"DAVID HARVEY PROVOKED A REVOLUTION IN HIS FIELD AND HAS INSPIRED A GENERATION OF RADICAL INTELLECTUALS. READ THIS BOOK."
—NAOMI KLEIN

A COMPANION TO MARX'S CAPITAL

THE COMPLETE EDITION

DAVID HARVEY

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Volume I

Preface

When it became known that the lectures I give annually on Marx's *Capital*, Volume I, were about to go online as a video series, I was approached by Verso and asked whether I would have any interest in preparing a written version. For a variety of reasons, I agreed to the idea.

To begin with, the failing economy and the onset of what threatens to be a serious global crisis, if not depression, have generated an upwelling of interest in Marx's analysis to see whether it can help us understand the origins of our current predicaments. The problem, however, is that the past thirty years, most particularly since the fall of the Berlin Wall and the end of the cold war, have not been a very favorable or fertile period for Marxian thought, and most certainly not for Marxian revolutionary politics. As a consequence, a whole younger generation has grown up bereft of familiarity with, let alone training in, Marxian political economy. It therefore appeared an opportune moment to produce a guide to *Capital* that would open the door for this generation to explore for itself what Marx might be about.

The timing for a constructive reevalution of Marx's work is opportune in another sense. The fierce oppositions and innumerable schisms within the Marxist movement that bedeviled the 1970s, affecting not only political practices but also theoretical orientations, have faded somewhat, as has the appetite for pure academicism which, on the one hand, helped keep interest in Marx alive in difficult times, but, on the other, did so at the price of arcane and often highly abstract arguments and reflections. My sense is that those who wish to read Marx now are far more interested in practical engagements, which does not mean they are fearful of abstractions but rather that they find academicism boring and irrelevant. There are many students and activists who desperately desire a strong theoretical base to better grasp how everything relates to everything else, so as to situate and contextualize their own particular interests and practical political work. I hope that this presentation of the basics of Marxian theory will help them do that.

In preparing this text, I worked from transcripts prepared by Katharina Bodirsky (to whom many thanks) of the audio recording of the lectures given in the spring of 2007. The video lectures (see davidharvey.org), organized by Chris Caruso (who also designed the website) and filmed by the Media College of the University of the Poor in New York and the Media Mobilizing Project in Philadelphia, were given in the fall of 2007. I want to thank Chris and everyone else for all their volunteer work on the project.

There were, however, significant differences between the audio and the video versions. These arose mainly because I always give the lectures in a somewhat *extempore* way, concentrating on different aspects of the text depending on political and economic events, as well as on my own interests (and even whims) of the moment. Class discussions also frequently redirect attention in unpredictable ways. Unfortunately, space would not allow for inclusion of the discussions, but I have several times incorporated elements from them into the main body of the text when that seemed appropriate. While I worked mainly from the audio version, I incorporated elements from the video materials as well. Of course, the editing of the transcripts had to be fairly draconian, in part for space reasons, but also because the translation from the spoken to the written word always requires significant and in some cases quite drastic modifications. I have also taken the opportunity to clear up some matters not covered in the lectures and to add a few further thoughts here and there. The text I use in the course is the translation by Ben Fowkes first published by Pelican Books and the *New Left Review* in 1976, republished by Vintage in 1977, and then in a Penguin Classics edition in 1992. The page numbers referred to are from these editions.

My hope is that this "companion"—and I really think of it as a companion on a journey rather than as an introduction or interpretation—will provide a helpful entry to Marx's political economy for anyone who wants to travel that road. I have tried to keep the presentation at an introductory level without, I hope, oversimplification. Furthermore, I have not considered in any detail the many controversies that swirl around diverse interpretations of the text. At the same time, the reader should understand that what is presented here is not a neutral interpretation, but a reading that I have arrived at over nearly forty years of teaching this text to all manner of people from all sorts of backgrounds (to whom I am indebted, since they have taught me a great deal), while also trying to use Marx's thought constructively in my own academic research in relation to political action. I do not seek to persuade people to adopt my own distinctive point of view. My ambition is to use my point of view as a gateway for others anxious to construct interpretations that are maximally meaningful and useful to them in the particular circumstances of their lives. If I have only partially succeeded in that, then I will be absolutely delighted.

Introduction

My aim is to get you to read a book by Karl Marx called *Capital*, Volume I, and to read it on Marx's own terms.[1] This may seem a bit ridiculous, since if you haven't yet read the book you can't possibly know what Marx's terms are; but one of his terms, I can assure you, is that you read, and read carefully. Real learning always entails a struggle to understand the unknown. My own readings of *Capital*, collected in the present volume, will prove far more enlightening if you have read the pertinent chapters beforehand. It is your own personal encounter with this text that I want to encourage, and by struggling directly with Marx's text, you can begin to shape your own understanding of his thought.

This poses an immediate difficulty. Everybody has heard of Karl Marx, of terms like "Marxism" and "Marxist," and there are all kinds of connotations that go with those words. So you are bound to begin with preconceptions and prejudices, favorable or otherwise; but I first have to ask you to try, as best you can, to set aside all those things you *think* you know about Marx so that you can engage with what he actually has to say.

There are still other obstacles to achieving this sort of direct engagement. We are bound, for example, to approach a text of this kind by way of our particular intellectual formations and experiential histories. For many students these intellectual formations are affected, if not governed, by academic considerations and concerns; there is a natural tendency to read Marx from a particular and exclusionary disciplinary standpoint. Marx himself would never have gotten tenure at a university in any discipline, and to this day most departmental apparatuses are disinclined to accept him as one of their own. So if you are a graduate student and want to read him right, then you'd better forget about what will get you tenure in your field—not in the long run, of course, but at least for the purpose of reading Marx. You have, in short, to struggle mightily to determine what he is saying beyond what you can easily understand by way of your particular disciplinary apparatus, your own intellectual formation and, even more important, your own experiential history (whether as a labor or community organizer or a capitalist entrepreneur).

One important reason for taking such an open stance toward this reading is that *Capital* turns out to be an astonishingly rich book. Shakespeare, the Greeks, Faust, Balzac, Shelley, fairy tales, werewolves, vampires and poetry all turn up in its pages alongside innumerable political economists, philosophers, anthropologists, journalists and political theorists. Marx draws on an immense array of sources, and it can be instructive—and fun—to track these down. Some of the references can be elusive, as he often fails to acknowledge them directly; I uncover yet more connections as I continue to teach *Capital* over the years. When I first started I had not read much Balzac, for example. Later, when reading Balzac's novels, I found myself often saying, “Ah, that’s where Marx got it from!” He apparently read Balzac comprehensively and had the ambition to write a full study of the *Comedie Humaine* when he got through with *Capital*. Reading *Capital* and Balzac together helps explain why.

So *Capital* is a rich and multidimensional text. It draws on a vast experiential world as conceptualized in a great diversity of literatures written in many languages at different places and times. I am not saying, I hasten to add, that you will not be able to make sense of Marx unless you get all the references. But what does inspire me, and I hope will inspire you, is the idea that there is an immense array of resources out there that can shed light on why we live life the way we do. In the same way that all of them are grist for Marx’s mill of understanding, so we, too, can make them grist for our own.

You will also find that *Capital* is an astonishingly good book, just as a *book*. When read as a whole, it is an enormously gratifying literary construction. But we here find more potential barriers to understanding, because many of you will have encountered and read bits of Marx in the course of your education. Maybe you read the *Communist Manifesto* in high school. Maybe you went through one of those courses on social theory, spending two weeks on Marx, a couple on Weber, a few on Durkheim, Foucault and a host of other important characters. Maybe you have read excerpts from *Capital* or some theoretical exposition of, say, Marx’s political beliefs. But reading excerpts or abstract accounts is entirely different from reading *Capital* as a complete text. You start to see the bits and pieces in a radically new light, in the context of a much grander narrative. It is vital to pay careful attention to the grand narrative and to be prepared to change your understanding of the bits and pieces or the abstract accounts you earlier encountered. Marx would almost certainly want his work to be read as a totality. He would object vociferously to the idea that he could be understood adequately by way of excerpts, no matter how strategically chosen. He would certainly not appreciate just two weeks of consideration in an introductory course on social theory, any more than he would himself have given over a mere two weeks to reading Adam Smith. You will almost certainly arrive at a quite different conception of Marx’s thought from reading *Capital* as a whole. But that means you have to read the whole book as a book—and that is what I want to help you to do.

There *is* a way in which intellectual formations and disciplinary standpoints not only matter but also provide helpful perspectives on *Capital*. I am, of course, against the sort of exclusionary readings around which students almost invariably organize their understandings, but I have learned over the years that disciplinary perspectives can be instructive. I have taught *Capital* nearly every year since 1971, sometimes twice or even three times in a single year, to groups of all kinds. One year it was with the whole philosophy department—somewhat Hegelian—of what was then called Morgan State College in Baltimore; another year it was all the graduate students in the English program at Johns Hopkins; another year it was mainly economists who showed up. What came to fascinate me was that each group saw different things in *Capital*. I found myself learning more and more about the text from working through it with people from different disciplines.

But sometimes I found that learning experience irritating, even painful, because a particular group would not see it my way or would insist on going off onto topics I thought irrelevant. One year I tried to read *Capital* with a group from the Romance-languages program at Johns Hopkins. To my intense frustration, we spent almost the whole semester on chapter 1. I'd keep saying, "Look, we have to move on and get at least as far as the politics of the working day," and they'd say, "No, no, no, we've got to get this right. What is value? What does he mean by money as commodity? What is fetish about?" and so on. They even brought the German edition along just to check the translations. It turned out they were all working in the tradition of somebody I had never heard of, somebody who I thought must be a political if not intellectual idiot for sparking this kind of approach. That person was Jacques Derrida, who spent time at Hopkins during the late 1960s and early 1970s. Reflecting on this experience afterward, I realized this group had taught me the vital importance of paying careful attention to Marx's language—what he says, how he says it and what, also, he takes for granted—just from going through chapter 1 with a fine-toothed comb.

But don't worry: I don't intend to do that in these readings because not only do I want to cover Marx's discussion of the working day, I am determined to see you through to the end of the volume. My point is simply that different disciplinary perspectives can usefully open up the multiple dimensions of Marx's thought, precisely because he wrote this text out of such an incredibly diverse and rich tradition of critical thinking. I am indebted to the many individuals and groups with whom I have read this book over these many years, precisely because they have taught me so much about aspects of Marx's work that I would never have recognized on my own. For me, that education is never-ending.

Now, there are three major intellectual and political traditions that inspire the analysis laid out in *Capital*, and they are all propelled by Marx's deep commitment to critical theory, to a critical analysis. When he was relatively young, he wrote a little piece to one of his editorial colleagues, the title of which was "For a Ruthless Criticism of Everything That Exists." Clearly, he was being modest—and I do suggest that you actually go read it, because it is fascinating. He doesn't say, "Everybody is stupid and I, the great Marx, am going to criticize everybody out of existence." Instead, he argues that there have been a lot of serious people who have thought about the world hard, and they have seen certain things about the world that have to be respected, no matter how one-sided or warped. The critical method takes what others have said and seen and works on it so as to transform thought—and the world it describes—into something new. For Marx, new knowledge arises out of taking radically different conceptual blocs, rubbing them together and making revolutionary fire. This is in effect what he does in *Capital*: he brings together divergent intellectual traditions to create a completely new and revolutionary framework for knowledge.

The three grand conceptual frameworks that converge in *Capital* are these: first, classical political economy—seventeenth- to mid-nineteenth-century political economy. This is mainly British, though not solely so, and it runs from William Petty, Locke, Hobbes and Hume to the grand trio of Adam Smith, Malthus and Ricardo, as well as to a host of others, like James Steuart. There was also a French tradition of political economy (Physiocrats like Quesnay and Turgot and later on Sismondi and Say) as well as individual Italians and Americans (like Carey) who provide Marx with additional critical materials. Marx subjected all these people to a deep criticism in the three volumes of notes now called *Theories of Surplus Value*. He didn't have a photocopying machine and he didn't have the Web, so he laboriously copied out long passages from Smith and then wrote a commentary on them, long passages from Steuart and a commentary on them, and so on. In effect he was practicing what we now call deconstruction, and I learned from Marx how to deconstruct arguments in this way. When he takes on Adam Smith, for example, Marx accepts much of what Smith says but then searches for the gaps or contradictions which, when rectified, radically transform the argument. This kind of argumentation appears throughout *Capital* because, as its subtitle indicates, it is shaped around "a critique of political economy."

The second conceptual building block in Marx's theorizing is philosophical reflection and inquiry, which for Marx originates with the Greeks. Marx wrote his dissertation on Epicurus, and he was familiar with Greek thought. Aristotle, as you will see, provides a frequent anchor for his arguments. Marx was also thoroughly trained in the way in which Greek thought came into the mainly German philosophical critical tradition—Spinoza, Leibniz and, of course, Hegel, as well as Kant and many others. Marx puts this mainly German critical philosophical tradition into a relationship with the British and French political-economic tradition, though, again, it would be wrong simply to see this in terms of national traditions (Hume was, after all, as much a philosopher—albeit an empiricist—as he was a political economist, and Descartes' and Rousseau's influence on Marx was also substantial). But the mainly German critical philosophical tradition weighed heavily on Marx because that was his initial training. And the critical climate generated by what later came to be known as the "young Hegelians" in the 1830s and 1840s influenced him greatly.

The third tradition to which Marx appeals is that of utopian socialism. In Marx's time, this was primarily French, although it was an Englishman, Thomas More, who is generally credited with originating the modern tradition—though it, too, goes back to the Greeks—and another Englishman, Robert Owen, who not only wrote copious utopian tracts but actually sought to put many of his ideas into practice in Marx's lifetime. But in France there was a tremendous burst of utopian thinking in the 1830s and 1840s, inspired largely by the earlier writings of Saint-Simon, Fourier and Babeuf. There were, for example, people like Etienne Cabet, who created a group called the Icarians, which settled in the United States after 1848; Proudhon and the Proudhonists; August Blanqui (who coined the phrase "dictatorship of the proletariat") and many like him who adhered to a Jacobin tradition (such as that of Babeuf); the Saint-Simonian movement; Fourierists like Victor Considerant; and socialist feminists like Flora Tristan. And it was in the 1840s in France that many radicals, for the first time, cared to call themselves communists, even though they had no clear idea of what that might mean. Marx was very familiar with, if not immersed in, this tradition, particularly when in Paris before his expulsion in 1844, and I think that he draws from it more than he willingly acknowledges. Understandably, he wanted to distance himself from the utopianism of the 1830s and 1840s, which he felt accounted in many ways for the failures of the revolution of 1848 in Paris. He didn't like it when utopians configured some ideal society without any idea of how to get from here to there, an opposition made clear in the *Communist Manifesto*. He therefore often proceeds in relation to their ideas by means of negation, particularly with respect to the thought of Fourier and Proudhon.

These are the three main conceptual threads that come together in Marx's *Capital*. His aim is to convert the radical political project from what he considered a rather shallow utopian socialism to a scientific communism. But in order to do that, he can't just contrast the utopians with the political economists. He has to re-create and reconfigure what social-scientific method is all about. Crudely put, this new scientific method is predicated on the interrogation of the primarily British tradition of classical political economy, using the tools of the mainly German tradition of critical philosophy, all applied to illuminate the mainly French utopian impulse in order to answer the following questions: what is communism, and how should communists think? How can we both understand and critique capitalism *scientifically* in order to chart the path to communist revolution more effectively? As we will see, *Capital* has a great deal to say about the scientific understanding of capitalism but not much to say about how to build a communist revolution. Nor will we find much about what a communist society would look like.

* * *

I have already addressed some of the barriers to reading *Capital* on Marx's own terms. Marx himself was all too aware of the difficulties and, interestingly, commented on them in his various prefaces. In the preface to the French edition, for example, he reacts to the suggestion that the edition should be brought out in serial form. "I applaud [the] idea of publishing the translation of *Capital* as a serial," he wrote in 1872.

> In this form the book will be more accessible to the working class, a consideration which to me outweighs everything else … That is the good side of your suggestion, but here is the reverse of the medal: the method of analysis which I have employed, and which had not previously been applied to economic subjects, makes the reading of the first chapters rather arduous, and it is to be feared that the French public, always impatient to come to a conclusion, eager to know the connection between general principles and the immediate questions that have aroused their passions, may be disheartened because they will be unable to move on at once … That is a disadvantage I am powerless to overcome, unless it be by forewarning and forearming those readers who zealously seek the truth. There is no royal road to science, and only those who do not dread the fatiguing climb of its steep paths have a chance of gaining its luminous summits. (104)

So I, too, have to begin by warning all readers of Marx, however zealously concerned with the pursuit of truth, that yes, indeed, the first few chapters of *Capital* are particularly arduous. There are two reasons for this. One concerns Marx's method, which we'll consider further shortly. The other has to do with the particular way in which he sets up his project.

Marx's aim in *Capital* is to understand how capitalism works by way of a critique of political economy. He knows this is going to be an enormous undertaking. In order to get that project under way, he has to develop a conceptual apparatus that will help him understand all the complexity of capitalism, and in one of his introductions he explains how he plans to go about that. "The method of presentation," he writes in the postface to the second edition, "must differ in form from that of inquiry":

> The latter has to appropriate the material in detail, to analyse its different forms of development and to track down their inner connection. Only after this work has been done can the real movement be appropriately presented. If this is done successfully, if the life of the subject-matter [i.e., the capitalist mode of production] is now reflected back in the ideas, then it may appear as if we have before us an a priori construction. (102)

Marx's method of inquiry starts with everything that exists—with reality as it's experienced, as well as with all available descriptions of that experience by political economists, philosophers, novelists and the like. He subjects that material to a rigorous criticism in order to discover some simple but powerful concepts that illuminate the way reality works. This is what he calls the method of descent—we proceed from the immediate reality around us, looking ever deeper for the concepts fundamental to that reality. Equipped with those fundamental concepts, we can begin working back to the surface—the method of ascent—and discover how deceiving the world of appearances can be. From this vantage, we are in a position to interpret that world in radically different terms.

In general, Marx starts with the surface appearance to find the deep concepts. In *Capital*, however, he begins by presenting the foundational concepts, conclusions he's already derived by employing his method of inquiry. He simply lays out his concepts in the opening chapters, directly and in rapid succession, in a way that indeed makes them look like *a priori*, even arbitrary, constructions. So, on first read, it is not unusual to wonder:

where on earth are all these ideas and concepts coming from? Why is he using them in the way he does? Half the time you have no idea what he is talking about. But as you move on through the book, it becomes clear how these concepts indeed illuminate our world. After a while, concepts like value and fetishism become meaningful.

Yet we only fully understand how these concepts work by the end of the book! Now, that's an unfamiliar, even peculiar, strategy. We are far more familiar with an approach that builds the argument brick by brick. With Marx, the argument is more onion-like. Maybe this metaphor is an unfortunate one, because, as someone once pointed out to me, when you dissect an onion, it reduces you to tears. Marx starts from the outside of the onion, moving through layers of external reality to reach its center, the conceptual core. Then he grows the argument outward again, coming back to the surface through the various layers of theory. The true power of the argument only becomes clear when, having returned to the realm of experience, we find ourselves equipped with an entirely new framework of knowledge for understanding and interpreting that experience. By then, Marx has also revealed a great deal about what makes capitalism grow in the way it does. In this way, concepts that at first seem abstract and *a priori* become ever richer and more meaningful; Marx expands the range of his concepts as he goes on.

This is different from the brick-by-brick approach, and it is not easy to adapt to. What this means in practice is that you have to hang on like crazy, particularly through the first three chapters, without really knowing what is going on, until you can get a better sense of it all when you get further on in the text. Only then can you begin to see how these concepts are working.

Marx's starting point is the concept of the commodity. At first blush this seems a somewhat arbitrary if not strange place to start. When thinking of Marx, phrases like the *Manifesto*'s "all history is the history of class struggle" come to mind. So why doesn't *Capital* start with class struggle? In fact it takes about three hundred pages before there's more than a hint of that, which may frustrate those looking for an immediate guide to action. Why doesn't Marx start with money? Actually, in his preparatory investigations, he wanted to start there, but after further study he concluded that money needed to be explained rather than assumed. Why doesn't he start with labor, another concept with which he is deeply associated? Why does he start with the commodity? Interestingly, Marx's preparatory writings indicate that there was a long period, about twenty or thirty years, during which he struggled with the question of where to begin. The method of descent brought him to the concept of the commodity, but Marx makes no attempt to explain that choice, nor does he bother to argue for its legitimacy. He just starts with the commodity, and that is that.

It's crucial to understand that he is constructing an argument on the basis of an already determined conclusion. This makes for a cryptic beginning to his whole argument, and the temptation for the reader is to be either so bemused or irritated by the arbitrariness of it all as to give up by chapter 3. So Marx is quite correct to point out that the start of *Capital* is particularly arduous. My initial task is, therefore, to guide you through the first three chapters, at least; it does get plainer sailing after that.

I have suggested, however, that the conceptual apparatus Marx here constructs is meant to deal not just with the first volume of *Capital* but with his analysis as a whole. And there are, of course, three volumes of *Capital* that have come down to us, so if you really want to understand the capitalist mode of production, you have unfortunately to read all three volumes. Volume I is just one perspective. But, even worse, the three volumes of *Capital* are only about an eighth (if that) of what he had in mind. Here is what he wrote in a preparatory text called the *Grundrisse*, wherein he sets out various designs for *Capital*. I have the ambition, he says at one point, to deal with the following:

> (1) The general, abstract determinants which obtain in more or less all forms of society … (2) The categories which make up the inner structure of bourgeois society and on which the fundamental classes rest. Capital, wage labour, landed property. Their interrelation. Town and country. The three great social classes. Exchange between them. Circulation. Credit system (private). (3) Concentration of bourgeois society in the form of the state. Viewed in relation to itself. The 'unproductive' classes. Taxes. State debt. Public credit. The population. The colonies. Emigration. (4) The international relation of production. International division of labour. International exchange. Export and import. Rate of exchange. (5) The world market and crises. (104)

Marx never came near to finishing this project. In fact, he took up few of these topics in any systematic way or in any detail. And many of them—like the credit system and finance, colonial activities, the state, international relations and the world market and crises—are absolutely crucial for our understanding of capitalism. There are hints in his voluminous writings as to how to deal with many of these topics, how best to understand the state, civil society, immigration, currency exchanges and the like. And it is possible, as I tried to show in my own *Limits to Capital*,[2] to pin some of the fragments he left us with on these topics together in ways that make sense. But it's important to recognize that the conceptual apparatus presented at the beginning of *Capital* bears the burden of laying the foundation for this momentous but incomplete project.

Volume I, you will see, explores the capitalist mode of production from the standpoint of production, not of the market, not of global trade, but the standpoint of production alone. Volume II (never completed) takes the perspective of exchange relations, while Volume III (also incomplete) concentrates initially on crisis formation as a product of the fundamental contradictions of capitalism, then also takes up issues of distribution of the surplus in the forms of interest, return on finance capital, rent on land, profit on merchant capital, taxes and the like. So there is a lot missing from the analysis of Volume I, but there is certainly enough there to furnish your understanding of how the capitalist mode of production actually works.

This brings us back to Marx's method. One of the most important things to glean from a careful study of Volume I is how Marx's method works. I personally think this is just as important as the propositions he derives about how capitalism works, because once you have learned the method and become both practiced in its execution and confident in its power, then you can use it to understand almost anything. This method derives, of course, from dialectics, which is, as he points out in the preface already cited, a method of inquiry "that had not previously been applied to economic subjects" (104). He further discusses this dialectical method in the postface to the second edition. While his ideas derive from Hegel, Marx's "dialectical method is, in its foundations, not only different from the Hegelian, but exactly opposite to it" (102). Hence derives the notorious claim that Marx inverted Hegel's dialectics and stood it right side up, on its feet.

There are ways in which, we'll find, this is not exactly true. Marx revolutionized the dialectical method; he didn't simply invert it. "I criticized the mystificatory side of the Hegelian dialectic nearly thirty years ago," he says, referring to his critique of Hegel's *Philosophy of Right*. Plainly, that critique was a foundational moment in which Marx redefined his relationship to the Hegelian dialectic. He objects to the way in which the mystified form of the dialectic as purveyed by Hegel became the fashion in Germany in the 1830s and 1840s, and he set out to reform it so that it could take account of "every historically developed form as being in a fluid state, in motion." Marx had, therefore, to reconfigure dialectics so that it could grasp the "transient aspect" of a society as well. Dialectics has to, in short, be able to understand and represent processes of motion, change and transformation. Such a dialectical method "does not let itself be impressed by anything, being in its very essence critical and revolutionary" (102–3), precisely because it goes to the heart of what social transformations, both actual and potential, are about.

What Marx is talking about here is his intention to reinvent the dialectical method to take account of the unfolding and dynamic relations between elements within a capitalist system. He intends to do so in such a way as to capture fluidity and motion because he is, as we will see, incredibly impressed with the mutability and dynamics of capitalism. This goes against the reputation that invariably precedes Marx, depicting him as some sort of fixed and immovable structuralist thinker. *Capital*, however, reveals a Marx who is always talking about movement and the motion—the processes—of, for example, the circulation of capital. So reading Marx on his own terms requires that you grapple with what it is he means by "dialectics."

The problem here is, however, that Marx never wrote a tract on dialectics, and he never explicated his dialectical method (although there are, as we shall see, plenty of hints here and there). So we have an apparent paradox. To understand Marx's dialectical method, you have to read *Capital*, because that is the source for its actual practice; but in order to understand *Capital* you have to understand Marx's dialectical method. A careful reading of *Capital* gradually yields a sense of how his method works, and the more you read, the better you'll understand *Capital* as a book.

One of the curious things about our educational system, I would note, is that the better trained you are in a discipline, the less used to dialectical method you're likely to be. In fact, young children are very dialectical; they see everything in motion, in contradictions and transformations. We have to put an immense effort into training kids out of being good dialecticians. Marx wants to recover the intuitive power of the dialectical method and put it to work in understanding how everything is in process, everything is in motion. He doesn't simply talk about labor; he talks about the labor *process*. Capital is not a thing, but rather a process that exists only in *motion*. When circulation stops, value disappears and the whole system comes tumbling down. Consider what happened in the aftermath of September 11, 2001, in New York City: everything came to a standstill. Planes stopped flying, bridges and roads closed. After about three days, everybody realized that capitalism would collapse if things didn't get moving again. So suddenly, Mayor Giuliani and President Bush are pleading the public to get out the credit cards and go shopping, go back to Broadway, patronize the restaurants. Bush even appeared in a TV ad for the airline industry encouraging Americans to start flying again.

Capitalism is nothing if it is not on the move. Marx is incredibly appreciative of that, and he sets out to evoke the transformative dynamism of capital. That's why it is so very strange that he's often depicted as a static thinker who reduces capitalism to a structural configuration. No, what Marx seeks out in *Capital* is a conceptual apparatus, a deep structure, that explains the way in which motion is actually instantiated within a capitalist mode of production. Consequently, many of his concepts are formulated around *relations* rather than stand-alone principles; they are about transformative activity.

So getting to know and appreciate the dialectical method of *Capital* is essential to understanding Marx on his own terms. Quite a lot of people, including some Marxists, would disagree. The so-called analytical Marxists—thinkers like G. A. Cohen, John Roemer and Robert Brenner—dismiss dialectics. They actually like to call themselves "no-bullshit Marxists." They prefer to convert Marx's argument into a series of analytical propositions. Others convert his argument into a causal model of the world. There is even a positivist way of representing Marx that allows his theory to be tested against empirical data. In each of these cases, dialectics gets stripped away. Now, I am not in principle arguing that the analytical Marxists are wrong, that those who turn Marx into a positivist model-builder are deluded. Maybe they are right; but I do insist that Marx's own terms are dialectical, and we are therefore obliged to grapple in the first instance with a dialectical reading of *Capital*.

One final point: our aim is to read Marx on Marx's own terms, but inasmuch as I am guiding that approach, those terms will inevitably be affected by my interests and experiences. I have spent much of my academic life bringing Marxian theory to bear on the study of urbanization under capitalism, of uneven geographical development and of imperialism, and that experience has obviously affected the way in which I now read *Capital*. To begin with, these are practical, rather than philosophical or abstractly theoretical, concerns; my approach has always been to ask what *Capital* can reveal to us about how daily life is lived in the grand cities that capitalism has produced. Over the thirty-odd years of engagement I have had with this text, all manner of geographical, historical and social shifts have occurred. Indeed, one of the reasons I like to teach *Capital* every year is that each time I must ask myself how it will read differently, what about it will strike me that I didn't notice before. I find myself coming back to Marx less for guidance than for potential theoretical insights as geography, history and people change. In the process, of course, I have in turn amended my understanding of the text. As the historical and intellectual climate confronts us with apparently unprecedented issues and perils, so the way we read *Capital* has also to shift and adapt.

Marx talks about this process of necessary reformulation and reinterpretation. Bourgeois theory understood the world in a certain way in the eighteenth century, he remarks, and then history moved on to make that theory and its theoretical formulations irrelevant (95–98). Ideas have to change or be reconfigured as circumstances change. Marx understood and represented the capitalist world luminously in the 1850s and 1860s, but the world has changed, and so the question must always be asked: in what ways is this text applicable to our own times? Unfortunately, in my view, the neoliberal counterrevolution that has dominated global capitalism over the past thirty years has done much to reconstitute globally those conditions that Marx so brilliantly deconstructed in the 1850s and 1860s in Britain. So in these readings I insert some of my own commentary on both the relevance of *Capital* to today's world and the reading of the text that seems best to fit the tenor of the times.

Mostly, though, I want you to come away with your own reading of *Capital*. That is, I hope you will engage with the text in terms of your own distinctive experience—intellectual, social, political—and learn from it in your own fashion. I hope you will have a good and enlightening time speaking to the text, as it were, and letting the text speak back to you. That kind of dialogue with the text is a wonderful exercise in seeking to understand what appears almost impossible to understand. It is the business of each reader to translate *Capital* into meaning for his or her own life. There is, and can be, no ultimate and definitive reading precisely because the world perpetually changes. As Marx would probably have said, *Hic Rhodus, hic salta!* Here is the ball, now run with it!

CHAPTER ONE

Commodities and Exchange

CHAPTER 1: THE COMMODITY

Section 1: Use-Value and Value

Let me begin by looking at the first section of chapter 1 in considerable detail. I do so in part because Marx here lays out fundamental categories in an *a priori* and somewhat cryptic, take-it-or-leave-it fashion that could do with elaboration. But I am also interested in getting you, as quickly as possible, familiar with the kind of close reading of *Capital* that is necessary if you are to understand it. Don’t worry, I will not continue at this level of intensity!

The commodity is Marx’s *a priori* beginning point. “The wealth of societies in which the capitalist mode of production prevails,” he says, “appears as an ‘immense collection of commodities’; the individual commodity appears as its elementary form. Our investigation therefore begins with the analysis of the commodity” (125). But notice something about the language. “Appears” occurs twice in the passage, and, plainly, “appears” is not the same as “is.” The choice of this word—and watch out for it, because Marx makes frequent use of it throughout *Capital*—signals that something else is going on beneath the surface appearance. We are immediately invited to think about what this might be. Notice also that Marx is exclusively concerned with the capitalist mode of production. He is not concerned with ancient modes of production, socialist modes of production or even hybrid modes of production, but with a capitalist mode of production in a pretty pure form. It is always important to remember this in what follows.

Starting with commodities turns out to be very useful because everyone has daily contact with and experience of them. We are surrounded by them at every turn, we spend time shopping for them, looking at them, wanting them or spurning them. The commodity form is a universal presence within a capitalist mode of production. Marx has chosen *the* common denominator, something that is familiar and common to us all, irrespective of class, race, gender, religion, nationality, sexual preference or whatever. We know about commodities in an everyday way, and they are, furthermore, essential to our existence: we have to buy them in order to live.

Commodities are traded in the market, and this immediately poses the question: what kind of economic transaction is this? The commodity is something that meets a human want, need or desire. It is something external to us that we take possession of and make ours. But Marx immediately declares he is not interested in “the nature of these needs, whether they arise, for example, from the stomach, or the imagination.” All he is interested in is the simple fact that people buy commodities and that this act is foundational to how people live. There are, of course, millions of commodities in the world, and all of them are different in terms of their material qualities and how they are described quantitatively (pounds of flour, pairs of socks, kilowatts of electricity, yards of cloth, etc.). But Marx pushes all this immense diversity to one side, saying that the discovery of "the manifold uses of things is the work of history," as is the "invention of socially recognized standards of measurement for the quantities of these useful objects" (125). But he needs to find some way to talk about the commodity in general. "The usefulness of a thing," can best be conceptualized as a "use-value" (126). This concept of use-value will be vital in everything that follows.

Notice how quickly he abstracts from the incredible diversity of human wants, needs and desires, as well as from the immense variety of commodities and their weights and measures, in order to focus on the unitary concept of a use-value. This is illustrative of an argument he makes in one of the prefaces, where he says that the problem for social science is that we cannot isolate and conduct controlled experiments in a laboratory, so we have to use the power of abstraction instead in order to arrive at similar scientific forms of understanding (90). In this opening passage you see this process of abstraction at work for the first, but certainly not the last, time.

But "in the form of society to be considered here" (i.e., capitalism), commodities "are also the material bearers … of … exchange-value." Be careful about the word "bearer," because bearing something is not the same as being something. Commodities are bearers of something else which has yet to be defined. So how do we discover what the commodity is a bearer of? When we look at actual exchange processes in the market, we witness an immense variety of exchange ratios between, for example, shirts and shoes and apples and oranges, and these exchange ratios vary a great deal even for the same products according to time and place. So at first sight it seems as if exchange ratios are "something accidental and purely relative" (but note the word "relative"). From this it would "appear" that the idea of "an intrinsic value, i.e. an exchange value that is inseparably connected with the commodity, inherent in it, seems a contradiction in terms" (126). On the other hand, everything is in principle exchangeable with everything else. Commodities can keep changing hands and keep moving in a system of exchanges. Something makes all commodities commensurable in exchange. From this it follows that "the valid exchange-values of a particular commodity express something equal, and secondly, exchange-value cannot be anything other than the mode of expression, the 'form of appearance', of a content distinguishable from it." I cannot dissect a commodity and find that element within it that makes it exchangeable. What makes it exchangeable must be something else, and that something else is discoverable only when the commodity is being exchanged (and here the idea of movement and process starts to emerge as crucial). As the commodity changes hands, so it expresses something about not only its own qualities but the qualities of all commodities, i.e., that they are commensurable with one another. So why are they commensurable, and whence does that commensurability derive? “Each of them” (the commodities), “so far as it is exchange-value, must therefore be reducible to this third thing” (127).

“This common element,” Marx then argues, “cannot be a geometrical, physical, chemical or other natural property of commodities” (127). This leads to a significant turn in the argument. Marx is usually depicted as an unwavering if not fundamentalist materialist. Everything has to be material in order to be validly considered as real, but here he is denying that the materiality of the commodity can tell you anything you might want to know about what it is that makes them commensurable. “As use-values, commodities differ above all in quality, while as exchange-values they can only differ in quantity, and therefore do not contain an atom of use-value.” The commensurability of commodities is not constituted out of their use-values. “If then we disregard the use-value of commodities, only one property remains”—and here we are going to make another of those *a priori* leaps by way of assertion—“that of being products of labour” (128). So commodities are all products of human labor. What commodities have in common is that they are all bearers of the human labor embodied in their production.

But, he then immediately asks, what kind of human labor is embodied in commodities? It can’t be the actual time taken—what he calls the concrete labor—because then the longer taken to produce the commodity, the more valuable it would be. Why would I pay a lot for an item because somebody took a long time making it when I can get it at half the price from somebody else who produced it in half the time? So, he concludes, all commodities are “reduced to the same kind of labour, human labour in the abstract” (128).

But what does this human labor in the abstract look like? Commodities are residues

> of the products of labour. There is nothing left of them in each case but the same phantom-like objectivity; they are merely congealed quantities of homogeneous human labour … As crystals of this social substance, which is common to them all, they are values—commodity values. (128)

What a crisp passage, yet with what incredibly condensed meanings! If human labor in the abstract is a “phantom-like objectivity,” how can we possibly see it or measure it? What kind of materialism is this?

It has, you will notice, taken a mere four pages of rather cryptic assertions to lay out the fundamental concepts and move the argument from use-value to exchange-value to human labor in the abstract, and ultimately to value as congealed quantities of homogeneous human labor. It is their value that makes all commodities commensurable, and this value is both hidden as a “phantom-like objectivity” and passed on in the processes of commodity exchange. This poses the question: is value really a “phantom-like objectivity,” or does it merely appear that way?

This allows us to reinterpret exchange-value as “the necessary mode of expression, or form of appearance, of value” (128). Notice the word “appearance” here once more, but now we can look at the relation the other way round because the mystery of what makes all commodities exchangeable is now understood as a world of appearances of this “phantom-like objectivity” called value. Exchange-value is a necessary representation of the human labor embodied in commodities. When you go into the supermarket you can find out the exchange-values, but you can’t see or measure the human labor embodied in the commodities directly. It is that embodiment of human labor that has a phantom-like presence on the supermarket shelves. Think about that the next time you are in a supermarket surrounded with these phantoms!

Marx then returns to the question of what kind of labor is involved in the production of value. Value is “abstract human labour … objectified … or materialized” in the commodity. How can this value be measured? In the first instance, this plainly has something to do with labor-time. But as I already argued in setting up the difference between concrete and abstract labor, it cannot be the actual labor-time, because then the commodity would be “more valuable the more unskillful and lazy the worker who produced it.” So “the labour that forms the substance of value is equal human labour, the expenditure of identical human labour-power.” In order to get at what the “expenditure of identical human labour-power” might mean, he needs, he says, to look at “the total labour-power of society, which is manifested in the values of the world of commodities” (129).

This *a priori* assertion has huge implications. Marx does not, however, elaborate on them here. So let me do so, lest you misconstrue what the value theory is about. To speak of “the total labour-power of society” is tacitly to invoke a world market that has been brought into being under a capitalist mode of production. Where does this “society”—the world of capitalist commodity exchange—begin and end? Right now it’s in China, it’s in Mexico, it’s in Japan, Russia, South Africa—it’s a global set of relations. The measure of value is derived out of this whole world of human laboring. But this was true, though obviously on a lesser scale, of Marx’s time, too. There is a brilliant description of what we now call globalization in the *Communist Manifesto*:

> The bourgeoisie has through its exploitation of the world-market given a cosmopolitan character to production and consumption in every country … it has drawn from under the feet of industry the national ground on which it stood. All old-established national industries have been destroyed or are daily being destroyed. They are dislodged by new industries, whose introduction becomes a life and death question for all civilised nations, by industries that no longer work up indigenous raw material, but raw material drawn from the remotest zones; industries whose products are consumed, not only at home, but in every quarter of the globe. In place of the old wants, satisfied by the productions of the country, we find new wants, requiring for their satisfaction the products of distant lands and climes. In place of the old local and national seclusion and self-sufficiency, we have intercourse in every direction, universal inter-dependence of nations.

It is on this dynamic global terrain of exchange relations that value is being determined and perpetually redetermined. Marx was writing in a historical context where the world was opening up very fast to global trade, through the steamship, the railways and the telegraph. And he understood very well that value was not determined in our backyard or even within a national economy, but arose out of the whole world of commodity exchange. But he here again uses the power of abstraction to arrive at the idea of units of homogeneous labor, each of which "is the same as any other, to the extent that it has the character of a socially average unit of labour-power and acts as such," as if this reduction to the value form is actually occurring through world trade.

This allows him to formulate the crucial definition of "value" as "socially necessary labour-time," which "is the labour-time required to produce any use-value under the conditions of production normal for a given society and with the average degree of skill and intensity of labour prevalent in that society." He concludes, "What exclusively determines the magnitude of the value of any article is therefore the amount of labour socially necessary, or the labour-time socially necessary for its production" (129). There is your definition. But it is plainly a contingent definition, because it is internal to the concept of "society"—but where does society begin or end? Is it closed or open? If that society is the world market, as it surely must be, then ... ?

One reason Marx could get away with this cryptic presentation of use-value, exchange-value and value was because anybody who had read Ricardo would say, yes, this is Ricardo. And it is pure Ricardo with, however, one exceptional insertion. Ricardo appealed to the concept of labor-time as value. Marx uses the concept of *socially necessary* labor-time. What Marx has done here is to replicate the Ricardian conceptual apparatus and, seemingly innocently, insert a modification. But this insertion, as we shall see, makes a world of difference. We are immediately forced to ask: what is socially necessary? How is that established, and by whom? Marx gives no immediate answers, but this question is one theme that runs throughout *Capital*. What are the social necessities embedded within a capitalist mode of production?

This, I submit, continues to be the big issue for us. Is there, as Margaret Thatcher famously remarked, "no alternative," which in a way is like saying that the social necessities that surround us are so implacably set that we have no choice but to conform to them? At its foundation, this goes back to a question of by whom and how "values" are established. We all like to think, of course, that we have our own "values," and every election season in the United States there is an interminable discussion about candidates' "values." But Marx is arguing that there is a certain kind and measure of value which is being determined by a process that we do not understand and which is not necessarily our conscious choice, and that the manner in which these values are being imposed on us has to be unpacked. If you want to understand who you are and where you stand in this maelstrom of churning values, you have first to understand how commodity values get created and produced and with what consequences—social, environmental, political and the like. If you think you can solve a serious environmental question like global warming without actually confronting the question of by whom and how the foundational value structure of our society is being determined, then you are kidding yourself. So Marx insists that we must understand what commodity values and the social necessities that determine them are all about.

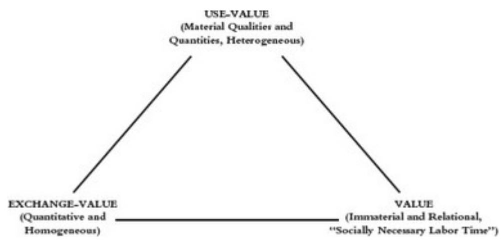
Commodity values are not fixed magnitudes. They are sensitive, for instance, to changes in productivity:

> The introduction of power-looms into England, for example, probably reduced by one half the labour required to convert a given quantity of yarn into woven fabric. In order to do this, the English hand-loom weaver in fact needed the same amount of labour-time as before; but the product of his individual hour of labour now only represented half an hour of social labour, and consequently fell to one half its former value. (129)

This alerts us to the fact that value is sensitive to revolutions in technology and in productivity. Much of Volume I is going to be taken up with the discussion of the origins and impacts of revolutions in productivity and the consequent revolutions in value relations. But it is not only revolutions in technology that are important, because value is "determined by a wide range of circumstances; it is determined amongst other things by the workers' average degree of skill, the level of development of science and its technological application"—Marx is very taken with the significance of technology and science to capitalism—"the social organization of the process of production, the extent and effectiveness of the means of production, and the conditions found in the natural environment" (130). A vast array of forces can impinge on values. Transformations in the natural environment or migration to places with more favorable natural conditions (cheaper resources) revolutionize values. Commodity values, in short, are subject to a powerful array of forces. He does not here attempt a definitive categorization of all of them; he simply wants to alert us that what we are calling "value" is not a constant, but is subject to perpetual revolutionary transformations.

But then comes a peculiar twist in his argument. Right in the last paragraph of this section, he suddenly reintroduces the question of use-values. "A thing can be a use-value without being a value." We breathe air, and so far we haven't managed to bottle it and sell it as a commodity, although I am sure someone is already trying to figure out how to do that. Also, "a thing can be useful, and a product of human labour, without being a commodity." I grow tomatoes in my backyard, and I eat them. Lots of people within capitalism actually do a lot of things for themselves (particularly with a bit of help from do-it-yourself stores). A lot of laboring (particularly in the domestic economy) goes on outside commodity production. The production of commodities requires not only the production of use-values "but use-values for others." Not simply use-values for the lord of the manor, as the serf would do, but use-values that go to others through the market. But the implication of this is that “nothing can be a value without being an object of utility. If the thing is useless, so is the labour contained in it; the labour does not count as labour, and therefore creates no value” (131). Marx earlier seemed to dismiss and abstract from use-values in order to get to exchange-value, and it was this that got him to value. But now he says that if the commodity doesn’t meet a human want, need or desire, then it has no value! You have, in short, to be able to sell it to someone somewhere.

Let us reflect a moment on the structure of this argument. We begin with the singular concept of the commodity and establish its dual character: it has a use-value and an exchange-value. Exchange-values are a representation of something. What is it a representation of? A representation of value, says Marx. And value is socially necessary labor-time. But value doesn’t mean anything unless it connects back to use-value. Use-value is socially necessary to value. There is a pattern to this argument, and it looks like this:



Consider, then, the implications of this argument. You own a commodity called a house. Are you more interested in its use-value or its exchange-value? You will likely be interested in both. But there is a potential opposition here. If you want to fully realize the exchange-value, you have to surrender its use-value to someone else. If you have the use-value of it, then it is difficult to get access to the exchange-value, unless you do a reverse mortgage or take out a home-equity loan. Does adding to the use-value of the house for oneself add to the potential exchange-value? (A new modern kitchen, probably yes; some special construction to facilitate a hobby, probably no.) And what happens to our social world when the house that was once conceptualized mainly in use-value terms as a home becomes reconceptualized as a way to build long-term savings (a capital asset) for a working-class family or even as a vehicle to be “flipped” by anyone who has access to credit for short-term speculative gain? This use-value/exchange-value dichotomy is, well, useful!

Consider the argument in greater detail. The commodity, a singular concept, has two aspects. But you can’t cut the commodity in half and say, that’s the exchange-value, and that’s the use-value. No, the commodity is a unity. But within that unity, there is a dual aspect, and that dual aspect allows us to define something called value—another unitary concept—as socially necessary labor-time, and this is what the use-value of a commodity is a bearer of. But in order to be of value, the commodity has to be useful. On this link back between value and use-value, we will see all kinds of issues arising around supply and demand. If the supply is too great, the exchange-value will go down; if the supply is too little, the exchange-value will go up—so there is an element here of supply and demand involved in the "accidental and relative" aspects of exchange-value. But behind these fluctuations, the value can remain constant (provided all the other forces that determine value, such as productivity, do too). Marx is not terribly interested in the supply and demand relation. He wants to know how to interpret commodity-exchange ratios between, say, shirts and shoes, when supply and demand are in equilibrium. We then need a different kind of analysis which points to value as congealed elements of this social substance called socially necessary labor-time. We have, without noticing it, tacitly abstracted from supply and demand conditions in the market in order to talk about commodity-values (with supply and demand in equilibrium) as socially necessary labor-time.

How has Marx's dialectical method been working here? Would you say that exchange-values cause value? Would you say exchange-values cause use-value, or use-values cause … ? This analysis is not causal. It is about relations, dialectical relations. Can you talk about exchange-value without talking about use-value? No, you can't. Can you talk about value without talking about use-value? No. In other words, you can't talk about any of these concepts without talking about the others. The concepts are codependent on one another, relations within a totality of some sort.

I recognize that to use the word "totality" is to wave a huge red flag in certain intellectual circles. Marx had no idea what structuralism might be about and would have had even less idea about poststructuralism. We should be wary of cramming his thought into these categories (my own view is that he does not fit into them at all). But Marx certainly had the ambition to understand the capitalist mode of production as a totality, so the only question of interest is, exactly what concept of totality does he have in mind? What we know from this first section is that this totality can best be approached through the triumvirate of concepts of use-value, exchange-value and value built around the commodity. But he has acknowledged that use-values are incredibly diverse, that exchange-values are accidental and relative and that value has (or appears to have) a "phantom-like objectivity," which is in any case subjected to perpetual revolutions through technological changes and upheavals in social and natural relations. This totality is not static and closed but fluid and open and therefore in perpetual transformation. This is definitely not a Hegelian totality, but what else we can say about it will have to wait until we have gotten further along in the text.

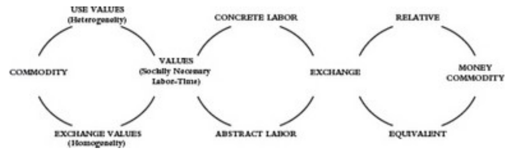
* * *

The story so far is roughly this: Marx declares that his aim is to uncover the rules of operation of a capitalist mode of production. He starts with the concept of the commodity and immediately establishes its dual character: use-value and exchange-value. Since use-values have been around forever, they tell us little about the specificity of capitalism. So Marx puts them aside in order to study exchange-values. The exchange ratios between commodities at first appear accidental, but the very act of exchange presupposes that all commodities have something in common that makes them comparable and commensurable. This commonality, Marx cryptically asserts, is that they are all products of human labor. As such, they incorporate “value,” initially defined as the socially necessary (average) labor time necessary to produce them under given conditions of labor productivity. But in order for the labor to be socially necessary, somebody somewhere must want, need or desire the commodity, which means that use-values have to be reintegrated into the argument.

In the analysis that follows, these three concepts of use-value, exchange-value and value are kept in a perpetual and sometimes tense relationship with one another. Marx rarely takes any one of these concepts in isolation, it is the *relations between them* that matter. He does, however, frequently examine the relationship between just two of them while holding the third tacitly to one side. In expanding on the dual character of labor embodied in a commodity in section 2, Marx focuses on the relationship between the use-value of laboring and the value that this useful labor embodies (holding exchange-value constant). In the following section, he brackets out use-value and examines the relationship between exchange-value and value in order to explain the origin and role of money. It’s important to notice these changes of focus as the argument unfolds, because the statements in any one section are always contingent on which of the concepts is being set aside.

There is yet another mode of argumentation here that requires elucidation if we are to proceed. Having begun with use-value and exchange-value—a dichotomy—he then arrives at a unitary concept of value that has something to do with human labor understood as “socially necessary labour-time” (129). But what kind of human labor is socially necessary? The search for an answer reveals another duality, that between concrete (actual) and abstract (socially relevant) labor. These two forms of labor converge again in the unitary act of commodity exchange. Yet examination of this moment of exchange reveals another duality between relative and equivalent forms of value. These two modes of expression of value are reunited in the emergence of one commodity—the money commodity—which functions as a universal equivalent in relation to all other commodities. What we see here is a pattern in the mode of argumentation, a gradual unfolding of the argument that works through oppositions that are brought back into unities (like the money-form) that internalize a contradiction which in turn generates yet another duality (the relationship between processes and things, material relations between people and social relations between things). This is Marx’s dialectical method of presentation at work, and it continues throughout the whole of *Capital*, as we will see.

Here is the pattern of argument unfolding in simple diagrammatic form:



Mapping the argument in this way makes it much easier to see the woods for the trees. It is easier to situate the content of any one section within the overall line of argument. This is not Hegelian logic in the strict sense, because there is no final moment of synthesis, only a temporary moment of unity within which yet another contradiction—a duality—is internalized and then requires a further expansion of the argument if it is to be understood. This is how Marx's process of representation unfolds in *Capital*—and indeed, it is an unfolding and not a logical derivation. It produces a skeletal structure of argumentation around which all manner of conceptual matter can be arranged so that, as we proceed, there emerges a broader and broader understanding of the internal relations that keep capitalism in a perpetual state of contradictory unity and, therefore, in perpetual motion.

Section 2: The Dual Character of the Labour Embodied in Commodities

Marx begins this section with the modest claim that he "was the first to point out and examine critically this twofold nature of the labour contained in commodities. As this point is crucial to an understanding of political economy," he says, "it requires further elucidation" (132). He begins, as he did in section 1, with use-values. These are physical products, produced by useful, "concrete" labor. The immense heterogeneity of forms of concrete labor processes—tailoring, shoemaking, spinning, weaving, farming and so on—is important, because without it there would be no basis for any acts of exchange (nobody, obviously, would want to exchange similar products) or a social division of labor.

> Use-values cannot confront each other as commodities unless the useful labour contained in them is qualitatively different in each case. In a society whose products generally assume the form of commodities … this qualitative difference between the useful forms of labour which are carried on independently and privately by individual producers develops into a complex system, a social division of labour. (133)

Here Marx broaches a methodological theme that echoes throughout these chapters: the movement from simplicity to greater complexity, from the simple molecular aspects of an exchange economy toward a more systemic understanding. He then deviates from the rule of looking at relations in order to examine some of the universal properties of useful labor. He does so because "labour … as the creator of use-values, as useful labour, is a condition of human existence which is independent of all forms of society." Useful labor is "an eternal natural necessity which mediates the metabolism between man and nature, and therefore human life itself" (133).

This idea of "metabolism," with labor as the mediator between human existence and nature, is central to Marx's historical-materialist argument. He will come back to it at various points in *Capital* even as he leaves the idea rather undeveloped. This, too, is often typical of his approach. He says, in effect, "Look, there is something important here you should think about [in this case, the relation to nature]. I am not going to work with it in any detail, but I want to put it on the table as significant before going on to matters of more immediate concern." "Use-values," he writes, "are combinations of two elements, the material provided by nature, and labour." Hence, "when man engages in production, he can only proceed as nature does herself" (133). This again is an important foundational point: whatever we do has to be consistent with natural law.

[We] can only change the form of the materials. Furthermore, even in this work of modification [we are] constantly helped by natural forces. Labour is therefore not the only source of material wealth, i.e. of the use-values it produces. As William Petty says, labour is the father of material wealth, the earth is its mother. (133–4)

With the help of this gendered metaphor (which dates back at least to Francis Bacon), Marx introduces a crucial distinction between wealth—the total use-values at one's command—and value—the socially necessary labor time these use-values represent.

Marx then returns to the question of values in order to contrast their homogeneity (all products of human labor) with the vast heterogeneity of use-values and of concrete forms of laboring. He writes,

Tailoring and weaving, although they are qualitatively different productive activities, are both a productive expenditure of human brains, muscles, nerves, hands etc., and in this sense both human labour. They are merely two different forms of the expenditure of human labour-power. Of course, human labour-power must itself have attained a certain level of development before it can be expended in this or that form. But the value of a commodity represents human labour pure and simple, the expenditure of human labour in general. (134–5)

As such, it is what Marx calls "abstract" labor (135–7). This kind of generality of labor contrasts with the myriad concrete labors producing actual use-values. In creating this concept of abstract labor, Marx holds that he is merely mirroring an abstraction produced by extensive commodity exchanges.

So Marx conceptualizes value in terms of units of simple abstract labor; this standard of measurement "varies in character in different countries and at different cultural epochs, but in a particular society it is given." Here again we encounter a strategy frequently deployed in *Capital*. The standard of measurement is contingent on space and time, but for the purposes of analysis we assume it is known. Furthermore, in this instance, he then goes on to say, "complex labour," i.e., skilled labor, "counts only as *intensified*, or rather *multiplied* simple labour, so that a smaller quantity of complex labour is considered equal to a larger quantity of simple labour":

Experience shows that this reduction is constantly being made. A commodity may be the outcome of the most complicated labor, but through its value it is posited as equal to the product of simple labor … In the interests of simplification, we shall henceforth view every form of labour-power directly as simple labour-power; by this we shall simply be saving ourselves the trouble of making the reduction. (135)

Notably, Marx never specifies what "experience" he has in mind, making this passage highly controversial. In the literature it is known as the "reduction problem," because it is not clear how skilled labor can be and is reduced to simple labor independently of the value of the commodity produced. Rather like the proposition about value as socially necessary labor time, Marx's formulation appears cryptic, if not cavalier; he doesn't explain how the reduction is made. He simply presumes for purposes of analysis that this is so and then proceeds on that basis. This means that the qualitative differences we experience in concrete labor, useful labor and the heterogeneity of it, is here reduced to something purely quantitative and homogeneous.

Marx's point, of course, is that abstract (homogeneous) and concrete (heterogeneous) aspects of labor are unified in the unitary act of laboring. It is not as if abstract labor occurs in one part of the factory and concrete labor occurs somewhere else. The duality resides within a singular labor process: making the shirt that embodies the value. This means there could be no embodiment of value without the concrete labor of making shirts and, furthermore, that we cannot know what value is unless shirts are being exchanged with shoes, apples, oranges and so on. There is, therefore, a relationship between concrete and abstract labor. It is through the multiplicities of concrete labors that the measuring rod of abstract labor emerges.

> On the one hand all labour is an expenditure of human labour-power, in the physiological sense, and it is in this quality of being equal, or abstract, human labour that it forms the value of commodities. On the other hand, all labour is an expenditure of human labour-power in a particular form and with a definite aim, and it is in this quality of being concrete useful labour that it produces use-values. (137)

Note that this argument mirrors that of the first section. The singular commodity internalizes use-values, exchange-values and values. A particular labor process embodies useful concrete labor and abstract labor or value (socially necessary labor-time) in a commodity that will be the bearer of exchange value in the market place. The answer to the problem of how skilled or "complex" labor can be reduced to simple labor partially lies, it turns out, in the next section, where Marx follows the commodity into the marketplace and takes up the relation between value and exchange-value. So let us move on to section 3.

Section 3: The Value Form, or Exchange-Value

This section incorporates, in my view, a lot of boring material that can all too easily mask the significance of the argument being made. Marx sometimes puts on, as I pointed out earlier, an accountant's hat, and the result is a form of exposition that can be tedious in the extreme: when this equals that and that equals this and this costs three pence and this fifteen, then the result is that something else is equivalent to … and so it goes, with the help of all manner of numerical illustrations to follow. The woods-for-the-trees problem, which often arises in Marx's writing, is at its worst here, so this is a good point to figure out how to approach it. I shall deal with this at two levels: I will skim over what is often a simple, technical argument, and then comment on its deeper significance.

Marx's objective is to explain the origin of the money-form. "We have to perform a task," he (again, so modestly!) claims, "never even attempted by bourgeois economics."

> That is, we have to show the origin of this money-form, we have to trace the development of the expression of value contained in the value-relation of commodities from its simplest, almost imperceptible outline to the dazzling money-form. When this has been done, the mystery of money will immediately disappear. (139)

He accomplishes this task in a series of heavy-handed steps, beginning with a simple barter situation. I have a commodity, you have a commodity. The *relative value* of my commodity is going to be expressed in terms of the value (the labor input) of the commodity you hold. So your commodity is going to be a measure of the value of mine. Turn the relationship around, and my commodity can be viewed as the equivalent value of yours. In simple barter situations of this sort, everybody who has a commodity has something with a relative value and looks for its equivalent in another commodity. Since there are as many commodities as there are people and exchanges, there are as many equivalents as there are commodities and exchanges. All Marx really wants to show here is that the act of exchange always has a dual character—the poles of relative and equivalent forms—in which the equivalent commodity figures "as the embodiment of abstract human labour" (150). The opposition between use-value and value, hitherto internalized within the commodity, "gets represented on the surface by an external opposition" between one commodity that is a use-value and another that represents its value in exchange (153).

In a complex field of exchanges like the marketplace, my commodity will have multiple potential equivalents, and conversely, everybody out there has relative values in a potential relation with my singular equivalent. An increasing complexity of exchange relations produces an "expanded form" of value that morphs into a "general form" of value (§b, 154–7, and §c, 157–62). This ultimately crystallizes in a "universal equivalent": one commodity that plays the exclusive role of a "money commodity" (§d, 162–3). The money commodity arises out of a trading system and does not precede it, so it is the proliferation and generalization of exchange relations that is the crucial, necessary condition for the crystallization of the money-form.

In Marx's time, commodities like gold and silver had emerged to play this crucial role, but it could in principle be cowry shells, cans of tuna or—as has sometimes happened in disruptive conditions of war—cigarettes, chocolate or whatever. A market system requires a money commodity of some sort to function effectively, but a money commodity can only come into being through the rise of market exchange. Money was not imposed from outside, nor invented by somebody who thought it would be a good idea to have a money-form. Even symbolic forms, Marx argues, have to be understood in this context.

This gives rise to an interesting interpretive question, one that crops up a number of times in *Capital*: is Marx making a historical argument or a logical argument? The historical evidence supporting his explanation of how the money commodity arose would now, I think, be regarded as rather thin. Quasi-monetary systems and commodities, religious icons and symbolic tokens and the like, have long been in existence, and while expressive of some sort of social relation, these have had no necessary primitive relation to commodity exchanges even as they gradually became mixed up in such exchanges. If we were to consult the archaeological and historical records, many would now probably hold that the money-form didn't arise the way that Marx proposes at all. I am inclined to accept that argument, but then on top of it say the following—and this comes back to Marx's interest in understanding a capitalist mode of production. Under capitalism, the money-form has to be disciplined to and brought into line with the logical position that Marx describes, such that the money-form reflects the needs of a system of proliferating exchange relations. But by the same token (forgive the pun), it is the proliferation of commodity-exchange relations that disciplines any and all preceding symbolic forms to the money-form required to facilitate commodity-market exchange. The precursors of the money-form, which can indeed be found in the archaeological and historical record of coinage, have to conform to this logic to the degree that they get absorbed within capitalism and perform the function of money. At the same time, it should be clear that the market could not have evolved without that disciplining taking place. Though the historical argument is weak, the logical argument is powerful.

This section as a whole establishes, then, the necessary relation between commodity exchange and the money commodity and the mutually determinative role that each plays in the development of the other. But there is much more going on in this section to which we need to pay close attention. At the very beginning of the section, Marx describes the way in which

> the objectivity of commodities as values differs from Dame Quickly in the sense that 'a man knows not where to have it'. Not an atom of matter enters into the objectivity of commodities as values; in this it is the direct opposite of the coarsely sensuous objectivity of commodities as physical objects. We may twist and turn a single commodity as we wish; it remains impossible to grasp it as a thing possessing value. However, let us remember that commodities possess an objective character as values only in so far as they are all expressions of an identical social substance, human labour, that their objective character as values is therefore purely social. From this it follows self-evidently that it can only appear in the social relation between commodity and commodity. (138)

This is an absolutely vital point that cannot be overemphasized: value is immaterial but *objective*. Given Marx's supposed adherence to a rigorous materialism, this is, on the face of it, a surprising argument, and we have to wrestle a bit with what it means. Value is a social relation, and you cannot actually see, touch or feel social relations directly; yet they have an objective presence. We therefore have to carefully examine this social relation and its expression.

Marx proposes the following idea: values, being immaterial, cannot exist without a means of representation. It is, therefore, the rise of the monetary system, the rise of the money-form itself as a means of tangible expression, that makes value (as socially necessary labor-time) the regulator of exchange relations. But the money-form comes closer—step by step, given the logical argument—to expressing value only as commodity-exchange relations proliferate. There is, therefore, nothing universal out there called “value” that after many, many years of struggling finally gets to be expressed through monetary exchange. Rather, there is an internal and coevolving relation between the rise of the money-and the value-forms. The rise of monetary exchange leads to socially necessary labor-time becoming the guiding force within a capitalistic mode of production. Therefore, value as socially necessary labor-time is historically specific to the capitalist mode of production. It arises only in a situation where market exchange is doing the requisite job.

There are two conclusions and one major question that derive from Marx’s analysis. The first conclusion is that exchange relations, far from being epiphenomena expressive of the deep value structure, exist in a dialectical relation with values such that the latter depend on the former as much as the former depend on the latter. The second conclusion confirms the immaterial (phantom-like), but objective, status of the value concept. All attempts to measure value directly will fail. The big question mark concerns how reliable and accurate the money representation is of value or, in other words, how the relation between immateriality (value) and objectivity (as captured by the monetary representation of value) actually unfolds.

Marx works through the problem in a number of steps. He comments,

> It is only the expression of equivalence between different sorts of commodities which brings to view the specific character of value-creating labour, by actually reducing the different kinds of labour embedded in the different kinds of commodity to their common quality of being human labour in general. (142)

Here we encounter a partial answer to the question of how the reduction from skilled and complex human labor to simple human labor occurs. But then he goes on to say: “human labour-power in its fluid state”—and it is striking how often Marx invokes the concept of fluidity in *Capital*—“or human labour, creates value, but is not itself value. It becomes value in its coagulated state, in objective form” (142). A distinction therefore needs to be made between the labor process and the thing that gets produced. This idea of a relationship between processes and things, along with the idea of fluidity, is important in Marx’s analysis. The more he invokes it, the more he moves away from dialectics as a formal logic to dialectics as a philosophy of historical process. Human labor is a tangible process, but at the end of the process, you get this thing—a commodity—which “coagulates” or “congeals” value. While the actual process is what is significant, it is the *thing* that has value and the *thing* that has the objective qualities. Thus:

> The value of the linen as a congealed mass of human labour can be expressed only as an ‘objectivity’, a thing which is materially different from the linen itself and yet common to the linen and all other commodities. (142)

The problem is: how does value, this “thing which is materially different from the linen,” get represented? The answer lies in the money-commodity form. But there are, he notes, some peculiarities in this relationship between value and its expression in the money-form. “The first peculiarity which strikes us,” he writes, is that a particular use-value “becomes the form of appearance of its opposite, value,” and this “conceals a social relation” (148–9).

> Hence the mysteriousness of the equivalent form, which only impinges on the crude bourgeois vision of the political economist when it confronts him in its fully developed shape, that of money. He then seeks to explain away the mystical character of gold and silver by substituting for them less dazzling commodities, and, with ever-renewed satisfaction, reeling off a catalogue of all the inferior commodities which have played the role of the equivalent at one time or another. (149–50)

“The body of the commodity,” he goes on to say, “which serves as the equivalent, always figures as the embodiment of abstract human labour, and is always the product of some specific useful and concrete labour” (150). What does this say? Gold, for example, is a specific use-value, a specific commodity, produced under specific conditions of production, and yet we are using it as a means of expression of all human labor everywhere—we are taking a particular use-value and using it as a stand-in for all social labor. This raises complicated questions, as we will see when we get deeper into the theory of money in chapter 2.

The second peculiarity is that “concrete labour becomes the form of manifestation of its opposite, abstract human labour,” and the third peculiarity is that “private labour takes the form of its opposite, namely labour in its directly social form” (150). This means not only that the universal equivalent, the money commodity, is subject to the qualitative and quantitative problems that beset the production of any use-value, but that the production and marketing of the money commodity as well as its accumulation (eventually as capital) lie in private hands even as it performs its universalizing social function. When gold was still a dominant commodity underpinning global money at the end of the 1960s, for example, the two primary gold producers were South Africa and Russia, neither of which was particularly friendly to international capitalism. The dematerialization of the whole financial system in the early 1970s and the system of floating exchange rates, free from any gold standard, that then came into being had the effect of disempowering the gold producers (even if this was not the primary reason it occurred).

These are the sorts of contradictions that Marx's analysis leads us to contemplate, and we later see—particularly in Volume III but also in chapter 3 of this volume—how these peculiarities and contradictions start to play out in the creation of possibilities for financial crises. In any case, the fundamental conclusion has to be that the relation between values and their representation in money-form is fraught with contradictions, and so we can never assume a perfect form of representation. This mismatch, as it were, between values and their representation turns out to have advantages even as it is deeply problematic, as we will see.

This brings us to an important passage on Aristotle. "There can be no exchange," says Aristotle, "without equality, and no equality without commensurability."[1] The relationship between the relative and equivalent forms of value presupposes an equality between those doing the exchanges. This attribute of equality within the market system is terribly important; Marx understands it as being fundamental to how capitalism theoretically works. Aristotle, too, understood the need for commensurability and equality in exchange relations, but he couldn't figure out what lay behind it. Why not? Marx's answer is that "Greek society was founded on the labour of slaves, hence had as its natural basis the inequality of men and of their labour-powers" (152). In a slave-holding society there can be no value theory of the sort that we are going to find under capitalism. Again, note the historical specificity of the value theory to capitalism.

This then brings Marx back to expand on the three peculiarities of the money-form in order to identify an emergent opposition:

> The internal opposition between use-value and value, hidden within the commodity, is therefore represented on the surface by an external opposition, i.e. by a relation between two commodities such that the one commodity, whose own value is supposed to be expressed, counts directly only as a use-value, whereas the other commodity, in which that value is to be expressed, counts directly only as exchange-value. (153)

This opposition between the expression of value and the world of commodities, an opposition that results in an "antinomy" between commodities and money, has to be interpreted as an externalization of something that is internalized within the commodity itself. Once externalized, the opposition becomes explicit. The relationship between commodities and money is a product of that dichotomy between use-value and exchange-value which we spotted as internal to the commodity at the very beginning.

So, what do we take from this? First, socially necessary labor-time cannot operate as a regulator of what is happening directly, because it is a social relation. Indirectly, it will do so through the medium of the money-form. Furthermore, the rise of the money-form is what permits value to start to crystallize out as the guiding principle of how a capitalist economy will work. And, always remember, value is immaterial but objective. Now, this creates quite a lot of problems for commonsense logic that assumes value can actually be measured; even some Marxist economists spend a lot of time explaining how they can do so. My argument would be: you can't do it. If it is immaterial, you cannot measure it directly. To find value in a commodity by just looking at a commodity is like trying to find gravity in a stone. It only exists in relations between commodities and only gets expressed materially in the contradictory and problematic form of the money commodity.

Let me now take a moment to reflect further on the status of the three fundamental concepts of use-value, exchange-value and value that Marx sets out. In doing so, I will impose some of my own reflections that arise out of my specific interests, which you may accept or reject as you like. These three different concepts internalize fundamentally different spatiotemporal referents. Use-values exist in the physical material world of things that can be described in Newtonian and Cartesian terms of absolute space and time. Exchange-values lie in the relative space-time of motion and exchange of commodities, while values can be understood only in terms of the relational space-time of the world market. (The immaterial relational value of socially necessary labor times comes into being within the evolving space-time of capitalist global development.) But as Marx has already convincingly shown, values cannot exist without exchange-values, and exchange cannot exist without use-values. The three concepts are dialectically integrated with one another.

In the same way, the three forms of absolute, relative and relational space-time are dialectically related within the historical-geographical dynamics of capitalist development. This is my argument as a geographer. One of the major consequences is that the space-time of capitalism is not constant but variable (as happens with speed-up and what Marx elsewhere calls "the annihilation of space by time"[2] wrought through perpetual revolutions in transport and communications). I cannot refrain from injecting this into the discussion for your consideration! If you want to follow up on the question of spatiotemporal dynamics of capitalism, though, you will have to look elsewhere.[3]

Section 4: The Fetishism of the Commodity and Its Secret

This section is written in a completely different, rather literary, style—evocative and metaphoric, imaginative, playful and emotive, full of allusions and references to magic, mysteries and necromancies. There is a marked contrast with the dull accountancy style of the previous section. This is rather typical of Marx's tactics throughout *Capital*; he often shifts linguistic styles according to the subject under consideration. In this case, the switch can create some confusion as to the relevance of the fetishism concept in Marx's overall argument (a confusion exacerbated by the fact that this section was moved from an appendix in the first edition of *Capital* to its current position—along with section 3—only in the second, definitive edition). Those interested in developing a rigorous political-economic theory out of Marx, for example, sometimes seem to view the fetishism concept as extraneous, not to be taken too seriously. On the other hand, those of a more philosophical or literary persuasion often treat it as the golden nugget, the foundational moment to Marx's understanding of the world. So one of the questions we have to ask is: how does this section stand in relation to Marx's overall argument?

The fetishism concept was already signaled in his discussion of the ways in which important characteristics of the political economic system get "concealed" or confused through the "antinomies" and "contradictions" between, for example, the particularities of the money commodity on the one hand and the universality of phantom-like values on the other. Tensions, oppositions and contradictions that have already been opened up in the text now come in for detailed scrutiny under the heading "The Fetishism of the Commodity and Its Secret" (163). Throughout the rest of *Capital*, as we will see, the concept of fetishism emerges again and again (more often tacitly rather than explicitly) as a essential tool for unraveling the mysteries of capitalist political economy. I consider the concept of fetishism, therefore, as fundamental to the political economy as well as to Marx's wider argument. In effect, it conjoins the two at the hip.

The analysis proceeds in two steps. First, he identifies how fetishism arises and works as a fundamental and inevitable aspect of political-economic life under capitalism. Second, he examines how this fetishism is misleadingly represented in bourgeois thought in general and classical political economy in particular.

Commodities, he begins by observing, "abound in metaphysical subtleties and theological niceties":

> The mysterious character of the commodity-form consists … simply in the fact that the commodity reflects the social characteristics of men's own labour as objective characteristics of the products of labour themselves, as the socio-natural properties of these things. (164–5)

The problem is that "the commodity-form, and the value-relation of the products of labour within which it appears, have absolutely no connection with the physical nature of the commodity and the material … relations arising out of this." Our sensuous experience of the commodity as use-value has nothing to do with its value. Commodities are, therefore, "sensuous things which are at the same time supra-sensible or social." The result is that a "definite social relation between men themselves … assumes here, for them, the fantastic form of a relation between things." And it is this condition that defines "the fetishism which attaches itself to the products of labour as soon as they are produced as commodities." This fetishism is "inseparable from the production of commodities" (165).

This is so, he says, because "the producers do not come into social contact until they exchange the products of their labour," so that they only come to know "the specific social characteristics of their private labour" in the act of market exchange. In other words, they don't and can't know what the value of their commodity is until they take it to the market and successfully exchange it. "To the producers, therefore, the social relations between their private labours appear as what they are"—note please especially the important phrase, *appear as what they are*—"i.e. they do not appear as direct social relations between persons in their work, but rather as material … relations between persons and social relations between things" (165–6).

So what's going on here? You go into a supermarket and you want to buy a head of lettuce. In order to buy the lettuce, you have to put down a certain sum of money. The material relation between the money and the lettuce expresses a social relation because the price—the "how much"—is socially determined, and the price is a monetary representation of value. Hidden within this market exchange of things is a relation between you, the consumer, and the direct producers—those who labored to produce the lettuce. Not only do you not have to know anything about that labor or the laborers who congealed value in the lettuce in order to buy it; in highly complicated systems of exchange it is *impossible* to know anything about the labor or the laborers, which is why fetishism is inevitable in the world market. The end result is that our social relation to the laboring activities of others is disguised in the relationships between things. You cannot, for example, figure out in the supermarket whether the lettuce has been produced by happy laborers, miserable laborers, slave laborers, wage laborers or some self-employed peasant. The lettuces are mute, as it were, as to how they were produced and who produced them.

Why is this important? When I taught introductory geography classes at Johns Hopkins, I always started off by asking students where their breakfast came from. And they'd say, "Oh, I bought stuff at the deli." But when I asked them to think back further than that, they found themselves consider a whole incredible world of laboring in radically different geographical environments and under radically different social conditions that they knew nothing about and could know nothing about from staring at their breakfast ingredients or going into the deli. The bread, the sugar, the coffee, the milk; the cups, knives and forks, toasters and plastic plates—to say nothing of the machinery and equipment needed to produce all these things—linked them to millions of people laboring away all around the world. One of the tasks of geographical education is to impart something about the variety of socio-environmental conditions, spatial linkages and labor practices involved in every aspect of daily life, down to putting breakfast on the table every day.

The students did sometimes seem to think I was trying to guilt-trip them for not paying more mind to those poor sugar-cane cutters in the Dominican Republic who earned next to nothing. When it got to that stage they would sometimes declare "Sir, I didn't have breakfast this morning!" To that I would characteristically reply that they might want to do without lunch, dinner, and supper too for a week or so just to learn the truth of the basic Marxian maxim that we have to eat in order to live.

Issues of this kind do raise moral questions. There are those who, for various reasons, propose all manner of codes of moral conduct in interpersonal relations, but who then face the dilemma of whether or how to extend that moral code into the world of commodity exchanges in the world market. It is all very well to insist on “good” face-to-face relations and to be helpful to one’s neighbor, but what is the point of that if we are totally indifferent to all those whom we do not know and can never know, but who play a vital role in providing us with our daily bread? These issues are sometime brought to our attention: by the “fair trade” movement, for example, which tries to articulate a moral standard for the world of commodity exchange, and the anti-poverty movement, which seeks to mobilize charitable contributions for distant others. But even these usually fail to challenge the social relations that produce and sustain the conditions of global inequality: wealth for the charitable donors and poverty for everyone else.

Marx’s point is not, however, about the moral implications. His concern is to show how the market system and the money-forms disguise real social relations through the exchange of things. He is not saying that this disguise, which he calls “fetishism” (165) (and please note that Marx’s use of this term is technical and quite different from other common usages), is a mere illusion, that it is a made-up construction that can be dismantled if only we care to try. No, in fact, what you see is the lettuce, what you see is your money, you see how much, and you make tangible decisions based on that information. This is the significance of the phrase “appear as what they are”: it really is this way in the supermarket, and we can observe it so, even as it masks social relations.

This fetishism is an unavoidable condition of a capitalistic mode of production, and it has many implications. For example, people do not “bring the products of their labour into relation with each other as values because they see these objects merely as the material integuments of homogeneous human labour. The reverse is true: by equating their different products to each other in exchange as values, they equate their different kinds of labour as human labour” (166). Once again, we see that values arise out of exchange processes even as exchange relations increasingly converge to express value as socially necessary labor-time. But the producers

> do this without being aware of it. Value, therefore, does not have its description branded on its forehead; it rather transforms every product of labor into a social hieroglyphic. Later on, men try to decipher the hieroglyphic, to get behind the secret of their own social product: for the characteristic which objects of utility have of being values is as much men’s social product as is their language. (166–7)

The dialectical relation between value formation and exchange and the immaterial, “phantom” qualities of value as a social relation could not be more starkly portrayed.

But how is this dialectic to be replicated in thought? Many of the political economists got it (and still get it) wrong, says Marx, because they look at prices in the supermarkets and think that’s all there is, and that is the only material evidence they need to construct their theories. They simply examine the relationship between supply and demand and associated price movements. Others, more perceptive, came to “the belated scientific discovery that the products of labor, in so far as they are values, are merely the material expressions of the human labor expended to produce them." This "marks an epoch in the history of mankind's development" (167). Classical political economy did gradually converge on some idea of value that lay behind the fluctuations of the market (often referred to as "natural prices") and it recognized that human labor had something to do with it.

But classical political economy failed to understand the gap between the immateriality of values as "congealed" socially necessary labor-time and their representation as money and therefore also failed to understand the role that the proliferation of exchange played in consolidating the value form as something historically specific to capitalism. It assumed that values were a self-evident and universal truth, failing to see that

> the value character of the products of labour becomes firmly established only when they act as magnitudes of value. These magnitudes vary continually, independently of the will, foreknowledge and actions of the exchangers. Their own movement within society has for them the form of a movement made by things, and these things, far from being under their control, in fact control them. (167–8)

Thus Marx begins his attack on the liberal concept of freedom. The freedom of the market is not freedom at all. It is a fetishistic illusion. Under capitalism, individuals surrender to the discipline of abstract forces (such as the hidden hand of the market made much of by Adam Smith) that effectively govern their relations and choices. I can make something beautiful and take it to market, but if I don't manage to exchange it then it has no value. Furthermore, I won't have enough money to buy commodities to live. Market forces, which none of us individually control, regulate us. And part of what Marx wants to do in *Capital* is talk about this regulatory power that occurs even "in the midst of the accidental and ever-fluctuating exchange relations between the products." Supply and demand fluctuations generate price fluctuations around some norm but cannot explain why a pair of shoes on average trades for four shirts. Within all the confusions of the marketplace, "the labour-time socially necessary to produce [commodities] asserts itself as a regulative law of nature. In the same way, the law of gravity asserts itself when a person's house collapses on top of him" (168). This parallel between gravity and value is interesting: both are relations and not things, and both have to be conceptualized as immaterial but objective.

This then leads Marx directly into a critique of how bourgeois modes of thought have evolved in relationship to the proliferation of exchange relations and the rise of the money-form:

> Reflection on the forms of human life, hence also scientific analysis of those forms, takes a course directly opposite to their real development … Consequently, it was solely the analysis of the prices of commodities which led to the determination of the magnitude of value, and solely the common expression of all commodities in money which led to the establishment of their character as values. It is however precisely this finished form of the world of commodities—the money form—which conceals the social character of private labour and the social relations

between the individual workers, by making those relations appear as relations between material objects, instead of revealing them plainly. (168–9)

This failure of vision on the part of the classical political economists is epitomized in the way so many of them embraced Daniel Defoe's *Robinson Crusoe* as a model for a perfect market economy arising out of a state of nature: Robinson, all on his own, marooned on an island, logically constructs a way of life appropriate to dwelling in a state of nature and step by step reconstitutes the logic of a market economy. But as Marx amusedly points out, Robinson, besides supposedly learning from experience, had also conveniently "saved a watch, ledger, ink and pen from the shipwreck," and immediately began, "like a good Englishman, to keep a set of books" (169–70). In other words, Robinson carried with him to the island the mental conceptions of the world appropriate to a market economy and then went on to construct a relation to nature in that image. The political economists perversely used the story to naturalize the practices of an emergent bourgeoisie.

I have long thought that the political economists selected the wrong Defoe story. *Moll Flanders* is a far better model for how commodity production and circulation work. Moll behaves like the quintessential commodity for sale. She is constantly speculating on the desires of others, and others are constantly speculating on her desires (the great moment occurs when, effectively broke, she spends every last penny on hiring a grand outfit including coach and horses and appropriate jewelry to go to a ball where she enamors a young nobleman and elopes with him that night, only to find out the next morning that he is broke too, at which point they both see the humor of it all and amicably part ways). She travels the world (even goes to colonial Virginia), spends time in debtors' prison; her fortune fluctuates up and down. She circulates like a monetary object in a sea of commodity exchanges. *Moll Flanders* is a much better analogy for the way capitalism, particularly the speculative Wall Street variety, really works.

Plainly, the classical political economists preferred the Robinson Crusoe myth because it naturalized capitalism. But as Marx insists, capitalism is a historical construct, not a natural object. "The categories of bourgeois economics" are merely "forms of thought which are socially valid, and therefore objective, for the relations of production belonging to this historically determined mode of social production." A look at this history indicates the limitations of the supposed universal truths of bourgeois theory. "Let us now transport ourselves from Robinson's island, bathed in light, to medieval Europe, shrouded in darkness." While it may be "shrouded in darkness" the social relations are obvious. Under the *corvée* system, Marx points out, "every serf knows that what he expends in the service of his lord is a specific quantity of his own personal labour-power"; feudal subjects were very aware that "the social relations between individuals in the performance of their labour appear at all events as their own personal relations, and are not disguised as social relations between things, between the products of labour” (169–70). The same is true of a patriarchal rural industry of a peasant family: the social relations are transparent, you can see who is doing what and for whom.

Such historical comparisons, along with the analysis of fetishism, allow us to see the contingent, as opposed to the universal, nature of the truths laid out in bourgeois political economy. “The whole mystery of commodities, all the magic and necromancy that surrounds the products of labour on the basis of commodity production, vanishes therefore as soon as we come to other forms of production” (169). We can even finally imagine social relations organized as “an association of free men,” i.e., a socialist world in which “the social relations of the individual producers, both towards their labour and the products of their labour, are … transparent in their simplicity, in production as well as in distribution” (171–2). By invoking the idea of association, Marx echoes much of French utopian socialist thought in the 1830s and 1840s (Proudhon, in particular, though Marx refrains from acknowledging so). His hope is that we might advance beyond the fetishism of commodities and try to establish, through associative forms, a different way of relating. Whether that is practical or not is a key question for any reader of Marx to consider; but here is one of the rare moments in *Capital* where we glimpse Marx’s vision of a socialist future.

The fetishism of the market generates a good deal of ideological baggage around it. Marx comments, for example, on the way in which Protestantism is the most fitting form of religion for capitalism. He argues that our forms of thought—not just those of the political economists—reflect the fetish of their times; but this is a general tendency. His remarks on religion and its relation to political economic life are significant:

> Political economy has indeed analysed value and its magnitude, however incompletely, and has uncovered the content concealed within these forms. But it has never once asked the question why this content has assumed that particular form, that is to say, why labour is expressed in value, and why the measurement of labour by its duration is expressed in the magnitude of the value of the product. These formulas, which bear the unmistakable stamp of belonging to a social formation in which the process of production has mastery over man, instead of the opposite, appear to political economists’ bourgeois consciousness to be as much a self-evident and nature-imposed necessity as productive labour itself. (173–5)

To this, Marx adds a lengthy and important footnote:

> The value-form of the product of labour is the most abstract, but also the most universal form of the bourgeois mode of production; by that fact it stamps the bourgeois mode of production as a particular kind of social production of a historical and transitory character. If then we make the mistake of treating it as the eternal natural form of social production, we necessarily overlook the specificity of the value-form, and consequently of the commodity-form together with its further developments, the money form, the capital form, etc. (174, n. 34)

You will err, he is suggesting, if you naturalize the value-form under capitalism, because it is then difficult, if not impossible, to conceive of alternatives.

This is what the bourgeois political economists have done: they have treated value as a fact of nature, not a social construction arising out of a particular mode of production. What Marx is interested in is a revolutionary transformation of society, and that means an overthrow of the capitalist value-form, the construction of an alternative value-structure, an alternative value-system that does not have the specific character of that achieved under capitalism. I cannot overemphasize this point, because the value theory in Marx is frequently interpreted as a universal norm with which we should comply. I have lost count of the number of times I have heard people complain that the problem with Marx is that he believes the only valid notion of value derives from labor inputs. It is not that at all; it is a historical social product. The problem, therefore, for socialist, communist, revolutionary, anarchist or whatever, is to find an alternative value-form that will work in terms of the social reproduction of society in a different image. By introducing the concept of fetishism, Marx shows how the naturalized value of classical political economy dictates a norm; we foreclose on revolutionary possibilities if we blindly follow that norm and replicate commodity fetishism. Our task is to question it.

Capitalism has no way of registering intrinsic, "natural" values in its calculus. "Since exchange-value is a definite social manner of expressing the labour bestowed on a thing, it can have no more natural content than has, for example, the rate of exchange"; it is illusory to believe, for example, that "ground rents grow out of the soil, not out of society" (176).

Bourgeois political economy looks at the surface appearance. Insofar as it had a labor theory of value, it never probed deeply into its meaning or the historical circumstances of its emergence. This leaves us with the task of getting beyond the fetishism, not by treating it as an illusion, but by addressing its objective reality (164–5, 176–7). One response is to take the "fair trade" path. Another is to devise a scientific path, a critical theory: a mode of investigation and inquiry that can uncover the deep structure of capitalism and suggest alternative value systems based on radically different kinds of social and material relations.

The two options are not mutually exclusive. A politics that deals with the conditions of labor on a global basis, developing into, say, an anti-sweatshop movement, can easily lead into the much deeper theoretical territory that Marx charts in *Capital* precisely because the surface appearance, while fetishistic, always indicates an objective reality. I recall, for example, when the students at Johns Hopkins put on a fashion show, featuring clothing from Liz Claiborne and the Gap, with a side commentary on both the items of clothing and the conditions of labor associated with their production. This was an effective way to talk about the fetishism and raise awareness with respect to global conditions, while suggesting the importance of doing something about it.

Marx's mission in *Capital*, though, is to define a science beyond the immediate fetishism without denying its reality. He has already laid a lot of the groundwork for this in the critique of bourgeois political economy. He has also already revealed the extent to which we are governed in what we do by the abstract forces of the market and how we are perpetually at risk of being ruled by fetishistic constructs that blind us to what is actually happening. To what degree can you say that this is a free society characterized by true individual liberty? The illusions of a liberal utopian order, in Marx's view, have to be debunked for what they are: a replication of that fetishism that displaces social relations between people into material relations between people and social relations between things.

CHAPTER 2: THE PROCESS OF EXCHANGE

Chapter 2 is not only shorter but easier to follow. Marx's purpose is to define the socially necessary conditions of capitalist commodity exchange and to create a firmer foundation for the consideration of the money-form that is to follow in chapter 3.

Since commodities do not themselves go to market, we need first to define the operative relationship between commodities and those who take them there. Marx imagines a society in which "the guardians" of commodities "recognize each other as owners of private property. This juridical relation, whose form is the contract, whether as part of a developed legal system or not, is a mirror between two wills which mirrors the economic relation … Here the persons exist for one another"—note the echo of the fetishism argument—not as people, but "as representatives and hence owners, of commodities." This leads him to make a broader point. Throughout *Capital*, "the characters who appear on the economic stage are merely personifications of economic relations," and it is "as the bearers"—please note the recurrence of this term—"of these economic relations that they come into contact with each other" (178–9). Marx is concerned with the economic roles that people play, rather than with the individuals who play them. So he will examine relations between buyers and sellers, debtors and creditors, capitalists and laborers. Throughout *Capital*, in fact, the focus will be on roles rather than persons, recognizing that individuals can and do often occupy several different roles, even deeply contradictory positions (as when, in our time, a worker has a pension fund invested in the stock market). This focus on roles rather than individuals is as perfectly legitimate as if we were analyzing the relations between drivers and pedestrians in the streets of Manhattan: most of us have taken on both roles and adapt our behaviors accordingly.

The roles in a capitalist mode of production are strictly defined. Individuals are juridical subjects who have private-property ownership of the commodity they wield, and they trade it under non-coercive, contractual conditions. There is reciprocal respect for the juridical rights of others; the principled equivalence of market exchanges that Aristotle noted is an honored virtue. What Marx describes here is the conventional political and legal framework for properly functioning markets as envisaged in liberal theory. In this world, a commodity is "a born leveller and cynic," because it "is always ready to exchange not only soul, but body, with each and every other commodity." The owner is willing to dispose of it, and the buyer wants to take it: "All commodities are non-use-values for their owners and use-values for their non-owners. Consequently, they must all change hands," but "only the act of exchange can prove whether that labour is useful for others, and its product consequently capable of satisfying the needs of others" (179–80).

This argument as to the socially necessary institutional and legal structure required for capitalism to work is historically specific. Failure to recognize the historical specificity of the bourgeois conception of rights and duties leads to serious errors. It is for this reason that Marx registers, in a lengthy footnote, a vigorous indictment of the anarchist Proudhon,

> who creates his idea of justice, of 'justice éternelle', from the juridical relations that correspond to the production of commodities: he thereby proves, to the consolation of all good petty bourgeois, that the production of commodities is a form as eternal as justice. Then he turns round and seeks to reform the actual production of commodities, and the corresponding legal system, in accordance with this ideal. (178, n. 2)

Proudhon in effect took the specifics of bourgeois legal and economic relations and treated them as universal and foundational for the development of an alternative, socially just economic system. From Marx's standpoint, this is no alternative at all since it merely re-inscribes bourgeois conceptions of value in a supposedly new form of society. This problem is still with us, not only because of the contemporary anarchist revival of interest in Proudhon's ideas but also because of the rise of a more broad-based liberal human rights politics as a supposed antidote to the social and political ills of contemporary capitalism. Marx's critique of Proudhon is directly applicable to this contemporary politics. The UN Universal Declaration of Human Rights of 1948 is a foundational document for a bourgeois, market-based individualism and as such cannot provide a basis for a thoroughgoing critique of liberal or neoliberal capitalism. Whether it is politically useful to insist that the capitalist political order live up to its own foundational principles is one thing, but to imagine that this politics can lead to a radical displacement of a capitalist mode of production is, in Marx's view, a serious error.

What follows is a recapitulation—and Marx frequently reiterates earlier arguments in somewhat different language—of the way in which money "crystallizes out of the process of exchange" in an institutional environment of this sort. He echoes this theme when he describes money as "the historical broadening and deepening of the phenomenon of exchange" that "develops the opposition between use-value and value which is latent in the nature of the commodity":

> The need to give an external expression to this opposition for the purposes of commercial intercourse produces the drive towards an independent form of value, which finds neither rest nor peace until an independent form has been achieved by the differentiation of commodities into commodities and money. At the same rate, then, as the transformation of the products of

labour into commodities is accomplished, one particular commodity is transformed into money. (181)

There is nothing here that we have not already seen in earlier sections, but now Marx expounds on what this economic relation between things implies for relations between people. This economy of market exchange, he says, implies that we are dealing with “the private owners” of “alienable things,” and this in turn implies that we have “persons who are independent of each other.” “Alienable” refers to the fact that “things are in themselves external to man,” i.e., freely exchangeable. This means that the exchangers are free of any personal attachment or other bond to the things they own. It also implies social relationships “of reciprocal isolation and foreignness” that are unique to capitalism and a concomitant of juridical ownership of commodities (182).

Such conditions did not prevail in the “patriarchal family, an ancient Indian commune or an Inca State”; exchange processes had to break down these preceding social structures. This happens gradually, he suggests, as occasional trade between communities evolves to the point where “the constant repetition of exchange makes it a normal social process” (182):

In the same proportion as exchange bursts its local bonds [note the implication of geographical expansion], and the value of commodities accordingly expands more and more into the material embodiments of human labour as such, in that proportion does the money-form become transferred to commodities which are by nature fitted to perform the social function of a universal equivalent. These commodities are the precious metals. (183)

This is, as I have already pointed out, a somewhat dubious historical argument about the dissolution of preexisting social forms in the face of increasing exchange relations and the rise of money-forms. But its logical content is important for demonstrating that what is socially necessary is “an adequate form of appearance of value,” and that requirement is best satisfied by precious metals such as gold and silver by virtue of their natural qualities. But, as he earlier pointed out, this means that the money commodity internalizes a duality, because it is both a commodity in the ordinary sense of being a product of labor *and* it also “acquires a formal use-value, arising out of its specific social function.” In this formal social function, “the money-form is merely the reflection thrown upon a single commodity by the relations between all other commodities” (183).

Furthermore, in this role it is perfectly possible to replace the money commodity “by mere symbols of itself.” This capacity for replacement is not surprising, however, given that “every commodity is a symbol, since, as value, it is only the material shell of the human labour expended on it” (185–6). Marx here opens up the possibility to incorporate many aspects of what is now often referred to as “the symbolic economy” directly into his analysis. He does not attempt to do so, and it would undoubtedly require modifications to the mode of presentation, but I think it important to note that the symbolic aspects of how capitalism works are not external to his argument. Those who argue that capitalism is different now because of the degree to which symbolic capital and the symbolic economy have come to the fore, and that capitalism has consequently changed its spots, should mark well that this is not necessarily so.

The danger lies in treating these symbolic qualities, which are very important, as purely imaginary or as “the arbitrary product of human reflection.” What Marx is driving at here is that even the money commodity cannot realize its specific value without exchanging with all other commodities as equivalents, even as it postures as the universal equivalent for all other commodities. “The difficulty,” he says, “lies not in comprehending that money is a commodity, but in discovering how, why and by what means a commodity becomes money” (186):

> What *appears* to happen is not that a particular commodity becomes money because all other commodities universally express their values in it, but, on the contrary, that all other commodities universally express their values in a particular commodity because it is money. (187, emphasis added)

In other words, once money exists, then commodities find a means of measuring their value easily to hand as if the gold drawn “from the bowels of the earth” is “the direct incarnation of human labour.” This, he declares, is “the magic of money” that needs to be unpacked. “The riddle of the money fetish is therefore the riddle of the commodity fetish, now become visible and dazzling to our eyes” (187).

But there is one other vital point to this chapter. With the “magic” and “fetish” of money firmly in place,

> men are henceforth related to each other in their social process of production in a purely atomistic way. Their own relations of production therefore assume a material shape which is independent of their control and their conscious individual action. (187)

This sounds suspiciously like a tacit invocation of Adam Smith’s vision of a perfectly functioning market whose hidden hand guides individual decisions. No individual is in command and everyone has to function according to what Marx later calls “the coercive laws of competition” (433).

In Smith’s ideal world, the state would create the institutional framework for perfectly functioning markets and private property and then watch the wealth of the state and the welfare of the citizenry rapidly improve as individual initiative and entrepreneurialism coordinated through the hidden hand of the market would produce a result that was beneficial to all. In such a world, Smith thought, the intentions and motivations of individuals (varying from greed to social mission) did not matter, because the hidden hand of the market would do the work.

This chapter poses a conundrum. On the one hand, Marx devotes a footnote to condemning Proudhon’s acceptance of bourgeois notions of rights and legality as providing absolutely no leverage in the construction of a revolutionary alternative. Yet in the main text of the chapter, Marx has seemingly accepted the liberal theory of property ownership, the reciprocity and equivalence of noncoercive market exchange between juridical individuals and even the hidden hand of the market as proposed by Adam

Smith. How are we to reconcile this seeming contradiction? I think the answer is simple enough, but the answer does have important ramifications for how we read the rest of *Capital*.

Marx is engaged in a critique of classical liberal political economy. He therefore finds it necessary to accept the theses of liberalism (and, by extension to our own times, neoliberalism) in order to show that the classical political economists were profoundly wrong even in their own terms. So rather than saying that perfectly functioning markets and the hidden hand can never be constructed and that the marketplace is always distorted by political power, he accepts the liberal utopian vision of perfect markets and the hidden hand in order to show that these would not produce a result beneficial to all, but would instead make the capitalist class incredibly wealthy while relatively impoverishing the workers and everyone else.

This translates into a hypothesis about actually existing capitalism: that the more it is structured and organized according to this utopian liberal or neoliberal vision, the greater the class inequalities. And there is, it goes without saying, plenty of evidence to support the view that the rhetoric of free markets and free trade and their supposed universal benefits to which we have been subjected these past thirty years have produced exactly the result that Marx would expect: a massive concentration of wealth and power at one end of the social scale opposite the proliferating impoverishment of everyone else. But in order to prove that point, Marx has to accept the institutional foundations of liberal utopianism, and that is precisely what he does in this chapter.

This raises an important caveat into how we have to read *Capital*. We have to be careful to distinguish between when Marx is talking about and critiquing the liberal utopian vision in its perfected state, and when he is attempting to dissect actually existing capitalism with all of its market imperfections, power imbalances and institutional flaws. As we will see, these two missions sometimes confound each other. Some of the muddles of interpretation come from this confounding. So I will try in what follows to indicate when he is doing what and to pinpoint those moments of confusion that occasionally arise, including those in Marx's own analysis, when his desire to accomplish one objective—the critique of classical political economy—gets in the way of the additional task of understanding the actual dynamics of a capitalist mode of production.

For the most part, though, Marx has an ingenious way of using the theoretical critique of liberal utopianism in its various political-economic guises to shed devastating critical light on the actually existing capitalism of his own day. And this is fortunate for us, living in a world where the theses of neoliberalism echo and, in some respects, deepen those of liberalism, because Marx's critique of free markets and free trade can shed as much devastating light on our own actually existing capitalism as it did for the capitalism of Marx's own time and place.

CHAPTER TWO

Money

CHAPTER 3: MONEY, OR THE CIRCULATION OF COMMODITIES

By now it's clear that a particular notion of money has been crystallizing out of Marx's account of commodity exchange. It was implicit in the opposition between the relative and equivalent forms of value and this, with the proliferation of exchange into a general social act, led on to the emergence of a universal equivalent that took the form of a tangible money commodity that represented value even as it disguised the origins of value in socially necessary labor-time. We now inspect this money-form more closely.

Chapter 3 is long and quite intricate. It tells a simple story, though, in what by now should be a familiar fashion. Money is a unitary concept, but it internalizes dual functions that mirror the duality of use- and exchange-value within the commodity. On the one hand, money operates as a measure of value, as a golden representative, as it were, of socially necessary labor-time. In this role it must possess distinctive qualities so as to provide, as far as possible, an accurate and efficient standard measure of value. On the other hand, money also has to lubricate the proliferation of exchange and do so with the minimum of fuss and difficulty. In this way it functions as a mere medium and means for moving an increasingly vast array of commodities around.

There is a tension, a contradiction, between these two functions. As a measure of value, for example, gold looks very good. It is permanent and can be stored forever; one can assay its qualities; one can know and control its concrete conditions of production and circulation. So gold is great as a measure of value. But imagine if every time you went for coffee, you had to use a grain of gold to purchase it. This is a very inefficient form of money from the standpoint of the circulation of myriad small quantities of commodities. Imagine everyone with a little pouch with grains of gold in it—what if somebody sneezed while counting out the grains? Gold is an inefficient means of circulation, even as it is excellent as a measure of value. So Marx contrasts money as a measure of value (section 1) and money as a means or medium of circulation (section 2). At the end of the day, though, there is only one kind of money (section 3). And the resolution of that tension between money as an effective measure of value and money as an efficient means of circulation is partially given by the possibility, or—and this is controversial—the *necessity*, of another form of circulation, which is the existence of credit moneys. The consequent relation between debtors and creditors opens up not only the possibility but also the necessity for another form of circulation, that of capital. In other words, what emerges in this chapter is the possibility for the concept, as well as the fact, of capital. In the same way that the possibility of money crystallized out of processes of exchange, so the possibility of capital crystallizes out of the contradiction between money as the measure of value and money as the means of circulation. This is the big story in this long chapter. If you keep it steadily in mind, a lot of the intricate and sometimes confusing details fall more easily into place.

Section 1: The Measure of Values

There is a distinction between "money" and "the money commodity." To consolidate his earlier argument—namely, that value is not in itself materially measurable but needs, rather, a representation to regulate exchanges—Marx begins by assuming gold to be the singular money commodity. This is "the necessary form of appearance of the measure of value which is immanent in commodities, namely labour-time" (188). Value gets expressed (or perhaps we should say "resides") in the relationship between the money commodity as "a form of appearance" of value and all the commodities that exchange with it. The value of commodities is unrecognizable and unknowable without its form of appearance.

This poses, however, some complications—and reveals some contradictions—that require close scrutiny. Marx focuses first on how prices get attached to commodities. Prices are, he says, imaginary, or ideal (meaning a product of thought or logical principle, as opposed to "real" or empirically derived conclusions) (189–90). He's referring to the fact that when I make a commodity, I have no idea what its value is before I take it to market. I go to the market with some imaginary, ideal notion of its value. So I hang a price tag on it. This tells the potential purchaser what I think the value of my commodity should be. I have no idea whether I'll get that price for it, though, because I can have no prior idea of what its value is "on the market":

> In its function as measure of value, money therefore serves only in an imaginary or ideal capacity. This circumstance has given rise to the wildest theories. But, although the money that performs the functions of a measure of value is only imaginary, the price depends entirely on the actual substance that is money. (190)

A relationship arises between the imaginary, ideal prices and the prices actually received in the marketplace. The received price should, "ideally," indicate true value, but it is only going to be the appearance, a representation—and an imperfect one, at that—of value.

We would obviously prefer the quantitative representation of value to be a stable standard of measurement. Gold is a specific commodity, though; its value is given by the socially necessary labor-time embodied in it, and this is not, as we have seen, constant. Fluctuations in the concrete conditions of production affect the value of gold (or any other money commodity). Since, however, such changes affect "all commodities simultaneously," then "other things being equal … *the mutual relations* between their values [are] unaltered, although those values are now all expressed in higher or lower gold-prices than before" (191–3, emphasis added).

Marx also introduces silver as a potential alternative money commodity in order to make a simple point: although gold seems to be a solid standard of value for comparing the relative values of all other commodities, it is insecure when it comes to establishing the absolute value (192–3). If, as in the gold rush of 1848, an influx of gold floods the market, then suddenly the value of gold—the representative measure of socially necessary labor-time—declines, and all the commodity prices have to adjust upward (hence the grand inflation in the sixteenth century when the Spaniards brought in gold from Latin America). We are always dealing with the money commodity as something that has a concrete use-value, and the conditions of its own production have an impact on the way value is represented. In recent years, gold prices have been yo-yoing all over the place (for reasons we will come to shortly). What Marx wants to emphasize here is that even though any money commodity makes for a shifting measure of value, its inconstancy makes no difference to the *relative* values of the commodities being exchanged in the marketplace (192–3, see also 146).

Marx goes on to observe that, "as measure of value, and as standard of price, money performs two quite different functions." Here, a sub-duality within the theory of money emerges, not to be confused with the grand distinction between money as a measure of value and as a medium of circulation. The money commodity "is the measure of value as the social incarnation of human labour"—this is the "ideal" representation—but it is also "the standard of price as a quantity of metal with a fixed weight." It is the latter aspect that allows us to say that this commodity is really "worth" so many ounces of gold. This quantity, the weight of gold, is what we have in mind before, and hopefully in hand after, the exchange of the commodity. "For various reasons," though—and these turn out to be historical reasons—"the money-names of the metal weights are gradually separated from their original weight-names" (192–3).

Now, there is no explicit theory of the state in *Capital*, but if you trace its many appearances throughout the text, it becomes clear that the state performs essential functions within a capitalist system of production (we have already tacitly invoked this in imagining the institutions of private property and a properly functioning market in chapter 2). One of the state's most important functions, as we will see, has to do with organizing the monetary system, regulating the money-names and keeping the monetary system effective and stable.

> These historical processes have made the separation of the money-name from the weight-name into a fixed popular custom. Since the standard of money is on the one hand purely conventional, while on the other hand it must possess universal validity, it is in the end regulated by law. (194)

The money-name is, however, a fetish-construct. "The name of a thing is entirely external to its nature. I know nothing of a man if I merely know his name is Jacob. In the same way, every trace of the money-relation disappears in the money-names pound, thaler, franc, ducat, etc." That is, the relationship to socially necessary labor-time is further disguised by these money-names. "Price," Marx concludes, "is the money-name of the labour objectified in a commodity" (195). The money-name (pounds, ducats) is not the same as the money commodity (gold), and its relation to value as socially necessary labor-time becomes ever more opaque; but the definition of price as the money-name of the labor embodied in a commodity is important to remember.

Marx goes on to make two more important observations. The possibility exists, he writes, "of a quantitative incongruity between price and magnitude of value, i.e. the possibility that the price may diverge from the magnitude of value," and this possibility belongs inherently to the price-form itself. "This is not a defect, but, on the contrary, it makes this form the adequate one for a mode of production whose laws can only assert themselves as blindly operating averages between constant irregularities" (196). What he is saying here is this: if I take my commodity to market and hang a price (a money-name or proposed representation of value) on it, you bring a similar commodity to market and hang your price on it, somebody brings another and hangs a different price on it, we will have a marketplace full of different prices for the same commodity. The average price that will actually be achieved on a particular day will depend on how many people want the commodity and how many people come to market wanting to sell it. So, the average realized price will jump around depending on fluctuations in supply and demand conditions.

It is through this mechanism that an equilibrium price emerges. This equilibrium price, or what the classical political economists called the "natural" price, is the price achieved when supply and demand have come into equilibrium. At this equilibrium point, Marx will later claim, supply and demand cease to explain anything. Supply and demand do not explain why a shirt, on average, costs less than a pair of shoes and what the average differential price is between shirts and shoes. It is Marx's view that this average differential price is reflective of value, of the socially necessary labor-time congealed in the different commodities. On a given day, though, price fluctuations will tell you the state of demand and supply for shoes on that day and why it has gone up or down from yesterday. So the fact that we put money-names on commodities and convert the measure of value into this ideal form, the price-form, allows price fluctuations to equilibrate the market, and this brings us closer to identifying a proper representation of value as equilibrium or natural price. What the fluctuations in prices achieve is a *convergence on the average social labor necessary to produce a commodity*. Without this quantitative incongruity there would be no way of smoothing out demand and supply variations in the marketplace and converging on the social average price that represents value.

The second observation is even more difficult to absorb:

> The price-form … is not only compatible with the possibility of a quantitative incongruity between magnitude of value and price, i.e. between the magnitude of value and its own expression in money, but it may also harbour a qualitative contradiction, with the result that price ceases altogether to express value, despite the fact that money is nothing but the value-

form of commodities. Things which in and for themselves are not commodities, such as conscience, honour, etc., can be offered for sale by their holders and thus acquire the form of commodities through their price. Hence a thing can, formally speaking, have a price without having a value. The expression of price is in this case imaginary, like certain quantities in mathematics. On the other hand, the imaginary price-form may also conceal a real value-relation or one derived from it, as for instance the price of uncultivated land, which is without value because no human labour is objectified in it. (197)

Once you can hang a price tag on something, you can in principle put a price tag on anything, including conscience and honor, to say nothing of body parts and children. You can hang it on a natural resource, on the view of a waterfall; you can certainly put a price tag on land and speculate on shifts in land prices. The price system can operate in these other dimensions to produce qualitative as well as quantitative incongruities. Which then raises the question: if prices can be put on anything independently of their value, and if they can in any case quantitatively fluctuate all over the place independently of value, then why is Marx so fixated on the labor theory of value? Aren't the conventional political economists—even to this day—correct to say that all we can observe and all that can have real meaning is contained in the concept of price, and that the labor theory of value is therefore irrelevant?

Marx does not defend his choice here; he didn't particularly have to, given that the labor theory of value was widely accepted by his Ricardian contemporaries. But today, with the labor theory widely questioned or abandoned, even by some Marxist economists, it behooves us to construct some sort of response. Marx would, I think, appeal to the concept of the material base: if everybody tried to live off the spectacle of waterfalls or through trading in conscience and honor, no one would survive. Real production, the real transformation of nature through labor processes, is crucial to our existence; and it is this material labor that forms the basis for the production and reproduction of all human life. We can't dress in conscience and honor (remember the fable of the emperor's new clothes), we can't dress in the spectacle of a waterfall; clothes do not come to us that way, they come to us through human labor processes and commodity exchange. Even in a city like Washington, D.C., where a vast amount of trading in conscience and honor seems to occur, there is always the question of where everybody's breakfast comes from, as well as the electronics, the paper, the automobiles, the houses and the highways that sustain daily life. To pretend this all arrives magically through the market, facilitated by the magic of the money that happens to be in our pocket, is to succumb totally to the fetishism of the commodity. We need the concept of value as socially necessary labor-time in order to break through the fetishism.

Whether or not you believe that Marx was right to take a position such as this is up to you to decide. To understand *Capital* on Marx's own terms, though, you have to be prepared to accept an argument somewhat along these lines, at least until you get to the end of the book. It is also important to recognize that Marx is, nevertheless, conceding something here that is terribly important. That is, the price system is indeed a surface appearance that has its own objective reality (it really is "as it appears") as well as a vital function—the regulation of demand and supply fluctuations so that they converge on an equilibrium price—and this system can easily get out of control on its own terms. As we will later see even in this chapter, the quantitative and qualitative incongruities have serious consequences for how market systems and money-forms work. (They can even yield not only the possibility, but also the *inevitability*, of financial and monetary crises!)

But Marx's presumption—and if you are to understand him, you must bear with him on this point—is that value as socially necessary labor-time lies at the center of things. If we assume that values are fixed (though perpetual shifts in technology and social and natural relations constantly remind us that in fact it's quite the contrary), then we'll see prices fluctuating over time around "natural" prices, the state of equilibrium between demand and supply. This equilibrium price is merely an appearance, a representation of socially necessary labor-time that generates the value crystallized in money. And *this* value is what the market prices are actually fluctuating around (196). Market prices perpetually and necessarily deviate from values; if they didn't, there would be no way of equilibrating the market. As for the qualitative incongruities, some of them (such as speculation in land values and land rents) have an important material role to play (not to be taken up until Volume III) in processes of urbanization and the production of space. But this is something that cannot be considered here.

Section 2: The Means of Circulation

It is useful to study Marx's introductory paragraphs carefully since they often signal a general argument or theme that needs to be borne in mind. Here he reminds us that "we saw in a former chapter that the exchange of commodities implies contradictory and mutually exclusive conditions" (198). What is he referring to? Look back at the section on relative and equivalent forms of value. There, he identified three peculiarities of the money commodity. First, that "use-value becomes the form of appearance of its opposite, value"; second, that "concrete labour becomes the form of manifestation of its opposite, abstract human labour"; and third, that "private labour takes the form of its opposite, namely labour in its directly social form" (148, 150, 151).

Gold is a particular commodity produced and appropriable by private persons, with a particular use-value, and yet all those particularities are somehow buried within the universal equivalent of the money commodity. "The further development of the commodity does not abolish these contradictions," Marx observes, "but rather provides the form within which they have room to move." There are some clues here—pay particular attention to that phrase, "the form within which [contradictions] have room to move"—as to the nature of Marx's dialectical method. There is, he says, a general “way in which real contradictions are resolved. For instance, it is a contradiction to depict one body as constantly falling towards another and at the same time constantly flying away from it. The ellipse is a form of motion within which this contradiction is *both realized and resolved*” (198, emphasis added).

Earlier, I described the dialectic as a form of expansionary logic. Some people like to think about the dialectic as being strictly about thesis, antithesis and synthesis, but what Marx is saying here is that there is no synthesis. There is only the internalization of and greater accommodation of the contradiction. Contradictions are never finally resolved; they can only be replicated either within a perpetual system of movement (like the ellipse) or on a grander scale. Yet there are apparent moments of resolution, as when the money-form crystallizes out of exchange to resolve the problem of how to circulate all those commodities efficiently. So we might breathe a sigh of relief and say, thank God, we have money, that’s a nice synthesis, we don’t have to think anymore. No, no, says Marx, we now have to analyze the contradictions that money-forms internalize—contradictions that become problematic on a much grander scale. There is, as it were, a perpetual expansion of the contradictions.

For this reason I get impatient with people who depict Marx’s dialectic as a closed method of analysis. It is not finite; on the contrary, it is constantly expanding, and here he is explaining precisely how. We only have to review what we have already experienced in reading *Capital*; the movement of its argument is a perpetual reshaping, rephrasing and expansion of the field of contradictions. This explains why there is so much repetition. Each step forward requires Marx to return to an earlier contradiction in order to explain where the next one is coming from. Reflecting on introductory passages like this one helps to clarify Marx’s meaning; it gives us a better idea of what he is trying to do in each section as his argument unfolds.

We see this process at work in the second section of the chapter on money, where Marx examines what he calls the “social metabolism” and “metamorphosis of commodities” through exchange. Exchange, as we have seen, “produces a differentiation of the commodity into two elements, commodity and money.” When we put these into motion, we see that commodities and money move in opposite directions with each change of hands. While the movement of one (the exchange of money) is supposed to facilitate the other (the movement of commodities), there is an oppositional flow, which creates the possibility for the rise of “antagonistic forms” (198–9). This sets the stage for the analysis of the metamorphosis of commodities.

Exchange is a transaction in which value undergoes a change of form. Marx labels this chain of movements—commodity into money, money into commodity—the “C-M-C” relation. (This is different from the “C-C” or commodity-to-commodity movement of bartering; all exchanges are now mediated through money.) This process is a twofold metamorphosis of value from C into M and of M into C (199–200).

It would seem on the surface that these are mirror images and therefore in principle equivalent, but in fact they are asymmetrical. The C-M side of the exchange, the sale, involves the change in form of a particular commodity into the universal equivalent, the money commodity. It is a movement from the particular to the universal. In order to sell your particular commodity, you must find somebody in the market who wants it. What happens if you get to market and nobody wants your commodity? This provokes a whole series of questions about how need—and the production of needs through, for example, advertising—influences the exchange process:

> Perhaps the commodity is the product of a new kind of labour, and claims to satisfy a newly arisen need, or is even trying to bring forth a new need on its own account … Today the product satisfies a social need. Tomorrow it may perhaps be expelled partly or completely from its place by a similar product. (201)

So the transformation from C into M is complicated in large part by supply and demand conditions that exist in the market at a particular time:

> We see then that commodities are in love with money, but that ‘the course of true love never did run smooth’. The quantitative articulation … of society’s productive organism, by which its scattered elements are integrated into the system of the division of labour, is as haphazard and spontaneous as its qualitative articulation. (202)

That is, the hidden hand of the market—the chaos of market exchange, the chronic uncertainty of it all—places all kinds of barriers in the way of a direct conversion of the commodity into the universal equivalent.

C-M-C is a single process—an exchange—that can be viewed from either of its two “poles” (203). The M-C side of exchange, the purchase, is a transition from money to commodity; it entails a movement from the universal to the particular. This is not, however, simply C-M in reverse. Changing money into a commodity is in principle much easier: you enter the market with your money and buy anything you want. To be sure, potential buyers may on occasion be frustrated by not finding what they desire; but in that case, thanks to the universal equivalence of the money commodity, they can always buy something else.

So in the process of exchange, value in effect moves from one state (that of the commodity) into another (that of money) and back again. Viewed as a whole, this process

> appears in the first place [to be] made up of two opposite and complementary movements, C-M and M-C. These two antithetical transmutations of the commodity are accomplished through two antithetical social processes in which the commodity-owner takes part, and are reflected in the antithetical economic characteristics of the two processes … While the same commodity is successively passing through the two inverted transmutations … the owner of the commodity successively changes his role from seller to buyer. (206)

Marx’s emphasis on antithesis signals a potential contradiction, but not one between buyers and sellers because these are “not fixed roles, but constantly attach themselves to different persons in the course of the circulation of commodities." The contradiction has to lie in the metamorphosis of commodities taken as a whole, i.e., within the circulation of commodities in general, since "the commodity itself is here subject to contradictory determinations," being at once a non-use-value from the standpoint of its owner and, as a purchase, a use-value to the buyer (206–7). This process—the circulation of commodities—is increasingly mediated by money. Again, notice how important the proliferation of exchange relations is to Marx's argument:

> We see here, on the one hand, how the exchange of commodities breaks through all the individual and local limitations of the direct exchange of products, and develops the metabolic process of human labour. On the other hand, there develops a whole network of social connections of natural origin, entirely beyond the control of the human agents. (207)

So where in the process of the circulation of commodities is the contradiction? Whereas a purchased commodity, being a use-value to its consumer, might "fall out of circulation," the money does not drop out and disappear. It keeps on moving such that "circulation sweats money from every pore" (208). With this, Marx launches a definitive and violent attack upon something called Say's law, which was a powerful idea within classical political economy and continues to this day to be a strong tenet of belief among monetarist economists.[1] The French economist J. B. Say held that there can be no such thing as a general crisis of overproduction within capitalism, because every sale is a purchase and every purchase is a sale. By this logic, there is always some sort of aggregate equilibrium between purchases and sales in the market: while there may be an overproduction of shoes relative to shirts, or oranges relative to apples, a generalized overproduction in society is impossible because of the overall equivalence of purchases and sales.

Marx objects as follows:

> Nothing could be more foolish than the dogma that because every sale is a purchase, and every purchase a sale, the circulation of commodities necessarily implies an equilibrium between sales and purchases. If this means that the number of actual sales accomplished is equal to the number of purchases, it is a flat tautology … No one can sell unless someone else purchases. But no one directly needs to purchase just because he has sold … To say that these mutually independent and antithetical processes [i.e., C-M and M-C] form an internal unity is to say also that their internal unity moves forward through external antitheses. These two processes lack internal independence because they complement each other. Hence, if the assertion of their external independence … proceeds to a certain critical point, their unity violently makes itself felt by producing—a crisis. There is an antithesis, immanent in the commodity, between use-value and value, between private labour which must simultaneously manifest itself as directly social labour, and a particular concrete kind of labour which simultaneously counts as merely abstract universal labour, between the conversion of things into persons and the conversion of persons into things; the antithetical phases of the metamorphosis of the commodity are the developed forms of motion of this immanent contradiction. These forms therefore imply the possibility of crises, though no more than the possibility. (208–9)

For the full development of this possibility of crises, I am sorry to say, you are going to have to read Volumes II and III, along with the three volumes of *Theories of Surplus Value*, because, as Marx points out, we need to know a lot more before we can explain in detail where crises might come from. For our purposes here, though, it's worth noticing how the "the conversion of things into persons and the conversion of persons into things" echoes the fetishism argument from the first chapter.

At the heart of Marx's objection to Say's law lies the following argument. I start with C, I go to M, but there is no force that compels me to spend the money immediately on another commodity. I can, if I want, simply hold on to the money. I might do that, for example, if I felt there was some insecurity in the economy, if I was worried about the future and wanted to save. (What would you rather have in your hand in difficult times: a particular commodity or the universal equivalent?) But what happens to the circulation of commodities in general if everybody suddenly decides to hold on to money? The buying of commodities would cease and circulation would stop, resulting in a generalized crisis. If everybody in the world suddenly decided not to use their credit cards for three days, the whole global economy would be in serious trouble. (Recall how we were all urged to get out our credit cards after 9/11 and get back to shopping.) Which is why so much effort is put toward getting money out of our pockets and keeping it circulating.

In Marx's time, most economists, including Ricardo, accepted Say's law (210, n. 42). And partly due to the influence of the Ricardians, the law dominated economic thinking throughout the nineteenth century and up until the 1930s, when there was a generalized crisis. Then followed the (typical, to this day) chorus of economists saying things like, "There would be no crisis if only the economy would perform according to my textbook!" The facts of the Great Depression made a dominant economic theory that denied the possibility of generalized crisis untenable.

Then, in 1936, John Maynard Keynes published his *General Theory of Employment, Interest and Money*, in which he totally abandons Say's law. In his *Essays in Biography* (1933), Keynes reexamines the history of Say's law and what he considered its lamentable consequences for economic theorizing. Keynes made much of something he called the liquidity trap, in which some ruction occurs in the market, and those with money get nervous and hold on to it rather than invest or spend it, driving the demand for commodities down. Suddenly people can't sell their commodities. Uncertainty increasingly troubles the market, and more people hang on to their money, the source of their security. Subsequently, the whole economy just goes spiraling downward. Keynes took the view that government had to step in and reverse the process by creating various fiscal stimuli. Then the privately hoarded money would be enticed back into the market.

As we've seen, Marx similarly dismisses Say's law as foolish nonsense in *Capital*, and since the 1930s there has been a dialogue about the relationship between Marxian and Keynesian theories of the economy. Marx clearly sides with those political economists who did argue for the possibility of general crises—in the literature of the time, these economists were referred to as "general glut" theorists—and there were relatively few of them. The Frenchman Sismondi was one; Thomas Malthus (of population-theory fame) was another, which is somewhat unfortunate, because Marx could not abide Malthus, as we will later see.

Keynes, on the other hand, praises Malthus inordinately in *Essays in Biography* but scarcely mentions Marx—presumably for political reasons. In fact, Keynes claimed he never read Marx. I suspect he did, but even if he didn't, he was surrounded by people like the economist Joan Robinson, who did read Marx and certainly told Keynes about Marx's rejection of Say's law. Keynesian theory dominated economic thinking in the postwar period; then came the anti-Keynesian revolution of the late 1970s. The monetarist and neoliberal theory that is predominant today is much closer to an acceptance of Say's law. So the question of the proper status of Say's law is an interesting one worthy of further inquiry. What matters for our purposes here, though, is Marx's emphatic rejection of it.

The next step in Marx's argument is to plunge into an analysis of the circulation of money. I won't spend much time on the details of this, because Marx is basically reviewing the monetarist literature of the time. The question he is posing here is: how much money does there need to be in order to circulate a given quantity of commodities? He accepts a version of what is called the "quantity theory of money," similar to that of Ricardo. After several pages of detailed discussion, he arrives at a supposed law: the quantity of the circulating medium is "determined by the sum of the prices of the commodities in circulation, and the average velocity of the circulation of money" (219). (The velocity of circulation of money is simply a measure of the rate at which money circulates—e.g., how many times in a day a dollar bill changes hands.) He had earlier noted, however, that "these three factors, the movement of prices, the quantity of commodities in circulation, and the velocity of the circulation of money, can all vary in various directions under different conditions" (218). The quantity of money needed therefore varies a great deal, depending on how these three variables shift. If you can find some way to speed up the circulation, then the velocity of money accelerates, as happens through credit-card use and electronic banking, for example: the greater the velocity of money, the less money you need, and conversely. Plainly, the concept of the velocity of money is important, and to this day the Federal Reserve goes to great pains to try to get accurate measures of it.

Considerations on the quantity theory of money bring him back to the argument I laid out at the beginning of this chapter—that when it comes to the circulation of commodities, little bits of gold are inefficient. It is much more efficient to use tokens, coins, paper or, as happens nowadays, numbers on a computer screen. But "the business of coining," Marx says, “like the establishing of a standard measure of price, is an attribute proper to the state” (221–2). So the state plays a vital role in replacing metallic money commodities with tokens, symbolic forms. Marx illustrates this with brilliant imagery:

> The different national uniforms worn at home by gold and silver as coins, but taken off again when they appear on the world market, demonstrate the separation between the internal or national spheres of commodity circulation and its universal sphere, the world market. (222)

The significance of the world market and world money comes back in at the end of this chapter.

Locally, the quest for efficient forms of money becomes paramount. “Small change appears alongside gold for the payment of fractional parts of the smallest gold coin” which then leads to “inconvertible paper money issued by the state and given forced currency” (224). As soon as symbols of money emerge, many other possibilities and problems arise:

> Paper money is a symbol of gold, a symbol of money. Its relation to the values of commodities consists only in this: they find imaginary expression in certain quantities of gold, and the same quantities are symbolically and physically represented by the paper. (225)

Marx also notes “that just as true paper money arises out of the function of money as the circulating medium, so does credit-money take root spontaneously in the function of money as the means of payment” (224). The money commodity, gold, is replaced by all manner of other means of payment such as coins, paper moneys and credit. This happens because a weight of gold is inefficient as a means of circulation. It becomes “socially necessary” to leave gold behind and work with these other symbolic forms of money.

Is this a logical argument, a historical argument or both? Certainly, the history of the different monetary forms and the history of state power are intricately intertwined. But is this necessarily so, and is there some inevitable pattern to those relations? Until the early 1970s, most paper moneys were supposedly convertible into gold. This was what gave the paper moneys their supposed stability or, as Marx would describe it, their relationality to value. Converting money into gold was, however, denied to private persons in many countries from the 1920s onward and mainly retained for exchanges between countries to balance currency accounts. The whole system broke down in the late 1960s and early 1970s, and we now have a purely symbolic system with no clear material base—a universal money commodity.

So what relationship exists today between the various paper moneys (e.g., dollars, euros, pesos, yen) and the value of commodities? Though gold still plays an interesting role, it no longer functions as the basis for representing value. The relationship of moneys to socially necessary labor-time, which was problematic even in the case of gold, has become even more remote and elusive. But to say it is hidden, remote and elusive is not to say it does not exist. Turmoil in international currency markets has something to do with differences in material productivity in different national economies.

The problematic relationship between the existing money-forms and commodity-values that Marx outlines is still with us and very much open to the line of analysis that he pioneered, even though its contemporary form of appearance is quite different.

Section 3: Money

Marx has examined money as a measure of value and revealed some of its contradictions, particularly with respect to its "ideal" functions as price and the consequent "incongruities" in the relationship between prices and values. He has looked at money from the standpoint of circulation and revealed another set of contradictions (including the possibility of general crises). Now—typical Marx—he comes back to us and says, well, at the end of the day, there is only one money. This means that somehow the contradictions between money as a measure of value and money as a medium of circulation have to have "room to move" or perhaps even be resolved.

He thus begins by reiterating the foundational idea of money as "the commodity which functions as a measure of value and therefore also as the medium of circulation, either in its own body or through a representative" (227). So we are back to the unitary concept, but we must examine how the contradictions earlier identified can operate within it. The loosening of the connection between value and its expression provides room for maneuver, but it does so at the expense of contact with a real and solid monetary base.

From this point, Marx probes deeper into the contradictions that characterize this evolved form of the money system. He begins by considering the phenomenon of hoarding:

> When the circulation of commodities first develops, there also develops the necessity and the passionate desire to hold fast to the product of the first metamorphosis. This product is the transformed shape of the commodity, or its gold chrysalis. Commodities are thus sold not in order to buy commodities, but in order to replace their commodity-form by their money-form. Instead of being merely a way of mediating the metabolic process, this change of form becomes an end in itself … The money is petrified into a hoard, and the seller of commodities becomes a hoarder of money. (227–8, emphasis added)

(This passage foreshadows another kind of circulation process, as we'll see, in which C-M-C is viewed as M-C-M with the procurement of money as an end in itself.)

But why would people do this? Marx offers an interesting twofold answer. On the one hand there is a passionate desire for money-power, but on the other there also exists a social necessity. Why is hoarding socially necessary for commodity exchange? Here he invokes the temporal problem of coordinating the sales and purchases of different commodities that take very different times to produce and bring to market. A farmer produces on an annual basis but also buys on a daily basis; he therefore needs to hoard reserves from one harvest to the next. Anyone wishing to purchase a big-ticket item (like a house or a car) needs to hoard money first—unless there is a credit system. “In this way hoards of gold and silver of the most various sizes are piled up at all the points of commercial intercourse” (229).

But the ability to hold the means of exchange (in defiance of Say’s law) also awakens a passion, a “lust for gold.” “The hoarding drive,” he says, “is boundless in its nature.” Witness Christopher Columbus: “Gold is a wonderful thing! Its owner is master of all he desires. Gold can even enable souls to enter Paradise” (229–30). Here Marx, quoting Columbus, returns to the idea that once you can hang a price tag on something, you can hang it on anything—even a person’s soul, as his allusion to the Catholic Church’s infamous medieval practice of selling indulgences (i.e., papal pardons that promised entry into heaven) suggests:

> Circulation becomes the great social retort into which everything is thrown, to come out again as the money crystal. Nothing is immune from this alchemy, the bones of the saints cannot withstand it. (229)

The sale of indulgences is sometimes regarded as one of the first major waves of capitalist commodification. It certainly laid the basis for all that hoarded wealth in the Vatican. Talk about the commodification of conscience and honor!

So there is nothing that is not commensurable with money; in the circulation of commodities, it is “a radical leveller, it extinguishes all distinctions” (229). This idea of money as a radical leveler is very important. It indicates a certain democracy of money, an egalitarianism in it: a dollar in my pocket has the same value as one in yours. With enough money, you could buy your way into heaven no matter your sins!

But money is also “itself a commodity, an external object capable of becoming the private property of any individual. Thus the social power becomes the private power of private persons” (229–30). This is a vital step in Marx’s argument. Notice how it echoes the third “peculiarity” of the money-form revealed in the section on relative and equivalent values—i.e., money’s tendency to render private labor a means of expression for social labor. With this step, though, Marx reverses that initial formulation of the logical relation between money and labor. There, the problem was that private activities were involved in the production of the universal equivalent. Now, he is describing the way in which private persons can appropriate the universal equivalent for their own private purpose—and we begin to see the possibility for the concentration of private and, eventually, class power in monetary form.

This does not always go down well. “Ancient society … denounced it as tending to destroy the economic and moral order” (230). This is a theme that Marx explored at some length in the *Grundrisse*, where he writes on how money destroyed the ancient community by becoming the community itself, the community of money.[2] This is the kind of world in which we ourselves now live. We may have fantasies of belonging to this or that cultural community, but in practice, Marx argues, our primary community is given by the community of money—the universal circulatory system that puts breakfast on our tables—whether we like it or not:

> Modern society, which already in its infancy had pulled Pluto by the hair of his head from the bowels of the earth, greets gold as its Holy Grail, as the glittering incarnation of its innermost principle of life. (230)

The social power that attaches to money has no limit. But boundless though the hoarding drive may be, there is a quantitative limitation on the hoarder: the amount of money he has at any given time. "This contradiction between the *quantitative limitation* and the *qualitative lack of limitation* of money keeps driving the hoarder back to his Sisyphean task: accumulation" (231, emphasis added). This is the first mention of accumulation in *Capital*, and it is important to notice that Marx arrives at it by uncovering the contradiction inherent in the act of hoarding money.

The limitless potentialities for monetary accumulation are fascinating to reflect on. There is a physical limit to the accumulation of use-values. Imelda Marcos is reported to have had some two thousand pairs of shoes, but this enormous quantity is still a finite amount. How many Ferraris or McMansions can you own? With money-power, the sky seems to be the limit. No matter how much money they earn, all CEOs and billionaires want, and can get, more. In 2005 the leading hedge fund managers in the United States received around $250 million in personal remuneration, but by 2008 several of them, including George Soros, gained nearly $3 billion. The accumulation of money as unlimited social power is an essential feature of a capitalist mode of production. When people seek to accumulate that social power, they start to behave in a very different way. Once the universal equivalent becomes a representation of all socially necessary labor-time, the potentialities for further accumulation are limitless.

The consequences of this are legion. A capitalist mode of production is essentially based on infinite accumulation and limitless growth. Other social formations at some historical or geographical point reach a limit, and when they do, they collapse. But the experience of capitalism, with some obvious phases of interruption, has been characterized by constant and seemingly limitless growth. The mathematical growth curves illustrating the history of capitalism in terms of total output, total wealth and total money in circulation are astonishing to contemplate (along with the radical social, political and environmental consequences they imply). This growth syndrome would not be possible if not for the seemingly limitless way in which the representation of value can be accumulated in private hands. None of this is explicitly mentioned in *Capital*, but it helps us make an important connection. Marx is setting up his argument concerning the contradiction between the limitless potentiality of money-power accumulation and the limited possibilities for use-value accumulation. This, we'll see, is a precursor to his explanation of the growth dynamics and expansionary nature of what today we call "globalizing" capitalism.

At this point, however, he simply takes the standpoint of the hoarder, for whom the limitless accumulation of social power in the form of money is a significant incentive (leaving aside the added incentive of the aesthetic value attached to beautiful silver and gold objects). Marx notices that hoarding has a potentially useful function in relation to the contradiction between money as a measure of value and as a medium of circulation. The hoarded money constitutes a reserve that can be put into circulation if there is a surge in commodity production and can be retracted when the quantity of money needed for circulation shrinks (e.g., due to an increase in velocity). In this way, the formation of a hoard becomes crucial to moderating "the ebbs and flows" of the money in circulation (231).

The extent to which a hoard can perform this function depends, however, on whether it is used appropriately. How might hoarded money be enticed back into circulation when needed? Raising the relative price of gold and silver, for example, could tempt people to spend on commodities that have become relatively cheaper. The idea is that "the reserves created by hoarding serve as channels through which money may flow in and out of circulation, so that circulation itself never overflows its banks" (232).

Marx then considers the implications of money being used as a means of payment. Again, the basic problem addressed here arises out of the intersecting temporalities of different kinds of commodity production. A farmer produces a crop that can be put on the market in September. How do farmers live the rest of the year? They need money continuously but get their money all at one time, once a year. One solution, instead of hoarding, is to use money as a means of payment. This creates a time gap between the exchange of commodities and the money exchanges; a future date of settlement has to be set. (Michaelmas became a traditional date to settle up accounts in Britain, reflecting the agricultural cycle there.) The commodities circulate "on tick." Money becomes money of account, written down in a ledger. Since no money is actually moving until settlement date, less aggregate money is needed to circulate commodities, and this helps resolve tensions between money as a measure of value and as a medium of circulation (232–3).

The result is a new kind of social relation—that between debtors and creditors—which gives rise to a different kind of economic transaction and a different social dynamic:

> The seller becomes a creditor, the buyer becomes a debtor. Since the metamorphosis of commodities, or the development of their form of value, has undergone a change here, money receives a new function as well. It becomes the means of payment. (233)

But note well: "the role of creditor or of debtor results here from the simple circulation of commodities," but it is also possible for it to shift from transient, occasional forms to "a more rigid crystallization," by which he means a more definite class relation. (He compares this dynamic to the class struggle in the ancient world and the contest in the Middle Ages that "ended with the ruin of the feudal debtors, who lost their political power together with its economic basis” (233).) So there is a power relation within the debtor-creditor relation, though its nature has yet to be determined.

So what is the role of credit in the general circulation of commodities? Suppose I am a creditor. You are in need of money, and I lend it to you now with the idea I will get it back later. The form of circulation is M-C-M, which is very different from C-M-C. Why would I circulate money in order later to get back the same amount of money? There is no advantage to me in this form of circulation unless I get back more money at the end than I started with. (Perhaps it’s already clear where this analysis is leading.)

There follows a crucial passage, the significance of which is all too easy to miss, partly because of the way Marx buries it in complicated language. I cite it nearly in full:

> Let us return to the sphere of circulation. The two equivalents, commodities and money, have ceased to appear simultaneously at the two poles of the process of sale. The money functions now, first as the measure of value in the determination of the price of the commodity sold … Secondly it serves as a nominal means of purchase. Although existing only in the promise of the buyer to pay, it causes the commodity to change hands. Not until payment falls due does the means of payment actually step into circulation, i.e. leave the hand of the buyer for that of the seller. The circulating medium was transformed into a hoard because the process stopped short after the first phase, because the converted shape of the commodity was withdrawn from circulation. The means of payment enters circulation, but only after the commodity has already left it. The money no longer mediates the process. It brings it to an end by emerging independently, as the absolute form of existence of exchange-value, in other words the universal commodity. The seller turned his commodity into money in order to satisfy some need; the hoarder in order to preserve the monetary form of his commodity, and the indebted purchaser in order to be able to pay. If he does not pay, his goods will be sold compulsorily. *The value-form of the commodity, money, has now become the self-sufficient purpose of the sale, owing to a social necessity springing from the conditions of the process of circulation itself*. (233–4, emphasis added)

Decoded, this means that there needs to be a form of circulation in which money is going to be exchanged in order to get money: M-C-M. This is a shift in perspective that makes a world of difference. If the objective is procuring other use-values through commodity production and commodity exchange, albeit mediated through money, we’re dealing with C-M-C. In contrast, M-C-M is a form of circulation in which money is the objective, not commodities. In order for that to have a rationale, it requires that I get back more money than I started with. This is the moment in *Capital* when we first see the circulation of capital crystallizing out of the circulation of commodities mediated by the contradictions of money-forms. There is a big difference between the circulation of money as a mediator of commodity exchange and money used as capital. Not all money is capital. A monetized society is not necessarily a capitalist society. If everything revolved around the C-M-C circulation process, then money would be merely a mediator, nothing more. Capital emerges when money is put into circulation in order to get more money.

I want to pause now to reflect a bit on the nature of Marx's argument so far. At this point, we can say that the proliferation of commodity exchange necessarily leads to the rise of money-forms and that the internal contradiction within these money-forms necessarily leads, in turn, to the rise of the capitalist form of circulation, in which money is used to gain more money. This is, crudely summarized, the argument of *Capital* so far.

We first have to decide whether this is a historical or a logical argument. If it is the former, then there is a teleology to history in general, and capitalist history in particular; the rise of capitalism is an inevitable step in human history, emerging out of the gradual proliferations of commodity exchange. It is possible to find statements in Marx that would support such a teleological view, and his frequent deployment of the word "necessary" certainly supports such an interpretation. I myself am not convinced of it, and if Marx did indeed believe this then I think he was wrong.

This leaves us with the logical rationale, which I find much more persuasive. It focuses on the methodology at work as the argument unfolds: the dialectical and relational opposition between use-value and exchange-value as embodied in the commodity; the externalization of that opposition in the money-form as a way to represent value and facilitate commodity exchange; the internalization of this contradiction by the money-form as both a medium of circulation and a measure of value; and the resolution of that contradiction through the emergence of relations between debtors and creditors in the use of money as a means of payment. Now we are in a position to understand money as the beginning and end point of a distinctive circulation process, to be called capital. The logic of Marx's argument reveals the internalized dialectical relations that characterize a fully developed capitalist mode of production (understood as a totality) of the sort that evolved (for contingent historical reasons) from the sixteenth century onward in Britain in particular.

There may, of course, be some compromise to be made with the historical rationale, simply by converting the language from "necessity" to "possibility" or even "probability" or "likelihood." We would then say that the contradictions in the money-form created the possibility for the rise of a capitalist form of circulation, and perhaps even point to specific historical circumstances in which the pressures emanating from those contradictions might become so overwhelming as to directly cause capitalism to break through. Certainly much of what Marx attributes to "social necessity" would seem to indicate this. We could likewise point to the intense barriers that had to be developed in "traditional" societies to prevent the capitalist form of circulation from coming to dominate and the social instabilities those societies experienced as they were subjected to periodic feasts and famines of either commodity trading or gold or silver supply. Different social orders (such as China's) have, at various times, ridden out these contradictions in their own fashion without falling under the domination of capital. Whether contemporary China has already fallen into the capitalist camp or can manage to continue to ride the capitalist tiger is, however, a matter of great import and a subject of much debate. I must, however, conclude now with a series of questions to contemplate.

In *Capital*, Marx passes on to more particular matters. There is, he notes "a contradiction immanent in the function of money as the means of payment":

> When the payments balance each other, money functions only nominally, as money of account, as a measure of value. But when actual payments have to be made, money does not come onto the scene as a circulating medium, in its merely transient form of an intermediary in the social metabolism, but as the individual incarnation of social labour, the independent presence of exchange-value, the universal commodity. (235)

That is, when money comes into circulation to solve this disequilibrium, those who hold it don't do so out of the goodness of their hearts, responding to the needs of others or to the market's need for a greater supply of money. Rather, somebody who owns the universal equivalent puts it into the market purposefully, for some reason, and we have to understand what that reason might be. But the "independence" of the universal commodity and its separation from day-to-day commodity circulation have profound consequences.

From here Marx's argument takes a surprising turn:

> This contradiction bursts forth in that aspect of an industrial and commercial crisis which is known as a monetary crisis. Such a crisis occurs only where the ongoing chain of payments has been fully developed, along with an artificial system for settling them. Whenever there is a general disturbance of the mechanism, no matter what its cause, money suddenly and immediately changes over from its merely nominal shape, money of account, into hard cash. Profane commodities can no longer replace it. (236)

In other words, you can't settle your bills with more IOUs; you've got to find hard cash, the universal equivalent, to pay them off. This then poses the social question in general: where is the hard cash going to come from? Marx continues,

> The use-value of commodities becomes valueless, and their value vanishes in the face of their own form of value. The bourgeois, drunk with prosperity and arrogantly certain of himself, has just declared that money is a purely imaginary creation. 'Commodities alone are money,' he said. But now the opposite cry resounds over the markets of the world: only money is a commodity. As the hart pants after fresh water, so pants his soul after money, the only wealth. In a crisis, the antithesis between commodities and their value-form, money, is raised to the level of an absolute contradiction. Hence money's form of appearance is here also a matter of indifference. The monetary famine remains whether payments have to be made in gold or in credit-money, such as bank-notes. (236–7)

Back in 2005, there was a consensus that there was an immense surplus of liquidity sloshing around in the world's markets. The bankers had surplus funds and were lending to almost anyone, including, as we later found out, people who had no creditworthiness whatsoever. Buy a house with no income? Sure, why not? Money doesn't matter because commodities like housing are a safe bet. But then the prices of houses stopped rising, and when the debts fell due, more and more people could not pay. At that point the liquidity suddenly dries up. Where is the money? Suddenly the Federal Reserve has to inject massive funds into the banking system because now "money is the only commodity."

As Marx amusingly put it elsewhere, in boom economies everybody acts like a Protestant—they act on pure faith. When the crash comes, though, everyone dives for cover in the "Catholicism" of the monetary base, real gold. But it is in these times that the question of real values and reliable money-forms gets posed. What is the relation between what is going on in all those debt-bottling plants in New York City and real production? Are they dealing in purely fictitious values? These are the questions that Marx raises for us, questions that are forgotten during the halcyon years but regularly come back to haunt us at moments of crisis. Once the monetary system becomes even more detached from the value system than it does with a gold standard, then all sorts of wild possibilities open up with potentially devastating consequences for social and natural relations.

The sudden shortage of circulating medium, at a certain historical moment, can likewise generate a crisis. Withdrawing short-term credit from the market can crash commodity production. A good example of that took place in East and Southeast Asia between 1997 and 1998. Perfectly adequate companies, producing commodities, were heavily indebted but could easily have worked their way out of their indebtedness had it not been for a sudden withdrawal of short-term liquidity. The bankers withdrew the liquidity, the economy crashed and viable companies went bankrupt, selling out for lack of access to the means of payment. Western capital and the banks came in and bought them all up for almost nothing. Liquidity was then restored, the economy revived and suddenly the bankrupted companies are viable again. Except now they are owned by the banks and the Wall Street folk, who can sell them off at an immense profit. In the nineteenth century, there were several liquidity crises of this kind, and Marx had followed them closely. 1848 saw a profound element of a liquidity crisis. And the people who came out of that year exceedingly enriched and empowered were—guess who?—the people who controlled the gold, i.e., the Rothschilds. They brought down governments simply because they controlled the gold at that particular moment. In *Capital*, Marx shows how the possibility of this kind of crisis is immanent in the way contradictions within the monetary system move under capitalism (236).

This then leads Marx to modify the quantity theory of money, by insisting that less money is needed the more payments balance each other out and the more money becomes a mere means of payment. "Commodities circulate, but their equivalent in money does not appear until some future date." In this way, "credit-money springs directly out of the function of money as a means of payment, in that certificates of debt owing for already purchased commodities"—what on Wall Street is now institutionalized as collateralized debt obligations (CDOs)—"themselves circulate for the purpose of transferring those debts to others" (237–8).

On the other hand, the function of money as a means of payment undergoes expansion in proportion as the system of credit itself expands … When the production of commodities has attained a certain level and extent, the function of money as a means of payment begins to spread out beyond the sphere of the circulation of commodities. It becomes the universal material of contracts. Rent, taxes and so on are transformed from payments in kind to payments in money. (238)

With this, Marx anticipates the monetization of everything, as well as the spread of credit and finance in ways that would radically transform both economic and social relations.

The bottom line is that “the development of money as a means of payment makes it necessary to accumulate it in preparation for the days when the sums which are owing fall due” (240). Again, accumulation and hoarding are paired, but they have different functions:

While hoarding, considered as an independent form of self-enrichment, vanishes with the advance of bourgeois society, it grows at the same time in the form of the accumulation of a reserve fund of the means of payment. (240)

This leads Marx to modify the quantity theory of money earlier stated: the total quantity of money required in circulation is the sum of commodities, multiplied by their prices and modified by the velocity and the development of means of payment. To this must now be added a reserve fund (a hoard) that will permit flexibility in times of flux (240). (In contemporary conditions, of course, this reserve fund is not privately held but lies within the prerogative of a public institution, which in the US is appropriately designated the Federal Reserve.)

The final subsection of this chapter deals with world money. To work effectively, any monetary system, as we have seen, requires a deep participation on the part of the state as a regulator of coins and symbols and overseer of the qualities and quantities of money (and in our times as manager of the reserve fund). Individual states typically manage their own monetary system in a particular way and can exercise a great deal of discretion in so doing. There is still a world market, however, and national monetary policies cannot exempt states from the disciplinary effects that flow from commodity exchange across the world market. So while the state may play a critical role in the stabilization of the monetary system within its geopolitical borders, it is nevertheless connected to the world market and subject to its dynamics. Marx points to the role played by precious metals; gold and silver became, as it were, the *lingua franca* of the world financial system. This metallic base was vital both domestically and in external (international) relations (241–3).

So the security of this metallic base and the money-forms (coins, in particular) derived from it became critical to global capitalism. It is interesting to note that at the same time as John Locke was urging religious tolerance, condemning the practice of burning heretics at the stake, his close colleague Isaac Newton was being called on to defend to quality of moneys as master of the Royal Mint. He had to face the problem of the debasement of the currency through the practice of shaving some of the silver off silver coins to make more coins (an easy way to make money, when you think about it). Convicted coin-clippers were publicly hung at Tyburn—offences against God were to be forgiven, but offences against capital and mammon deserved capital punishment!

So this brings us to the problem of how relevant Marx's arguments are in a world where the financial system works without a money commodity, without a metallic base, as has been the case since 1971. You will notice that gold is still important and perhaps wonder, in these troubled times of roiled international currency markets, whether you want to hold gold, dollars, euros or yen. So gold has not entirely disappeared from the scene, and there are some who argue for a return to some version of a gold standard to counteract the instabilities and the chaotic speculation that often trouble international financial transactions. The gold, recall, is simply depicted by Marx as a representation of value, of socially necessary labor-time. All that has happened since 1973 is that the manner of representation has changed. But Marx himself also notes multiple shifts in representational forms with coins, paper moneys, credit and the like, so in a way there is nothing in the current situation that defies his mode of analysis. What has happened, in effect, is that the value of a particular currency vis-à-vis all other currencies is (or should be) determined in terms of the value of the total bundle of commodities produced within a national economy. Plainly, the overall productivity of a whole economy is an important variable in all this; hence the emphasis placed on productivity and efficiency in public policy.

Now, if we stick with Marx's logic, we should immediately observe the contradictions that derive from this situation. To begin with, there is the fiction of a national economy that matches the "national uniforms" of national moneys. Such an economy is an "ideal," a fiction made real by collecting vast amounts of statistics on production, consumption, exchange, welfare and the like. These statistics are crucial for evaluating the state of a nation and play an important role in affecting exchange rates between currencies. When the statistics on consumer confidence and jobs look good, the currency rises. These data actually construct the fiction of a national economy when really there is no such thing; in Marx's terms, it is a fetish construct. But then perhaps speculators may enter and challenge the data (much of which is organized on pretty shaky grounds) or suggest that some indicators are more important than others, and if they can prevail then they can make megabucks betting on currency moves. For example, George Soros made a billion dollars in a few days by betting against the British pound in relation to the European Exchange Rate Mechanism, by convincing the market that he had the better view on the national economy.

What Marx has built into his mode of analysis is a persuasive way to understand the fraught and problematic link between value (the socially necessary labor-time congealed in commodities) and the ways in which the monetary system represents that value. He unpacks what is fictitious and imaginary about those representations and their resulting contradictions, while showing how, nevertheless, the capitalist mode of production cannot function without these ideal elements. We cannot abolish the fetishism, as he earlier pointed out, and we are condemned to live in a topsy-turvy world of material relations between people and social relations between things. The way forward is to advance the analysis of the inherent contradictions, to understand the way they move and the ways they open up new possibilities for development (as with the credit system) as well as the potential for crises. Marx's method of inquiry, it seems to me, is exemplary even as we have to adapt it to understand our current perilous situation.

One final point. This chapter on money is rich, complicated and hard to absorb on first reading. For this reason, as I began by remarking, many people give up on *Capital* by chapter 3. I hope you have found enough that is intriguing to stay with it. But you will also be glad to know that you do not have to understand everything in the chapter in order to move on. Much of what is said here is more relevant to later volumes than to the rest of Volume I. Armed with some basic, but essential, propositions from this chapter, it is possible to grasp the rest of the material without too much difficulty. From here on in, the argument becomes much easier.

CHAPTER THREE

From Capital To Labor-Power

We now take on the three chapters dealing with the concepts of capital and of labor-power. These chapters, I think you'll find, are much more straightforward and clear than those we have been through. There are times when they seem almost obvious; one wonders sometimes why we are being treated to such elaborate discussions of fairly simple ideas, particularly when in earlier chapters such difficult ideas were presented almost without explanation. To some degree this is a product of the period when Marx was writing. Anyone interested in political economy at that time would have been familiar with the labor theory of value (albeit in Ricardian form), whereas we not only are unfamiliar with it but live in times when most economists, and even some Marxists, consider it indefensible. Were Marx writing *Capital* today, he would have to offer a strong defense of it rather than simply state it as obvious. By contrast, the materials covered in these following chapters were more radical departures from conventional thought in Marx's time, but appear far more familiar to us today.

We are, however, undertaking a macro-transition in the argument's location in these three chapters, and it is useful to note this at the outset. *Capital* starts out with a model of exchange based on the barter of commodities, in which it was (unrealistically) imagined that equivalent socially necessary labor-times were being exchanged. Marx then moves from this C-C relation to examine how exchanges get mediated and generalized through the rise of the money form. Careful analysis of this C-M-C exchange system brings us at the end of the money chapter to identify the M-C-M form of circulation, in which money became the aim and object of exchange. In the C-M-C circuit, an exchange of equivalent values makes sense because its aim is to acquire use-values. I want the shirts and the shoes but do not need or want the apples and pears I have produced. But when it comes to M-C-M, the exchange of equivalents seems absurd. Why go through all the trouble and risk of this process to end up with the same amount of money-value at the end? M-C-M only makes sense if it results in an increment of value, M-C-M + ΔM, to be defined as surplus-value.

This raises the question: where can this surplus-value come from when the laws of exchange, M-C and then C-M, as presupposed in classical political economy, mandate an exchange of equivalents? If the laws of exchange are to be observed as the theory states, then a commodity must be found that has the capacity to produce more value than it itself has. That commodity, Marx says in chapter 6, is labor-power. This is the broad transitional story told in these three chapters. The focus begins to shift from commodity exchange to capital circulation.

There is, however, one important feature in these chapters that deserves some preliminary scrutiny. Several times already I have asked whether

Marx is making a logical argument (based on a critique of the utopian propositions of classical liberal political economy) or a historical argument about the evolution of actually existing capitalism. By and large I have preferred the logical reading to the historical one, even though there may be important historical insights to be gained in considering the circumstances necessary to facilitate the rise of a capitalist mode of production (such as the work of the state in relation to the different money-forms). This manner of approach would be consistent with the methodological argument he makes elsewhere, that we can only properly understand history by looking backward from where we are today. This was his key point in the *Grundrisse*:

> Bourgeois society is the most developed and the most complex historical organization of production. The categories which express its relations, the comprehension of its structure, thereby also allows insights into the structure and relations of production of all the vanished social formations out of whose ruins and elements it built itself up, whose partly still unconquered remnants are carried along within it, whose mere nuances have developed explicit significance within it, etc. Human anatomy contains a key to the anatomy of the ape.[1]

But while "the intimations of higher development … can be understood only after the higher development is already known," this should not delude us into seeing the prototypes of "bourgeois relations in all forms of society" or thinking "that the categories of bourgeois economics possess a truth for all other forms of society."[2] Marx does not accept a Whig interpretation of history or a simple teleology. The bourgeois revolution fundamentally reconfigured preexisting elements into fundamentally new forms, at the same time allowing us to see those preexisting elements in a new light.

CHAPTER 4: THE GENERAL FORMULA FOR CAPITAL

In these three chapters, the reading of history seems to have an important independent role to play in the theorizing. He starts off chapter 4, for example, with a historical statement: "World trade and the world market date from the sixteenth century, and from then on the modern history of capital starts to unfold." The logical starting point is given in the parallel statement that "commodity circulation is the first form of appearance of capital" (247). So the logical and historical arguments are immediately juxtaposed. We need, therefore, to pay careful attention to how these arguments work together in these chapters in order to understand how the methodological prescriptions set out in the *Grundrisse* are put into practice in *Capital*.

Marx begins by examining how capital historically confronted the power of landed property in the transition from feudalism to capitalism. In this transition, merchants' capital and usurers' capital—specific forms of capital—played an important historical role. But these forms of capital are different from the "modern" industrial form of capital that Marx considers central to a fully developed capitalist mode of production (247). The dissolution of the feudal order, the dissolution of the power of landed property and of feudal land control, was largely accomplished through the powers of merchant capital and usury. This is a theme you find strongly articulated also in the *Communist Manifesto*. Interestingly, it's a history that assumes a logical place in *Capital*, because what we see in usurers' capital in particular is the independent social power of money (and of the money holders), an independent power that he showed in the money chapter to be socially necessary within a capitalist mode of production. It is through the deployment of this independent power that usury and the usurers helped bring feudalism to its knees.

This brings him back to the starting point for understanding the role of money (as opposed to the commodity) in the circulation process. Money can be used to circulate commodities, it can be used to measure value, to store wealth and so on. Capital, however, is money used in a certain way. Not only is the M-C-M process an inversion of the C-M-C process, but, as Marx observed in the previous chapter, "money does not come onto the scene as a circulating medium, in its merely transient form of an intermediary in the social metabolism, but as the individual incarnation of social labour, the independent presence of exchange-value, the universal commodity" (235). The representation of value (money), in other words, becomes the aim and objective of circulation. This form of circulation, however, "would be absurd and empty if the intention were, by using this roundabout route, to exchange two equal sums of money, £100 for £100" (248). The exchange of equal values is perfectly fine with respect to use-values because it is the qualities that matter. But the only logical reason to engage in the M-C-M circulation, as we saw in chapter 3, is to have more value at the end than at the beginning. Marx laboriously arrives at the fairly obvious conclusion:

> The process M-C-M does not therefore owe its content to any qualitative difference between its extremes, for they are both money, but solely to quantitative changes. More money is finally withdrawn from circulation than was thrown into it at the beginning … The complete form of this process is therefore M-C-M', where M' = M + ΔM, i.e. the original sum advanced plus an increment. This increment or excess over the original value I call 'surplus-value'. (251)

With this we arrive for the first time at the concept of surplus-value, which is, of course, fundamental to all of Marx's analysis.

What happens is that "the value originally advanced … not only remains intact while in circulation, but increases its magnitude, adds to itself a surplus-value, or is valorized … And this movement converts it into capital" (252). Here, finally, is the definition of "capital." For Marx, capital is not a thing, but a *process*—a process, specifically, of the circulation of values. These values are congealed in different things at various points in the process: in the first instance, as money, and then as commodity before turning back into the money-form.

Now, this process definition of capital is terribly important. It marks a radical departure from the definition you'll find in classical political economics, where capital was traditionally understood as a stock of assets (machines, money, etc.), as well as from the predominant definition in conventional economics, where capital is viewed as a thing-like "factor of production." Conventional economics has in practice a hard time measuring (valuing) the factor of production that is capital. So they just label it K and put it into their equations. But actually, if you ask, "What is K and how do you get a measure of it?" the answer is far from simple. Economists come up with all kinds of measures, but they can't agree on what capital actually "is." It plainly exists in the form of money, but it also exists as machines, factories and means of production; and how do you put an independent monetary value on the means of production, independent of the value of the commodities they help to produce? As was shown in the so-called capital controversy of the early 1970s, the whole of contemporary economic theory is dangerously close to being founded on a tautology: the monetary value of K in physical asset-form is determined by what it is supposed to explain, viz. the value of the commodities produced[3] (208–9).

Again, Marx looks at capital as a process. I could make capital right now by taking money out of my pocket and putting it into circulation to make more money. Or I could take capital out of circulation simply by choosing to put the money back into my pocket. It then follows that not all money is capital. Capital is money used in a certain way. The definition of capital cannot be divorced from the human choice to launch money-power into this mode of circulation. But this poses a whole set of problems. To begin with, there is the question of how much of an increment capital can possibly yield. Recall that one of the findings in the chapter on money was that the accumulation of money-power is potentially limitless; Marx repeats that here (235, 256–7). Its full significance, however, will only be taken up much later (in chapters 23 and 24 in particular).

A capitalist, Marx says, is "the conscious bearer … of this movement, the possessor of money becomes a capitalist. His person, or rather his pocket, is the point from which the money starts, and to which it returns." From this it follows that "use-values must therefore never be treated as the immediate aim of the capitalist." That is, the capitalist produces use-values only in order to gain exchange-value. The capitalist doesn't actually care about which or what kind of use-value gets produced; it could be any kind of use-value, as long as it permits the capitalist to procure the surplus-value. The aim of the capitalist is, rather unsurprisingly, the "unceasing movement of profit-making" (254). This sounds like the plot of Balzac's *Eugenie Grandet*!

> This boundless drive for enrichment, this passionate chase after value, is common to the capitalist and the miser; but while the miser is merely a capitalist gone mad, the capitalist is a rational miser. The ceaseless augmentation of value, which the miser seeks to attain by saving his money from circulation, is achieved by the more acute capitalist by means of throwing his money again and again into circulation. (254)

Capital is, therefore, value in motion. But it is value-in-motion that appears in different forms. "If we pin down the specific forms of appearance"—notice this phrase again—"assumed in turn by self-valorizing value in the course of its life, we reach the following elucidation: capital is money, capital is commodities" (255). Marx now makes the process definition of capital explicit:

> In truth, however, value is here the subject of a process in which, while constantly assuming the form in turn of money and commodities, it changes its own magnitude, throws off surplus-value from itself considered as original value, and thus valorizes itself independently. For the movement in the course of which it adds surplus-value is its own movement, its valorization is therefore self-valorization … By virtue of being value, it has acquired the occult ability to add value to itself. It brings forth living offspring, or at least lays golden eggs. (255)

Of course, Marx is being heavily ironic here. I mention this because I once read a dissertation that took the magical qualities of self-expansion ascribed to capital seriously. In this dense text, it is often rather too easy to miss the irony. In this instance, the "occult" qualities of capital and its seemingly magical capacity to lay "golden eggs" exist only in the realm of appearance. But it is not hard to see how this fetish construct could be taken for real—a capitalist system of production depends on this very fiction, as we saw in chapter 1. You put money in a savings account, and at the end of the year it has grown. Do you ever ask yourself where the growth came from? The tendency is to assume that this expansion simply belongs to the nature of money. We have, of course, seen periods when the savings rate has been negative, i.e., when inflation has been so high and interest rates so low that the net return to the saver had been negative (as is the case now, in 2008). But it does really appear as if your money in the bank inherently grows at the rate of interest. Marx wants to know what is hidden behind the fetish. This is the mystery that has to be solved.

There is, he says, one moment in this circulation process that we always come back to and that therefore appears to be more important than the others, and that is the money moment: M-M. Why? Because money is the universal representation and ultimate measure of value. It is therefore only at the money moment—the moment of capitalist universality—that we can tell where we are in relation to value and surplus-value. It's hard to tell that just looking at the particularity of commodities. "Money therefore forms the starting-point and the conclusion of every valorization process" (255). In Marx's example, the conclusion should yield £110 from the £100 the capitalist started out with:

> The capitalist knows that all commodities, however tattered they may look, or however badly they may smell, are in faith and in truth money, are by nature circumcised Jews, and, what is more, a wonderful means for making still more money out of money. (256)

Remarks of this sort have been grist for a significant debate over Marx's supposed anti-Semitism. It is indeed perfectly true that these kinds of phrases crop up periodically. The context of the time was one of widespread anti-Semitism (e.g., the portrayal of Fagin in Dickens's *Oliver Twist*). So you can either conclude that Marx, coming from a Jewish family that converted for job-holding reasons, was subconsciously going against his past or unthinkingly echoing the prejudices of his time, or, at least in this case, you can conclude that his intent is to take all the opprobrium that was typically cast on Jews and to say that it really should be assigned to the capitalist as a capitalist. I will leave you to your own conclusions on that.

Back in the text we find Marx still chipping away at the fetishistic surface appearance:

> But now, in the circulation M-C-M, value suddenly presents itself as a self-moving substance which passes through a process of its own, and for which commodities and money are both mere forms. But there is more to come: instead of simply representing the relations of commodities, it now enters into a private relationship with itself, as it were. It differentiates itself as original value from itself as surplus-value, just as God the Father differentiates himself from himself as God the Son … Value therefore now becomes value in process, money in process, and, as such, capital. (256)

That's the next step in the fundamental definition of capital: value in process, money in process. And how different this is from capital as a fixed stock of assets or a factor of production. (Yet it is Marx, not the economists, who gets criticized for supposedly static "structural" formulations!) Capital "comes out of circulation, enters into it again, preserves and multiplies itself within circulation, emerges from it with an increased size, and starts the same cycle again and again" (256). The powerful sense of flow is palpable. Capital is process, and that is that.

Marx briefly returns to merchants' capital and usurers' capital (his historical, rather than logical, starting point). While industrial capital is what he is really concerned with, he has to recognize that there are these other forms of circulation—merchants' capital (buying cheap in order to sell dear) and interest-bearing capital, through which a seeming self-expansion of value can also be accomplished. So we see different possibilities: industrial, merchant and interest-bearing capital, all of which have the M-C-M + ΔM form of circulation. This form of circulation, he concludes, is "the general formula for capital, in the form in which it appears directly in the sphere of circulation" (257). It is this form of circulation that has to be put under the microscope and scrutinized in order to demystify its "occult" qualities. So: does capital lay its own golden eggs?

CHAPTER 5: CONTRADICTIONS IN THE GENERAL FORMULA

Marx begins the search for an answer by examining the contradictions within the M-C-M + ΔM form of circulation. The fundamental question is quite simply this: where does the increment, the surplus-value, come from? The rules and laws of exchange in their pure form (as presupposed in utopian liberalism) say there has to be a rule of equivalence in the transitions from M to C and in C to M. Surplus-value cannot, therefore, be derived from exchange in its pure form. "Where equality exists there is not gain." In practice, of course, "it is true that commodities may be sold at prices which diverge from their values, but this divergence appears as an infringement of the laws governing the exchange of commodities." These laws are those presupposed in the classical political-economic model of perfectly functioning markets. "In its pure form, the exchange of commodities is an exchange of equivalents, and thus it is not a method of increasing value" (260–1).

Faced with this conundrum, the capitalists and their economists, like Condillac, tried to attribute the increase to the field of use-values. But Marx rejects this. You can't suddenly appeal to use-values to cure a problem that derives from the equivalence of exchange-values.

> If commodities, or commodities and money, of equal exchange-value, and consequently equivalents, are exchanged, it is plain that no one abstracts more value from circulation than he throws into it. The formation of surplus-value does not take place. In its pure form, the circulation process necessitates the exchange of equivalents. (262)

But Marx knows full well that "in reality processes do not take place in their pure form" so he then goes on to "assume an exchange of non-equivalents." This gives rise to a number of possibilities. For one, the seller has "some inexplicable privilege … to sell his commodities above their value." But this doesn't work, when you start to think about the relationship between buyers and sellers in generalized markets, any more than it works to say that the buyer has a privilege to purchase commodities below their value. "The formation of surplus-value [cannot] be explained by assuming that commodities are sold above their value," or "are bought at less than their value" (262–3).

He then briefly considers the problem of what we now call effective demand, which was at the time mainly articulated by Malthus (although it is surprising that Marx doesn't reference Malthus's key text on the matter, *Principles of Political Economy*) (264–5). Malthus argued that there was a definite tendency toward a deficiency of aggregate demand in the market for the surplus commodities that capitalists produce in order to procure surplus-value. Who has the purchasing power to buy the commodities? The capitalists are reinvesting, so they are not consuming as much as they could. The workers cannot consume the totality of the product, because they are being exploited. So Malthus concluded that there was an important role for a class of landowners—or as Marx would call them, bourgeois parasites of all kinds—who did the benevolent thing of consuming as much as they could in order to keep the economy stable. Malthus thereby justified the perpetuation of a nonproductive consuming class (in the face of the Ricardian critique that also dismissed them as nonproductive parasites).

Malthus modified his argument somewhat by suggesting that this class of consumers could also be outside the nation—and that foreign trade and even foreign tribute (silver payments to an imperial power, for example) would also help solve the problem. This latter is one of Rosa Luxemburg's major arguments, that the necessary effective demand in a capitalist system (which she felt Marx hadn't sufficiently addressed in *Capital*) ultimately can only be guaranteed by establishing some relationship to the outside—in short, by imposing imperialist extractions of tribute. The British imperialist logic that led to the Opium Wars reflected this: there was a lot of silver in China, so the idea was to sell Indian opium to the Chinese, get all that silver out in that lucrative sale, and thereby pay for all the goods that were being produced in Manchester and sent to India. When the Chinese resisted opening their doors to the opium trade, the British response was to knock them down with military force.

Marx delivers a scathing dismissal of the idea that there is a class of consumers somewhere or other who get their value from God-knows-where, and who can somehow generate the surplus-value from within or from outside the system of capitalist social relations. Everyone (even members of the parasitic classes) within capitalism, he says, has to get their value from somewhere, and if they get their value from within the system then it is from appropriating values from others (like capitalists or workers) who are responsible for its production. The problem of surplus-value production cannot be solved by appeal to the market, and we most certainly cannot justify for this reason the perpetuation of a nonproductive class of consumers. Nor, in the long run, can foreign trade do the trick; at some point, the principle of equivalence has to prevail (265).

These passages on effective demand are problematic in certain respects, and Rosa Luxemburg provides a compelling challenge to Marx on this point, arguing that imperialism directed against noncapitalist social formations provided a partial answer to the effective demand problem.[4] There has been debate over these issues ever since. But in these passages Marx is simply concerned with how surplus-value is produced, not with how it might be paid for and realized through consumption. The surplus-value has to be produced before it can be consumed, and we cannot appeal to processes of consumption in order to understand its production.

So these ideas on effective demand cannot explain how surplus-value is produced, particularly if we "keep within the limits of the exchange of commodities, where sellers are buyers, and buyers are sellers." Now, at first blush this seems an odd remark, given his earlier dismissal of Say's law. Nor does it seem to help when he adds that "our perplexity may perhaps have arisen from conceiving people merely as personified categories, instead of as individuals" (265), though we will see why he takes this path shortly. It is here, I think, that we encounter a real tension in Marx's text between his reliance on critique of the utopian tendencies of classical political economy and his desire to understand and illuminate for us the nature of actually existing capitalism. Marx is, in effect, saying that we have to seek an answer to the surplus-value origin problem in a geographically closed and perfected capitalist mode of production; in that ideal state, appeals to parasitic classes, consumerism or foreign trade have to be ruled out. He will later be explicit about these assumptions in *Capital*; here he tacitly invokes them by rejecting all external solutions. He dismisses effective-demand issues in general as irrelevant at this point in the analysis because here, in Volume I, he is concerned with production alone. Only in Volume II will he take up the problems of realization of values in the market and the world of consumption.

All this rules out any examination at this point in the analysis of geographical expansions, spatial fixes, imperialism and colonialism socially necessary to the survival of capitalism. He simply assumes a perfected and closed capitalist system, and it is on these terms alone that the origin of surplus-value is to be explained. While this assumption restricts the range of his theoretical capacity (particularly with respect to understanding the actual historical and geographical dynamics of capitalism), it deepens and sharpens his analysis. As I have shown elsewhere—particularly in *The Limits to Capital* and *Spaces of Capital*[5]—these broader questions were of deep concern to Marx when he sought to address the grander project of understanding the state, foreign trade, colonialism and the construction of the world market. But at this point in *Capital*, he is solely concerned to show that the production of surplus-value cannot arise out of market exchange regardless of what historical or geopolitical conditions may prevail. Some other way has to be found to solve the contradiction of how to produce a non-equivalence (i.e., the surplus-value) from the exchange of equivalents.

This adoption of such a narrow focus also explains why Marx momentarily switches to looking at individuals rather than social roles. Individuals can indeed best others by selling above value, and this indeed can and does happen all the time. But when looked at systemically and in aggregate social terms, the effect is simply to rob Peter to pay Paul. An individual capitalist may cheat another and get away with it, but then somebody's gain is somebody else's loss, and there is no aggregate surplus-value. A way must therefore be found for all capitalists to gain surplus-value. A healthy or properly functioning economy is one in which all capitalists earn a steady and remunerative rate of profit.

> However much we twist and turn, the final conclusion remains the same. If equivalents are exchanged, no surplus-value results, and if non-equivalents are exchanged, we still have no surplus-value … It can be understood, therefore, why, in our analysis of the primary form of capital, the form in which it determines the economic organization of modern society, we have entirely left out of consideration its well-known and so to speak antediluvian forms, merchants' capital and usurers' capital. (266)

It may have been historically true, as Benjamin Franklin observed, that "war is robbery, commerce is cheating" (267). Clearly, in the origins of capitalism, there was a lot of predation, fraud, robbery and stealing of surplus-values from around the world. And Marx does not deny the historical significance of that. The same applies to usurers' capital even in the face of long-standing and in some instances ultra-strict taboos against charging interest. Islamic law, for example, forbids charging interest. Probably not so well known, but up until the mid-nineteenth century, the Catholic Church had a prohibition on charging interest, and this had tremendous significance. For instance, at that time in France, conservative Catholics often compared investment houses to bordellos and viewed financial operations as a form of prostitution. There are some great political cartoons from that era that satirize this. One I used in *Paris: Capital of Modernity* depicts a young woman trying to entice this older and quite horrified man into this investment house, saying, "My rate of return is good for whatever amount you wish to invest. I'll treat you very gently."[6]

So merchant's capital and usurers' capital (or interest-bearing capital) both had important historical roles. But, Marx concludes,

in the course of our investigation, we shall find that both merchants' capital and interest-bearing capital are derivative forms, and at the same time it will become clear why, historically, these two forms appear before the modern primary form of capital. (267)

These forms of capital circulation, he is saying, had a historical existence before industrial capital arrived on the scene. But, as we'll see, industrial capital is going to be *the* form of capital that defines a capitalist mode of production in its pure state. And once that industrial capital becomes dominant, it needs the merchant to sell the product, and it needs interest-bearing capital to be able to switch investments around to deal with the problems of long-term fixed capital investment and so on. In order for that to happen, the primary form of capital circulation has to subdue both finance capital and merchants' capital to its particular needs. In Volume III of *Capital*, Marx will take up the question of how this happened and with what consequences.

From our present perspective it is important to evaluate the positionality of merchants' and interest-bearing capital within capitalism in general. Certainly a plausible case can be made that they went from being hegemonic and dominant in the sixteenth and seventeenth centuries to becoming subservient to industrial capital during the nineteenth century. But many would now argue—myself included—that finance capital has become dominant again, particularly since the 1970s. If so, it is up to us to assess what this means and what it portends.

This is not a matter we can take up here, however. For our purposes, what is important to note is that Marx presumed (and this was probably correct at the time) that the circulation of capital in its industrial form had become hegemonic, and therefore it was within that framework that the question of surplus-value production had to be resolved. He therefore concludes:

Capital cannot therefore arise from circulation, and it is equally impossible for it to arise apart from circulation. It must have its origin both in circulation and not in circulation … We therefore have a double result … The transformation of money into capital has to be developed on the basis of the immanent laws of the exchange of commodities in such a way that the starting-point is the exchange of equivalents. The money-owner, who is as yet only a capitalist in larval form, must buy his commodities at their value, sell them at their value, and yet at the end of the process withdraw more value from circulation than he threw into it at the beginning. His emergence as a butterfly must, and yet must not, take place in the sphere of circulation. These are the conditions of the problem. Hic Rhodus, hic salta! (268–9)

Which in rough, colloquial translation means, "Here is the ball, now run with it."

CHAPTER 6: THE SALE AND PURCHASE OF LABOUR-POWER

The contradiction turns out to be easy to resolve. It is given away in the title of this chapter. Marx sets the argument up as follows:

In order to extract value out of the consumption of a commodity, our friend the money-owner must be lucky enough to find within the sphere of circulation, on the market, a commodity whose use-value possesses the peculiar property of being a source of value, whose actual consumption is therefore itself an objectification … of labour, hence a creation of value. The possessor of money does find such a special commodity on the market: the capacity for labour … in other words labour-power. (270)

Labor-power consists of the physical, mental and human capacities to congeal value in commodities. But in order to be itself a commodity, labor-power has to have certain characteristics. First, "in order that its possessor may sell it as a commodity, he must have it at his disposal, he must be the free proprietor of his own labor-capacity, hence of his person." So the idea of the free laborer becomes crucial—slavery and serfdom will not do. The laborer cannot give up his or her person; all he or she can do is to trade the physical, mental and human capacities to create value. "In this way he manages both to alienate … his labour-power"—that is, to pass it over to somebody else—"and to avoid renouncing his rights of ownership over it" (271).

So the capitalist cannot own the laborer; all the capitalist owns is the *capacity* to labor and to produce value for a certain period of time.

The second essential condition which allows the owner of money to find labour-power in the market as a commodity is this, that the possessor of labour-power, instead of being able to sell commodities in which his labour has been objectified, must rather be compelled to offer for sale as a commodity that very labour-power which exists only in his living body. (272)

Laborers, in other words, are not in a position to work for themselves.

For the transformation of money into capital, therefore, the owner of money must find the free worker available on the commodity-market; and this worker must be free in the double sense that as a free individual he can dispose of his labour-power as his own commodity, and that, on the other hand, he has no other commodity for sale, i.e. he is rid of them, he is free of all the objects needed for the realization … of his labour-power. (272–3)

The laborer must, in short, already be dispossessed of access to the means of production.

Marx's commentary on freedom is really apposite to our own times. What did it mean, for example, when President George W. Bush went on and on about bringing freedom to the world? He used the words "freedom" and "liberty" in his Second Inaugural Address some fifty times. On Marx's critical interpretation, this would mean that Bush was mobilizing a campaign to free as many people in the world as possible of any direct control over, or access to, the means of production. Yes, indeed, individual laborers will have rights over their own body and individual legal rights in the labor market. In principle they have the right to sell their labor-power to whomsoever they choose and the right to buy whatever they want in the marketplace with the wages they receive. Creating such a world is what the capitalist form of imperial politics has been about for the past two hundred years. Indigenous and peasant populations were dispossessed of access to the means of production and proletarianized wholesale across the globe. In more recent neoliberal versions of this same process, more and more social strata in populations all around the world, including in the advanced capitalist countries, have been dispossessed of their assets, including independent access to means of production or other means of survival (e.g., pensions for older workers or state welfare payments).

The ideological and political ironies involved in the promotion of this "double-edged" form of bourgeois freedom are not lost on Marx. Today we are sold a bill of goods on the positive aspects of freedom and forced to accept as inevitable or even natural the negative aspects. Liberal theory is founded on doctrines of individual rights and freedoms. From Locke to Hayek and onward, all the ideologists of liberalism and neoliberalism have asserted that the best defense of such individual rights and liberties is a market system founded on private property and the bourgeois rules of independence, reciprocity and juridical individualism that Marx described (and, for purposes of inquiry, accepted) in chapter 2.

Since it is hard to protest against universal ideals of freedom, we are easily persuaded to go along with the fiction that the good freedoms (like those of market choice) far outweigh the bad freedoms (such as the freedom of capitalists to exploit the labor of others). And if it takes a little repression to dispossess people of their access to means of production and to ensure the sustenance of market freedoms, then that is justified as well. Pretty soon we find ourselves in the midst of McCarthyism or Guantánamo Bay without an oppositional leg to stand on. Woodrow Wilson, that great liberal president of the United States who sought to found the League of Nations, put it this way in a lecture he delivered at Columbia University in 1907:

> Since trade ignores national boundaries and the manufacturer insists on having the world as a market, the flag of his nation must follow him, and the doors of the nations which are closed against him must be battered down. Concessions obtained by financiers must be safeguarded by ministers of state, even if the sovereignty of unwilling nations be outraged in the process. Colonies must be obtained or planted, in order that no useful corner of the world may be overlooked or left unused.

Marx's essential ideological objective is to pinpoint the duplicity that lies at the heart of the bourgeois conception of freedom (much like he questioned Proudhon's appeal to bourgeois conceptions of justice). The contrast between George Bush's rhetoric of liberty and freedom and the reality of Guantánamo Bay is exactly what we should expect.

But how did the laborer come to be "free" in this double sense? *Why* the free worker approaches the capitalist with his labor in the market, Marx observes, "does not interest the owner of money … And for the present it interests us just as little" (273). Here Marx simply assumes that proletarianization has already occurred and that a functioning labor market already exists. But he does, however, want to make "one thing" clear:

> Nature does not produce on the one hand owners of money or commodities, and on the other hand men possessing nothing but their own labour-power. This relation has no basis in natural history, nor does it have a social basis common to all periods of human history. It is clearly the result of a past historical development, the product of many economic revolutions, of the extinction of a whole series of older formations of social production. (273)

That the wage-labor system had specific historical origins has to be acknowledged, if only to press home the point that the category of wage labor is no more "natural" than that of the capitalist or of value itself. The history of proletarianization will be taken up in greater detail later, in part 8. For now he simply wants to assume a full-fledged labor market already exists. He nevertheless acknowledges,

> The economic categories already discussed similarly bear a historical imprint. Definite historical conditions are involved in the existence of the product as a commodity … Had we gone further, and inquired under what circumstances all, or even the majority of products take the form of commodities, we should have found that this only happens on the basis of one particular mode of production, the capitalist one. (273)

The capitalist mode of production, not other modes of production, we are reminded, is Marx's exclusive focus.

The commodity production that has in the past existed in various forms, alongside the monetary circulation that historically has also existed in many forms, is clearly related in Marx's mind to the rise of wage-labor forms. None of these evolutions is independent of the other in the rise to domination of a capitalist mode of production. Again, the historical and logical arguments intertwine. The socially necessary relation that logically binds commodity production to monetization and both in turn to the commodification of wage labor has distinctive historical origins. The wage system and the labor market that to us appear obvious and logical almost certainly did not appear so even toward the end of European feudalism.

> The historical conditions of [capital's] existence are by no means given with the mere circulation of money and commodities. It arises only when the owner of the means of production and subsistence finds the free worker available, on the market, as the seller of his own labour-power. And this one historical pre-condition comprises a world's history. Capital, therefore, announces from the outset a new epoch in the process of social production. (274)

Labor-power is, however, a peculiar commodity, a special commodity unlike any other. First and foremost, it is the only commodity that has the capacity to *create value*. It is laborers whose socially necessary labor-time is congealed in commodities, and laborers who sell their labor-power to the capitalist. In turn, the capitalist uses this labor-power to organize the production of surplus-value. Note, however, that the form in which labor-power circulates is C-M-C (laborers take their labor-power into the market and sell it in return for money, which then permits them to buy the commodities they need to survive). So the laborer, remember, is always in the C-M-C circuit, while the capitalist works in the M-C-M' circuit. There will therefore be different rules for how they think about their respective situations. The laborer can be content with the exchange of equivalents because it is use-values that matter. The capitalist, on the other hand, has to solve the problem of gaining surplus-value out of the exchange of equivalents.

So what is it that fixes the value of labor-power as commodity? The answer is complicated because labor-power is not a commodity in the usual sense, not only because it alone can create value but also because the determinants of its value are different from those of shirts and shoes both in principle and in the details. Marx mentions the differences with scarcely any elaboration:

> The value of labour-power is determined, as in the case of every other commodity, by the labour-time necessary for the production, and consequently also the reproduction, of this specific article. In so far as it has value, it represents no more than a definite quantity of the average social labour objectified in it … For his maintenance he requires a certain quantity of the means of subsistence. Therefore the labour-time necessary for the production of labour-power is the same as that necessary for the production of those means of subsistence; in other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of its owner. (274)

The value of labor-power is fixed, therefore, by the value of all of those commodities that are needed to reproduce the laborer in a given state of life. We add up the value of the bread, the value of the shirts and the shoes and all the other things necessary to sustain and reproduce laborers, and the total is what fixes the value of labor-power.

It seems a simple enough calculation, seemingly no different in principle from any commodity. But how are "needs" determined? Needs distinguish labor from all other commodities. First off, in the course of laboring, "a definite quantity of human muscle, nerve, brain etc. is expended, and these things have to be replaced." If the laborers are required for a certain kind of laboring (e.g., down in a coal mine) they may need, say, more meat and potatoes to sustain their laboring. Furthermore, "his means of subsistence must therefore be sufficient to maintain him in his normal state as a working individual." Again, what is "normal"? There are "natural needs … such as food, clothing, fuel and housing" that "vary according to the climatic and other physical peculiarities of his country" (274–5). Workers' needs are different in the Arctic than in temperate zones. But then comes the really big shift:

> On the other hand, the number and extent of his so-called necessary requirements, as also the manner in which they are satisfied, are themselves products of history, and depend therefore to a great extent on the level of civilization attained by a country; in particular they depend on the conditions in which, and consequently on the habits and expectations with which, the class of free workers has been formed. In contrast, therefore, with the case of other commodities, the determination of the value of labour-power contains a historical and moral element. (275)

The implication is that the value of labor-power is not independent of the history of class struggles. Furthermore, "the level of civilization" in a country will vary according to, for example, the strength of bourgeois reform movements. The respectable and virtuous bourgeois are from time to time appalled to witness the poverty of the masses and, feeling guilty, conclude that it is unacceptable in a decent society that the mass of the people live in the way they do. They insist on the provision of decent housing, decent public health, decent education, decent this and decent that. Some of these measures can be seen as self-interested (because, for example, cholera epidemics do not stop at class borders), but there is no bourgeois society anywhere that does not have some sense of civilized values, and this sense plays a crucial role in determining what the value of labor-power should be.

Marx is appealing to the principle that there is a totality of commodities that sets the terms for what counts as a reasonable wage in a particular society at a particular time. He does not discuss any such particulars. Instead we can proceed with the theoretical inquiry as if the value of labor-power is fixed and known, even as the *datum* is perpetually moving and in any case has to be flexible, reflecting such other features as the reproduction costs of the laborer, from training and the reproduction of skills to raising a family and reproducing the working class (its qualities as well as its quantities) (275–6).

There is one other peculiarity of labor-power as a commodity that is worthy of note. The capitalist enters the marketplace and has to pay for all the commodities (raw materials, machinery, etc.) before putting them to work, but with labor-power the capitalist hires the labor-power and pays its providers only after they have done the work. In effect, the laborer advances the commodity of labor-power to the capitalist, hoping to get paid at the end of the day. This does not always happen, however; firms that declare bankruptcy can renege on wages (277–8). In contemporary China, for example, a large proportion of the labor force in certain industries (construction) and certain regions, particularly the North, have been denied their wages, prompting widespread protests.

Marx’s point here is that the notion of an acceptable standard of living for the laborer varies according to natural, social, political and historical circumstances. Obviously, what is acceptable in one society (say, contemporary Sweden) is not the same as in another (contemporary China), and what was acceptable in 1850 in the United States is not acceptable today. So the value of labor-power is highly variable, depending not only on physical needs but also on conditions of class struggle, the degree of civilization in the country and the history of social movements (some of which go far beyond what the workers themselves might directly struggle for). There may be social democratic parties that insist on universal healthcare, access to education, adequate housing, public infrastructure—parks, water, public transportation, sanitation—as well as full employment opportunities at a minimum wage. All these things can be considered fundamental obligations of civilized countries, depending on the social and political situation.

The upshot is that labor-power is not a commodity like any other. It is the unique creator of value at the same time as a historical and moral element enters into the determination of its value. And this historical and moral element is subject to influence by a wide array of political, religious and other forces. Even the Vatican has produced powerful encyclicals on the conditions of labor, and the theology of liberation, when it was at its height in Latin America, played a key role in fomenting revolutionary movements in the 1960s and 1970s that focused on the standards of living of the poor. So the value of labor-power is not a constant. It fluctuates not only because the costs of subsistence commodities vary but also because the commodity bundle needed to reproduce the laborer is affected by all these wide-ranging forces. Plainly, the value of labor-power is sensitive to changes in the value of the commodities needed to support them. Cheap imports will reduce that value; the Wal-Mart phenomenon has thus had a significant impact on the value of labor-power in the United States. The hyperexploitation of labor-power in China keeps the value of labor-power down in the United States through cheap imports. This also explains the resistance, in many quarters of the capitalist class, to putting barriers to entry or tariffs on Chinese goods, because to do so would be to raise the cost of living in the US, leading to a demand from workers for higher wages. Marx, having briefly mentioned issues of this sort, shunts them aside to conclude that, "nevertheless, in a given country at a given period, the average amount of the means of subsistence necessary for the worker is a known *datum*" (275). Marx fixes what he concedes is fluid and in perpetual flux as the "known *datum*" in a given country at a given time. How reasonable is this move? Theoretically, it permits him to move on to explain how surplus-value can be produced, but it does so at a price.

In most national economies, ways have indeed been found to determine what this *datum* might be. Legislation concerning a minimum wage, for example, recognizes the importance of a fixed *datum* in a given place and time, while the politics over whether to raise it or not is an excellent illustration of the role political struggle plays in determining the value of labor-power. Local struggles in recent years over a "living wage" also illustrate the idea of both a general *datum* and social struggle over what the *datum* should be.

An even more interesting parallel with Marx's formulation exists in the determination of the so-called poverty level. In the mid-1960s, Mollie Orshansky devised a method to define the poverty level by fixing it in terms of the money needed to buy that particular commodity bundle deemed necessary for the reproduction of, say, a family of four at some minimally acceptable level. This is the sort of known *datum* that Marx is referring to. Since the 1960s, however, there has been incessant debate regarding this definition, which became the basis of public policy (e.g., welfare and Social Security payments). Exactly what the market basket of commodities should be—how much for transportation, how much for clothing, how much for food, how much for rent (and do you really need a mobile phone nowadays?)—became a matter of controversy. The figure for a family of four now stands at more than $20,000 a year. The right wing says we have all along been looking at the wrong bundle and thereby overestimating poverty; in high-cost locations like New York City, however, studies suggest the level should be $26,000 or so. Obviously, historical, political and moral arguments are going to factor in here.

Let us return to the idea of the circulation of labor-power through the C-M-C circuit and the difference between that and the capitalists working in the C-M-C + ΔC circuit. Marx comments:

> The use-value which the [capitalist] gets in exchange manifests itself only in the actual utilization, in the process of the consumption of the labour-power … The process of the consumption of labour-power is at the same time the production process of commodities and of surplus-value. The consumption of labour-power is completed, as in the case of every commodity, outside the market or the sphere of circulation. (279)

And now follows the large shift in perspective:

> Let us therefore, in company with the owner of money and the owner of labour-power, leave this noisy sphere, where everything takes place on the surface and in full view of everyone, and follow them into the hidden abode of production, on whose threshold there hangs the notice 'No admittance except on business'. Here we shall see, not only how capital produces, but how capital is itself produced. The secret of profit-making must at last be laid bare. (279–80)

Marx then concludes with a swinging indictment of bourgeois constitutionality and law. Leaving the sphere of circulation and exchange means leaving that sphere constitutionally set up as "a very Eden of the innate rights of man." The market is "the exclusive realm of Freedom, Equality, Property and Bentham."

> Freedom, because both buyer and seller of a commodity, let us say of labour-power, are determined only by their own free will. They contract as free persons, who are equal before the law … Equality, because each enters into relation with the other, as with a simple owner of commodities, and they exchange equivalent for equivalent. Property, because each disposes only of what is his own. And Bentham, because each looks only to his own advantage. The only force bringing them together, and putting them into relation with each other, is the selfishness, the gain and the private interest of each. Each pays heed to himself only, and no one worries about the others. And precisely for this reason, either in accordance with the pre-established harmony of things, or under the auspices of an omniscient providence, they all work together to their mutual advantage, for the common weal, and in the common interest. (280)

Marx's deeply ironic description of the standard form of liberal bourgeois constitutionality and market law brings us to the final phase of transition in his argument:

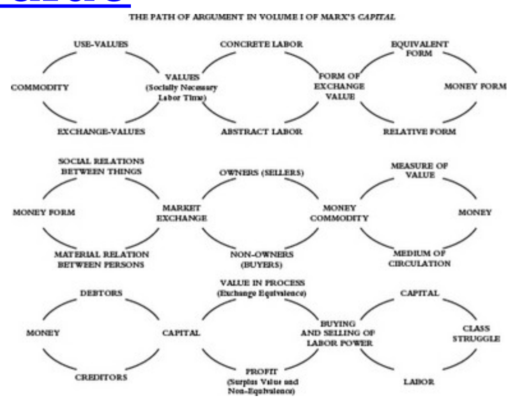
> When we leave this sphere of simple circulation or the exchange of commodities, which provides the 'free-trader vulgaris' with his views, his concepts and the standard by which he judges the society of capital and wage-labour, a certain change takes place, or so it appears, in the physiognomy of our dramatis personae. He who was previously the money-owner now strides out in front as a capitalist; the possessor of labour-power follows as his worker. The one smirks self-importantly and is intent on business; the other is timid and holds back, like someone who

has brought his own hide to market and knows he has nothing else to expect but—a tanning. (280)

These further reflections on bourgeois rights, echoing the duality of the supposed freedom of the laborer, provide a segue in the argument into a consideration of the far less visible moment of production that occurs, typically, in the factory. And it is into this realm that we will follow Marx next.

CHAPTER FOUR

The Labor Process And The Production Of Surplus-Value



I want to cast a backward look at the direction Marx's argument has taken thus far. I do so with the help of a diagrammatic representation of his dialectical chain of argumentation (see figure above). Reducing Marx's argument to this format inevitably does an injustice to the richness of his thinking, but I think it useful to have some sort of cognitive map of his argument so that you can more easily navigate its swirling crosscurrents.

He begins with the unitary concept of the commodity, which embodies the duality of use- and exchange-values. What lies behind exchange-value is the unitary concept of value defined as socially necessary labor-time ("socially necessary" implies someone wants or needs the use-value). Value internalizes a duality of concrete and abstract labor, which conjoin in an act of exchange through which value gets expressed in the duality of relative and equivalent forms of value. From this, a money commodity emerges as the representative of the universality of value, but this disguises the inner meaning of value as a social relation to produce the fetishism of commodities, understood as material relations between persons and social relations between things. In the marketplace, people relate to one another not as people but as buyers and sellers of things. Here Marx assumes, as in liberal theory, private property rights, juridical individuals and perfectly functioning markets. Within that world, money, the representation of value, takes on two distinctive and potentially antagonistic roles, as the measure of value and as the means of circulation. But finally there is only one money, and the tension between the two roles is seemingly resolved by a new money relation, that between debtors and creditors. This shifts the focus from a C-M-C form of circulation to M-C-M, which is, of course, the prototype of the concept of capital defined not as a thing but as a form of circulation of value that produces a surplus-value (profit), M-C-M + ΔM. This poses a contradiction between the equivalence supposed in perfect market exchange and the non-equivalence required in the production of surplus-value. This contradiction is resolved by the existence of labor-power as a commodity that can be bought and sold on the market and then used to produce value and therefore surplus-value. And so we arrive, finally, at the grand conception of a class relation between capital and labor.

This is not, please note, a causal chain of argument. It does entail the gradual unfolding, the layering of different levels of complexity, as the argument expands from a simple opposition within the commodity into more and more insights into different aspects of how a capitalist mode of production works. This dialectical expansion continues throughout the book, for example, in the emergence of a class relation and of class struggle and in the dual concepts of absolute and relative surplus-value. And the expansion jumps scale into the macro-dichotomy between the whole of Volume I, which concentrates on the world of production of surplus-value, and Volume II, where the primary focus is on the circulation and realization of surplus-value. The tensions (contradictions) between production and realization underpin the theory of crisis in Volume III. But I go way ahead in the story.

This cognitive map helps us envision how Marx has "grown" his argument organically and by what dialectical leaps. But please remember that the chart is a mere skeletal form around which Marx arranges an analysis of the real flesh and blood of a dynamic, evolving and contradictory capitalist mode of production.

CHAPTER 7: THE LABOUR PROCESS AND THE VALORIZATION PROCESS

We now leave the "noisy" sphere of the market, the sphere of freedom, equality, property and Bentham, and go inside the labor process, where the sign says: "No Admittance Except on Business." This chapter is, however, unusual in one respect. For the most part, Marx is emphatic that he is dealing only with the conceptual categories formulated within and appropriate to a capitalist mode of production. Value, for example, is not a universal category but something unique to capitalism arising out of the bourgeois era (Aristotle, as we have seen, could not have come up with it, given the conditions of slavery). But in this chapter, for the first ten pages or so, Marx launches into a discussion that is universal, applicable across all possible modes of production. We "have to consider the labour process," he says, "independently of any specific social formation" (283), thus confirming a position he took earlier, that labor is "a condition of human existence which is independent of all forms of society; it is an eternal natural necessity which mediates the metabolism between man and nature, and therefore human life itself" (133).

We should not interpret these statements, however, in familiar bourgeois terms that presuppose a clear separation between "man and nature," culture and nature, natural and artificial, mental and physical, and in which history is viewed as a titanic struggle between two independent forces, humanity and nature. There is, in Marx's view, no such clear separation in the labor process. That process is wholly natural and wholly human at the same time. It is construed dialectically as a moment of “metabolism” in which it is impossible to separate the natural from the human.

But within this unitary conception of the labor process, as happened in the case of the commodity, we immediately identify a duality. There is, says Marx, “a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature.” Human beings are active agents in relation to the world around them. So man

> confronts the materials of nature as a force of nature. He sets in motion the natural forces which belong to his own body, his arms, legs, head and hands, in order to appropriate the materials of nature in a form adapted to his own needs. Through this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature. (283)

This is where we most clearly encounter Marx’s dialectical formulation of the relation to nature. We cannot transform what’s going on around us without transforming ourselves. Conversely, we can’t transform ourselves without transforming everything going on around us. The unitary character of this dialectical relation, even though it entails an “externalization” of nature and an “internalization” of the social, can never be displaced. This dialectic, of perpetually transforming oneself by transforming the world and vice versa, is fundamental to understanding the evolution of human societies as well as the evolution of nature itself. But this process is not unique to human beings—ants do it, beavers do it, all kinds of organisms do it. The whole history of life on earth is rife with dialectical interactions of this kind. James Lovelock argues in his Gaia hypothesis, for example, that the atmosphere which supports us right now wasn’t always there but has been created by organisms that once lived off methane and produced oxygen. The dialectic of organic life and the evolution of the natural world has been central all along.

In his earlier works, Marx made much of the idea of a distinctively human “species being” (perhaps drawing on Kant’s anthropology as well as the later anthropological formulations of Feuerbach). This idea takes a backseat in the formulations of *Capital*, but it does occasionally exercise a shadowy influence, as in this instance. So what makes our labor exclusively human? “A spider,” he writes,

> conducts operations which resemble those of the weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally [i.e., mentally].

This is an important statement. We have an idea, Marx says, and then make it real. There is, therefore, always an “ideal” (mental) moment, a utopian moment, entailed in human productive activity. Furthermore, this moment is not haphazard: “man not only effects a change of form in the materials of nature; he also realizes … his own purpose in those materials.” The activity is purposive. “And this is a purpose he is conscious of, it determines the mode of his activity with the rigidity of a law, and he must subordinate his will to it. This subordination is no mere momentary act.” He needs—we need—to pay close attention, and

> the less he is attracted by the nature of the work … and the less, therefore, he enjoys it as the free play of his own physical and mental powers, the closer his attention is forced to be. (284)

There are a number of points to be made about these crucial passages—and they really are crucial. To begin with, there is no question that Marx is here contesting Fourier’s ideas about the labor process. Fourier thought laboring should be about joy, passionate and erotic engagement, if not pure play. Marx is saying it’s never like that. A lot of hard work and self-discipline are required if the imagined is to be made real on the ground, if a conscious purpose is to be realized. Second, Marx here accords a vital role to mental conceptions, to conscious and purposive action, and this contradicts one of those arguments so often attributed to him, namely that material circumstances determine consciousness, that how we think is dictated by the material circumstances in our life. Here he clearly says, no, there is a moment when the ideal (the mental) actually mediates what we do. The architect—and I think it is important to treat the architect here as a metaphor rather than as a profession—has the capacity to think the world and to remake the world in that image. Some analysts argue either that Marx simply forgot his own maxims in this passage or that he is in effect schizophrenic, that there are two Marxisms: one the Marx of this passage, allowing for the free play of ideas and mental activities, and one the deterministic Marx, who indeed holds that our consciousness, as well as what we think and do, is determined by our material circumstances. I think neither view is plausible. It is unlikely that in *Capital*, of all places, in a central chapter of a work that was revised carefully for publication (and later modified in response to criticism), Marx would take a position that was not deeply consistent with the way in which he understood the world. If these passages were in one of his notebooks, or even in the *Grundrisse*, that would be one thing. But this is a central transitional moment in *Capital*’s argument. It deserves, therefore, a serious reading and a careful interpretation.

Marx’s dialectical understanding of the labor process as a metabolic moment immediately implies that ideas cannot possibly come out of nowhere. Ideas are in some sense wholly natural (this is a position fundamentally at odds with Hegelian idealism). So there is nothing strange about saying ideas arise from within the metabolic relation to material nature and always bear the mark of that origin. Our mental conceptions of the world are not divorced from our material experiences, our central engagements with the world, and therefore, they are not independent of those engagements. But there is (and the parallel with the case of money and the commodity is here instructive), an inevitable externalization of an internal relation, and in the same way that the world of money (particularly when it assumes symbolic forms) can both appear to be and “really is” (see the fetishism argument) in opposition to the world of commodities and their use-values, so our mental conceptions move into an external relation to the material world we seek to reshape. There is, therefore, a dialectical movement, when the imagination soars free, when it can and does say I am going to build this rather than that, reshaping material elements using natural forces (including human muscle) in such a way as to produce something new and different (e.g., the potter at the wheel). There is a certain openness to ideas and mental conceptions that is captured here in Marx’s formulation. And in exactly the same way that the monetary system can get out of hand and generate financial crises, so our mental conceptions (our ideological fixations) can get out of hand and generate crises. Indeed, this is exactly the position that Marx takes with respect to the whole bourgeois vision of the world, with its Robinson Crusoe fantasies and its celebration of a fictional possessive individualism and perfectly functioning markets. In the same way that the monetary system is forced at some point to return to its senses in relation to the material world of socially necessary labor, so the bourgeois conception of the world, which is still so very much with us, has to give way to a more appropriate configuration of mental conceptions if we are to address the spiraling social and environmental problems of contemporary capitalism. In this, the struggle over appropriate mental conceptions (usually cast as “merely” superstructural, though note that Marx did specify that this is the realm in which we “become conscious” of issues and “fight them out”) has a significant role to play. Why else would Marx struggle so mightily to write *Capital*? This moment, when Marx positions mental conceptions, consciousness, purposiveness and commitment, is therefore in no way aberrant in relation to the dynamics of social evolution and the transformation of nature, and human nature, through laboring. It is, instead, fundamental.

Marx is also saying that projects (like building a house) take hard work to complete and that once we have embarked on a project we all too often become imprisoned within its confines. We have to submit to its demands, subject ourselves and our passions to its purposive intensity, if we are to complete it. Every time I write a book, for instance, I start with an idea that sounds brilliant and exciting, but by the time I’m done, it feels like getting out of prison! But there is a far broader meaning here. At the heart of Marx’s critical sensibility lies the idea that human beings can all too easily fall prisoner to their own products and projects, to say nothing of their false mental conceptions of the world. This critical sensibility can be applied just as ruthlessly to communism, socialism and ancient Rome as to capitalism, where Marx will most powerfully and persuasively deploy it.

There is something else about these passages that makes them interesting. Marx, it seems to me, attaches a sense not only of creativity but also of nobility to the labor process. I find the argument deeply Romantic. Marx was undoubtedly influenced by early-nineteenth-century Romanticism. His early writings are infused with Romantic sentiments and meanings. And while this sensibility is subdued in his later writings, it is not hard to detect its presence (even as concepts of alienation move from deeply agonistic in the *Economic and Philosophical Manuscripts* to more technical meanings in *Capital*). But here he says directly that human beings can transform the world in radical ways, according to their imagination and with an idea of a purpose, and be conscious about what they are doing. And in so doing, they have the power to transform themselves. We must therefore think about our purposes, become conscious of how and when we intervene in the world, transforming ourselves. We can and must seize hold of that dialectical possibility creatively. There is, therefore, no neutral transformation of an externalized nature in relationship to us. What we do "out there" is very much about us "in here." Marx makes us think about exactly what this dialectic means for us, as well as for nature, of which we are but one part: hence the universalistic approach to understanding the labor process. This implies that human nature is not a given but perpetually evolving.

Marx's positioning here is controversial (as is, perhaps, my own reading of it). There are abundant opportunities to dispute it. You can take Fourier's position, for example, or some version of the Marxist autonomistic positions of Tony Negri, John Holloway and Harry Cleaver, whose *Reading* Capital *Politically*[1] offers an intensive inquiry into the matters now before us. But you have to come to terms here with some understanding of what Marx is saying, see that this is how he is positioning himself, that this is his vision of what the potentiality for creative labor and changing the world is really all about.

So how then can the labor process, as a universal condition of possibility of human existence, be characterized? Marx distinguishes three distinctive elements: "purposeful activity, that is work itself … the object on which that work is performed, and … the instruments of that work" (284). Initially, the object on which work is performed is given in the concept of land, raw nature. But he quickly moves away from this to distinguish raw nature from raw materials, which are aspects of the world that have already been partially transformed, created or extracted by human labor. A similar distinction arises in the case of the instruments of labor. These can be given directly—sticks, stones, etc., that we can use. But then there are the consciously made instruments of labor such as knives and axes. So while the earth may be our "original larder" and "our original tool house," human beings have long succeeded in transforming both the land and the instruments of labor according to conscious design. "Man," Marx says, quoting Ben Franklin with some modicum of approval, can be defined "as a tool-making animal." "The use and construction of instruments of labour, although present in germ among certain species of animals, is characteristic of the specifically human labour process" (285–6). Marx then offers a side observation on which he will elaborate in detail later:

> It is not what is made but how [it is made], and by what instruments of labour, that distinguishes different economic epochs. Instruments of labour not only supply a standard of the degree of development which human labour has attained, but they also indicate the social relations within which men work. (286)

The implication is that transformation in our instruments of labor has consequences for our social relations and vice versa; that as our social relations change, so our technology must change, and as our technology changes, so our social relations change. So he here sets up the idea of a dialectic between technologies and social relations which will be significant later on. This is, as we have seen, a typical Marx strategy—to insert a comment of this sort as a precursor to what comes later.

But we are not only concerned with tools in the conventional sense. Physical infrastructural conditions, also produced by human labor, are not directly involved in the immediate labor process but are necessary to its performance. “Instruments of this kind, which have already been mediated through past labour, include workshops, canals, roads, etc.” (287). The labor process depends not only on the extraction of materials from raw nature but also on a built environment of fields, roads and urban infrastructure (sometimes referred to as “second nature”).

So what about the actual labor process itself? Here Marx reverts to a consideration of process-thing relationships. Labor is a process; it’s transforming something into something else. This transformation extinguishes an existing use-value and creates an alternative. Furthermore, “what on the side of the worker appeared in the form of unrest”—that is, motion—“now appears, on the side of the product, in the form of being … as a fixed, immobile characteristic. The worker has spun, and the product is a spinning” (287). This difference between process and thing is always there.

This is something I always appreciate about Marx’s formulation. As an educator, I am constantly confronted with the process-thing relation. The process of a student’s learning gets judged in the end by performative things, like written papers. But it is sometimes hard, if not impossible, to evaluate the process through the things produced. Students may find the process astonishingly enlightening and learn a lot, but if they produce a lousy paper, they get an F. Then they say, “But I learned so much taking this course!” And I say, “How can you possibly write a paper like that and say you’ve learned anything?” But this is a problem that frequently confronts us all. We can totally screw up in producing the thing, but we learn a fantastic amount in the process.

For Marx, the heart of laboring is the process. In exactly the same way that capital is construed as a process of circulation, so labor is construed as a process of making. But it is a process of making use-values, and under capitalism this means making use-value for someone else in commodity form. Does this use-value have to be of immediate use? Not necessarily, because past labor can be stored up for use in the future (even primitive societies usually maintain a surplus product to tide them over). In our world, a massive amount of past labor is stored up in our fields, cities and physical infrastructure, and some of that came from long ago. The daily activity of laboring is one thing, but the way that laboring gets stored up in products and things also plays a critical role. Furthermore, the labor process often produces different things simultaneously. This is what is known as a "joint products" issue. The raising of cattle produces milk, meat and hides, while sheep raised for their meat produce wool whether you like it or not. This will pose problems under capitalism: how, for example, are these multiple joint products to be separately valued? Then there is the problem of how the products of past labor relate to present activities of laboring. This becomes particularly important in the case of the value of machines: "a machine which is not active in the labour process is useless." The implication is that

> living labour must seize on these things, awaken them from the dead, change them from merely possible into real and effective use-values. Bathed in the fire of labour [and this is again Marx coming back to the centrality of labor as process] appropriated as part of its organism, and infused with vital energy for the performance of the functions appropriate to their concept and to their vocation in the process, [the machines] are indeed consumed, but to some purpose, as elements in the formation of new use-values, new products, which are capable of entering into individual consumption as means of subsistence or into a new labour process as means of production. (289–90)

It is, therefore, contact with living labor which resuscitates the value of the dead labor congealed in past products. This points to a vital distinction between productive and individual consumption. Productive consumption is past labor that gets consumed in a current labor process to make an entirely new use-value; individual consumption is what gets consumed by people as they reproduce themselves.

"The labour process," Marx argues in a concluding passage, "is purposeful activity aimed at the production of use-values. It is an appropriation of what exists in nature for the requirements of man. It is the universal condition for the metabolic interaction … between man and nature" (note again how important this idea of metabolic interaction is in Marx's analysis), "the everlasting nature-imposed condition of human existence" (which is what he said back on page 133),

> or rather it is common to all forms of society in which human beings live. We did not, therefore, have to present the worker in his relationship with other workers; it was enough to present man and his labour on one side, nature and its materials on the other. The taste of porridge does not tell us who grew the oats, and the process we have presented does not reveal the conditions under which it takes place. (290)

What Marx has done in these few pages is to offer universal physical dissections and descriptions of the labor process independent of any social formation, stripped bare of any particular social meaning. I can describe somebody digging a ditch in all its physical detail, including its relation to past labor embodied in the shovel, but I can't tell from this description whether this is some nutty aristocrat who does it just for exercise, whether it's a peasant, whether it's a slave, whether it's a wage laborer or a convict. So there is a way to look at the labor process as a purely physical process without actually knowing anything whatsoever about the social relations in which it is embedded and without reference to the ideological and mental conceptions that arise within, say, a capitalist mode of production. What remains is to consider how capitalism makes distinctive use of these universal capacities and powers.

The Capitalist Form of the Labor Process

"Let us now return to our would-be capitalist. We left him just after he had purchased, in the open market, all the necessary factors of the labour process; its objective factors"—that is, the means of production—"as well as its personal factor, labour-power." Two conditions attach, however, to the contract between capital and labor in the buying and selling of labor-power as a commodity. The first is that "the worker works under the control of the capitalist to whom his labour belongs" (291). That is, when I enter into contract with a capitalist, the capitalist has the right to direct my work and assign my tasks. Now, there will likely be contestation over this if that work is dangerous to life and limb, but nevertheless, the general principle is that the laborer will get the money to survive and in return the capitalist can direct the laborer to do this or that. Labor-power is a commodity that belongs to the capitalist for the period of the contract. The second condition is that whatever the laborer produces during the period of the contract belongs to the capitalist, not to the laborer. Even though I am the one who makes the commodity and who embeds concrete labor and value in it, it does not belong to me. This is an interesting violation of the Lockean view that those who create value by mixing their labor with the land are entitled to private property in that value. In general, I think you can see that these two conditions amount to the total alienation (though Marx does not use that word here) of the laborer from the creative potential that attaches both to laboring and to the product. "From the instant he steps into the workshop, the use-value of his labour-power and therefore also its use, which is labour, belongs to the capitalist. By the purchase of the labour-power, the capitalist incorporates labour, as a living agent of fermentation"—again we encounter the *Grundrisse*'s "form-giving fire" of laboring as an activity—"into the lifeless constituents of the product, which also belong to him" (292).

These two conditions, however, permit the capitalist to so organize production as

> to produce a commodity greater in value than the sum of the values of the commodities used to produce it; namely the means of production and the labour-power he purchased with his good money on the open market. His aim is to produce not only a use-value, but a commodity; not only use-value, but value; and not just value, but also surplus-value.

So the capitalist brings together the "labour process and the process of creating value" to create a new kind of unity (293). This is what the capitalist has to do, this is the capitalist's conscious aim, because the origin of profit lies in surplus-value, and the role of the capitalist is to seek profit. "Every condition of the problem is satisfied," says Marx,

> while the laws governing the exchange of commodities have not been violated in any way. Equivalent has been exchanged for equivalent. For the capitalist as buyer paid the full value for each commodity, for the cotton, for the spindle and for the labour-power. He then did what is done by every purchaser of commodities: he consumed their use-value.

In so doing, he is enabled to produce commodities with more value than those purchased at the outset, hence the production of surplus-value. "This whole course of events," Marx concludes, involves "the transformation of money into capital," in such a way that it "both takes place and does not take place in the sphere of circulation" (301–2). The materials and labor-power are bought in the marketplace at their value but put to work to congeal more value in the commodities produced in the process of production, out of sight of the marketplace. The conditions that are "satisfied" are those set out at the end of chapter 5: that the money owner "must buy his commodities at their value, sell them at their value, and yet at the end of the process withdraw more value from circulation than he threw into it at the beginning" (269). The result appears magical, because not only does capital appear able to lay golden eggs but

> by incorporating living labour into … lifeless objectivity, the capitalist simultaneously transforms value, i.e. past labour in its objectified and lifeless form, into capital, value which can perform its own valorization process, an animated monster which begins to 'work', 'as if its body were by love possessed' [here Marx quotes Faust]. (302)

The form of circulation looks like this:

$$M - C \substack{LP \\ \\ MP} \ldots\ldots P \ldots\ldots\ldots C - M + \Delta M$$

Let us look more closely at the different steps in this process. The capitalist has to buy means of production (MP): raw materials, machinery, semimanufactured items, all products of past labor (congealed values). The capitalist has to pay for those commodities at their value according to the rules of exchange. If a spindle is needed, then the socially necessary labor-time embodied in spindles fixes value. If somebody uses a gold spindle, then that is not socially necessary. For the labor process to work, the capitalist requires adequate access to means of production in the marketplace. What the purchase of labor-power (LP) enables is the reanimation of these "dead" means of production through the process of laboring (P).

> During the labour process, the worker's labour constantly undergoes a transformation, from the form of unrest … into that of being …, from the form of motion … into that of objectivity … At the end of one hour, the spinning motion is represented in a certain quantity of yarn; in other words, a definite quantity of labour, namely that of one hour, has been objectified in the cotton. We say labour, i.e. the expenditure of his vital force by the spinner, and not spinning labour, because the special work of spinning counts here only in so far as it is the expenditure of labour-power in general, and not the specific labour of the spinner. (296)

In other words, it is abstract labor which is being incorporated into this act of spinning, it is value being added in the form of socially necessary labor-time congealed in the yarn. The result is that

> definite quantities of product, quantities which are determined by experience, now represent nothing but definite quantities of labour, definite masses of crystallized labour-time. They are now simply the material shape taken by a given number of hours or days of social labour. (297)

Furthermore, "in the process we are now considering it is of extreme importance that no more time be consumed in the work of transforming the cotton into yarn than is necessary under the given social conditions" (296).

But at the end of the workday, if all goes well, the capitalists find themselves, magically, in possession of surplus-value. The "capitalist stares in astonishment," writes Marx with heavy irony. Should not the value of the product be "equal to the value of the capital advanced," a simple adding up of all the values of the inputs (297)? Where does the surplus-value come from, given the law of equivalence in exchanges? "The road to hell," writes Marx with equal irony, "is paved with good intentions" (298).

So the capitalists look for virtuous reasons to explain the surplus-value. First off, consider abstinence. Capitalists abstain from present consumption and invest the money they save. Do they not deserve some reward for their abstinence? This is a theme that echoes loudly in the long debate over the role of the Protestant ethic in the rise of capitalism. Second, capitalists provide employment to people. If capitalists didn't invest their money, there would be no employment. Poor workers! Capitalists are doing them a favor by investing their money. Don't the capitalists deserve some rate of return for that? This is a pretty general and on the surface rather convincing argument—does not investment create jobs? I used to have this argument with my mother all the time. She'd say, "But of course we need capitalists!" I'd say, "Why, why?" And she'd say, "Who would employ workers if we didn't have capitalists?" She could not imagine that there might be other ways in which you could employ people. "Capitalists are vital," she would say, "and it is very important we keep them around and treat them nicely, because if they didn't employ laborers, the world would become a terrible place—look what happened in the 1930s!" The third argument is that capitalists say they work hard. They set up the production process, manage things, put in their own labor-time and take all this risk. Yes, indeed, many capitalists work, and some of them work hard, but when they work they usually pay themselves twice over, i.e., they pay themselves the rate of return on the capital they invest and they pay themselves as managers. They pay themselves as CEOs and then take stock options.

Marx regards all these explanations as subterfuges and conjuring tricks:

> The whole litany [the capitalist] has just recited was simply meant to pull the wool over our eyes. He himself does not care twopence for it. He leaves this and all similar subterfuges and conjuring tricks to the professors of political economy, who are paid for it. He himself is a practical man, and although he does not always consider what he says outside his business, within his business he knows what he is doing. (300)

Capitalists may indeed be frugal and abstain, and they may also sometimes exhibit a benevolent attitude toward their workers (desperately trying to maintain their workforce in employment when times are bad, for example). Marx's point is that capitalists could not possibly sustain the whole system by appeals to virtue, morality or benevolence, that the individual behavior of capitalists, varying from benevolence to vicious greed, is irrelevant to what capitalists must do in order to be capitalists, which is, quite simply, to procure surplus-value. Furthermore, their role is defined, as Marx will later point out, by "coercive laws of competition," which push all capitalists to behave in similar fashion no matter whether they are good people or proverbial capitalist pigs.

The full answer to the problem of explaining surplus-value follows. You pay the value of labor-power, which is set, recall, by the value of the commodities needed to reproduce the laborer at a given standard of living. The laborer sells the commodity labor-power, gets money, then goes and gets that bundle of commodities needed to live. But it will only take a certain number of hours each day for the laborer to reproduce the equivalent of the value of labor-power. Therefore, "the daily cost of maintaining labour-power" and its daily creation of value are two totally different things. "The former determines the exchange-value of the labour-power, the latter is its use-value." Labor, recall, is in the C-M-C circuit, while capital is in the M-C-M + ΔM circuit.

> The fact that half a day's labour is necessary to keep the worker alive during 24 hours does not in any way prevent him from working a whole day. Therefore the value of labour-power, and the value which that labour-power valorizes … in the labour-process, are two entirely different magnitudes; and this difference was what the capitalist had in mind when he was purchasing the labour-power … What was really decisive for him was the specific use-value which this commodity possesses of being a source not only of value, but of more value than it has itself. This is the specific service the capitalist expects from labour-power, and in this transaction he acts in accordance with the eternal laws of commodity-exchange. In fact, the seller of labour-power [the laborer], like the seller of any other commodity, realizes … its exchange-value, and alienates … its use-value. (300–1)

There is a key distinction between what labor gets and what labor creates. Surplus-value results from the difference between the value labor congeals in commodities in a working day and the value the laborer gets for surrendering labor-power as a commodity to the capitalist. Laborers, in short, are paid the value of labor-power, and that is that. The capitalist then puts them to work in such a way that not only do they reproduce the value of their own labor-power, they also produce surplus-value. The use-value of labor-power to the capitalist is that it is the one commodity that can produce value and hence surplus-value.

There are, of course, lots of subtleties to be considered. We know from the previous chapter, for example, that the value of labor-power is not a fixed magnitude but varies according to physical needs, the degree of civilization in a country, the state of class struggle and all the rest of it. So the value of labor-power in Sweden is radically different from that in Thailand or China. But Marx, in order to simplify the analysis, here assumes the value of labor-power is a fixed *datum*. And in a given society at a given time, we can say roughly what the value of labor-power is. This allows Marx to presume that capitalists will pay the full value of that labor-power (even though they may struggle mightily in practice to pay their workers less) and still use it, whatever that full value is, to create surplus-value by milking the gap between what labor gets and the value that labor makes. This gap can be procured because the capitalist has control over (a) what the laborer does in the factory and (b) the product. But hidden within this argument is another variable that Marx has yet to analyze explicitly: how long is the laborer contracted to work during the day? If laborers produce the equivalent value of their labor-power in six hours, then plainly the capitalist can procure surplus-value only by contracting them to work more hours than that. If the workday is ten hours, then the capitalist gains four hours' worth of surplus-value. This is what permits the extraction of surplus-value in a way that does not in any way violate the rules of exchange.

It is at this point that we need to remind ourselves of the duality of Marx's project. What he wishes to show here is that even in a perfected liberal society where all the rules of exchange are perfectly obeyed, capitalists have a way of extracting surplus-value from laborers. The liberal utopia turns out to be not so utopian after all, but potentially dystopian for the laborers. Marx is not saying that wage determination actually works this way, but that the theses of classical liberal political economy (and this carries over to our neoliberal times) are seriously warped in favor of capital. The world of freedom, equality, property and Bentham is a mask, a ruse, to permit the extraction of surplus-value from laborers without violating the laws of exchange.

Marx, having set out his fundamental theorem—that surplus-value originates from the difference between what labor gets for its labor-power as a commodity and what the laborer produces in a labor process under the command of capital—immediately states a host of caveats. He observes, for example, that "the time spent in production counts only in so far as it is socially necessary for the production of a use-value," and this depends on labor-power functioning under "normal conditions." This raises the question: what is normal? The labor-power should, moreover, be of "normal effectiveness," again leaving open the question of what normal is, except to say that this will vary from one trade to another and that it means possessing "the average skill, dexterity and speed prevalent in that trade." The labor must also

> be expended with the average amount of exertion and the usual degree of intensity; and the capitalist is as careful to see this is done, as he is to ensure that his workmen are not idle for a single moment. (303)

The casual introduction of the question of "usual intensity" here is significant, for it erupts later as a crucial aspect of labor control because "moments" are "the elements of profit" (352). In all this, the capitalist "insists on his rights" under the law of exchanges, to full use of the commodity that has been purchased and the right to penalize those who do not cooperate fully with his desires. These rights include that labor not be wasted, that

> all wasteful consumption of raw material or instruments of labour is strictly forbidden, because what is wasted in this way represents a superfluous expenditure of quantities of objectified labour, labour that does not count in the product or enter into its value. (303)

What we here see outlined is a charter covering the capitalist control over the labor process, and it is through the implementation of these controls that the question of what is socially necessary in the labor process becomes more clearly defined. The outcome is, surprise, a duality!

> The production process, considered as the unity of the labour process and the process of creating value, is the process of production of commodities; considered as the unity of the labour process and the process of valorization, it is the capitalist process of production, or the capitalist form of the production of commodities. (304)

Again, Marx distinguishes between the production of commodities in general and the specific capitalist form which uses commodity production to gain surplus-value, thus establishing a different kind of unity.

Finally, he returns to the fraught question of how to account for the impact of skill differentiations within the labor process. Skilled labor is considered as simple labor "with a higher specific gravity as it were." This is labor of "a more costly kind, labour-power whose production has cost more time and labour than unskilled or simple labour-power, and which therefore has a higher value," and in turn "becomes objectified, during an equal amount of time, in proportionally higher values" (304–5). In the footnote (305), however, he points out that many of these skill distinctions are illusory or arbitrary and themselves determined socially and historically. There is a long history of this, which Marx briefly alludes to but which could do with some elaboration. I found in my own work on Second Empire Paris, for example, that the definition of "skill" was highly gendered. Any work that women could do was viewed as unskilled, so when women began to enter a trade, the effect was to deskill the labor. This partly accounts for the hostility of some artisanal groups to women's employment and for Proudhon's insistence that women did not belong in the workshop but should stay at home. The issue of women's employment then became a major source of tension within the First International in the 1860s. This does not help, however, with the issue of how to account for labor which is highly trained and therefore costly to produce and maintain. Marx again bypasses this thorny issue by assuming that "in every process of creating value," the "higher type of labour" can be reduced to "average simple labour" and that we can thereby assume "that the labour of the worker employed by the capitalist is average simple labour" (306). There are in fact some serious difficulties with this argument, which is known as the reduction-from-skilled-to-simple-labor problem. But I, too, will bypass it here, leaving you with a question mark to be examined later.

The lengthy footnote on the relationship between slavery and wage labor (303–4) deserves some comment. When the two labor systems collide and become competititve with each other, the effects are particularly pernicious. Slavery becomes more brutal under the competitive lash of market integrations into capitalism, while, conversely, slavery exerts strong negative pressures on both wages and conditions of work. Any kind of human relationship that might have previously existed between master and slave will likely be destroyed. Of course, slavery varies a great deal in what it is about, but it is not about the production of value in the sense that Marx means it. It entails a different kind of labor process. There is no abstract labor in a pure slave system. This was why Aristotle could not formulate a labor theory of value—because this theory only works in the case of free labor. Remember, value for Marx is not universal but specific to wage labor within a capitalist mode of production.

CHAPTERS 8 & 9: CONSTANT CAPITAL, VARIABLE CAPITAL AND THE RATE OF SURPLUS-VALUE

In the next two chapters, Marx seeks to both clarify and consolidate his theory of surplus-value, a theory that, as Engels notes in his introduction to Volume II of *Capital*, “struck home like a thunderbolt out of a clear sky.” These chapters are not complicated, so I will go over them fairly lightly.

Marx first establishes a distinction between what he calls constant and variable capital. Constant capital is past labor already congealed in commodities that are used as means of production in a current labor process. The value of the means of production is already given, and so the question is what happens to that value when it is incorporated into the new labor process. Marx argues that the value simply gets transferred into the new commodity. This value varies according to the productivity of those industries producing raw materials, machinery, etc., so to call this capital “constant” is not to regard it as fixed. All Marx wants to signal here is that the value of the means of production flows through the labor process to be congealed in the new commodity. The value remains constant as it flows.

The actual process of transfer of value is complicated by a variety of special circumstances. Cotton goes into a shirt, and in this instance the cotton physically ends up being the substance of the shirt, so it is reasonable to say that the value of the cotton is incorporated into the shirt. But the energy used in producing the shirt doesn’t end up in the shirt. And you certainly wouldn’t like it if bits of a machine ended up in the shirt. A distinction exists, therefore, between the physical transfers and the circulation of values. The two circulation processes are different because cotton is a physical, material use-value but value is immaterial and social (but nevertheless, as was earlier argued, objective). The raw materials also contain a certain amount of past value, as do the machines and other instruments of labor. All these accumulated past values are brought into a new production process in the form of dead labor that living labor reanimates. So the laborer in effect preserves the values already congealed in raw materials, partially manufactured products, machines and the like and does so by using them up (in productive consumption). Marx is going to make a great deal of the fact that the laborer does this favor for the capitalist gratis.

These past use-values and their congealed values don't and can't create anything new. They are simply used and preserved. Machines, for example, cannot create value. This is an important point, since it is often held, fetishistically, that machines are a source of value. But in Marx's accounting schema, they absolutely are not. All that happens is that the value of the machine is transferred into the commodity during the labor process. But with machines there is a problem, because a machine may last for twenty years, and you are producing lots of shirts with it, so the question is how much of the value of the machine ends up in each shirt? The simplest way to account for the flow of value from the machine into the shirt is to say that, for example, one-twentieth of the value of a machine that lasts twenty years will flow each year into the shirts produced in that year. The labor process preserves all these values by passing them through into the commodity to be sold on the market. This can happen, notice, only because value is immaterial but objective, so it is open to being socially accounted for in this way.

Then there is the variable capital, the value given over to hiring the laborers. How does this circulate, and with what consequences? Dead labor is resuscitated and passed on into the value of the new commodity by living labor. This is a very important idea for Marx, and you can see immediately its political significance. Laborers have the power to destroy constant capital (e.g., machines) simply by refusing to work with it. If labor is withdrawn (and "productive consumption" ceases), then the transfer of capital from the machine to the final product stops, and the value of the constant capital is decreased or totally lost. Clearly, the laborer is potentially empowered by this, and to the degree that laborers perform this function they should surely claim some sort of remuneration for so doing. After all, if capitalists can argue for the right to surplus-value on the grounds that they bring employment to laborers, why cannot laborers argue that they deserve surplus-value because without their efforts all the constant capital held by capitalists would be valueless?

The laborers also add value by congealing socially necessary labor-time in products. But the value they create has two components. First, the laborers have to produce enough value to cover the costs of their own hiring. This, when rendered into money-form, permits the reproduction of labor-power at a given standard of living in a given place and time. The laborers spend their money to buy the commodities they want, need or desire in order to live. In this way, variable capital literally circulates through the body of the laborer in the C-M-C circulation process that reproduces the living laborer through individual consumption and social reproduction. The second aspect of variable capital concerns the production of surplus-value, the production of value over and above that which would be required to reproduce the laborers at a given standard of living. This surplus-value produces and reproduces the capitalist. Marx is, in effect, proposing a value-added theory of surplus-value production.

The total value of the commodity is made up of the value of constant and variable capitals plus the surplus-value (c + v + s). If the capitalist is to gain surplus-value, then it is the variable part that needs to be controlled. After all, machines don't go on strike, and machines don't behave in cantankerous ways (though they can sometimes appear to be temperamental). The active element in the labor process is variable capital. This is the "form-giving fire" of living labor applied to production. Again, there is a political point to this argument. "Look, dear workers," Marx is saying, "*you* are the ones who are really doing all the work here. You are the ones who preserve values from the past. You are the ones who reproduce yourselves by way of your laboring. And you are the ones who produce the surplus-value that capital appropriates so that capitalists can live, all too often in luxury. Obviously, it is very much in the interest of the capitalists to make sure that you don't recognize your central role and your massive powers. They prefer that you imagine yourself just going out and getting a job with a decent wage so that you can go home and reproduce yourself and your family, preferably fit enough to come back to work the next day. You are in a C-M-C circulation process, and they think you should confine your ambitions to that station in life." Marx wants to counter this deliberate fetishization by alerting the working class to its true position in relation to surplus-value production and capital accumulation.

So the full circulation process of capital has been defined, and the definitions of constant and variable capital are laid out. "That part of capital," he writes in summary form,

> which is turned into means of production, i.e. the raw material, the auxiliary material and the instruments of labour, does not undergo any quantitative alteration of value in the process of production. For this reason, I call it the constant part of capital, or more briefly, constant capital … On the other hand, that part of capital which is turned into labour-power does undergo an alteration of value in the process of production. It both reproduces the equivalent of its own value and produces an excess, a surplus-value … I therefore call it the variable part of capital, or more briefly, variable capital. (317)

This leads into chapter 9, where Marx uses the categories he has just defined and examines the relationships between them in a more structured way. He here puts his accounting hat back on. Ostensibly, he is looking "for an exact expression" of the degree of exploitation of labor-power. But there are several ratio measures he comes up with that are of interest. Consider, for example, the ratio of constant to variable capital, c/v. This ratio is a measure of the productivity of labor, the value of means of production that a single value unit of labor-power can transform. The higher the ratio, the more productive the labor. Then consider the ratio of surplus-value to variable capital, s/v. This measures the rate of exploitation of labor-power. It is the amount of surplus-value that a single value unit of labor-power can produce. The higher the ratio, the greater the exploitation of labor-power. Finally, there is the rate of profit, which is the ratio of the surplus-value to the total value used (constant plus variable capital) or s/(c + v). The rate of profit is different from the rate of exploitation. The latter captures how much extra labor the laborers give up to the capitalist in return for the value they receive to reproduce themselves at a given standard of living. Of course, you can see straight away that the rate of profit is always lower than the rate of exploitation. If you complain about a high rate of exploitation, then the capitalists may show you their books to prove that their rate of profit is low. So you then are supposed to feel sorry for the capitalist and forget the high rate of exploitation! The more constant capital employed, the lower the rate of profit (with everything else held equal). A low rate of profit can accompany a high rate of exploitation. This is going to be a crucial argument for Volume III of *Capital*. Capitalists themselves work on the basis of the rate of profit, and they tend to allocate their capital according to wherever the rate of profit is highest. The result is a tendency (driven by competition) toward the equalization of the rate of profit. If I look at a situation and I think I can get a higher rate of profit over there, I take my capital over there. But that doesn't necessarily lead me to make good decisions from the standpoint of maximizing the rate of exploitation, which is the key element the capitalist should be interested in. In fact, this is where the fetishism of the system captures the capitalist. Even if capitalists recognized all this, there wouldn't be anything they could do about it. Competition drives them to make decisions on the basis of the rate of profit rather than the rate of exploitation. If they go to a bank to borrow money, then the bank will make its decisions based on the rate of profit, not on the rate of exploitation.

Of course, the ratio of surplus-value not only to that portion of the capital from which it directly arises, and whose change in value it represents, but also to the sum total of the capital advanced, is economically of very great importance. We shall therefore deal exhaustively with this ratio in our third book. (323)

In Volume III, Marx seeks to show that this is one of the mechanisms that drives capitalism into periodic crises of falling rates of profit. I cannot elaborate on this here any more than Marx can, so all I want to emphasize at this point is that you should carefully note the distinction between the rate of profit, s/(c + v), and the rate of exploitation, s/v.

For Marx, and for the workers, it is the rate of exploitation that really matters. Furthermore, an understanding of the dynamics of capitalism requires an analysis of the rate of exploitation rather than the rate of profit. So this is what Marx concentrates on in this chapter. The rate of exploitation can, he says, be looked at in a number of different ways. You can think of it as the relationship between surplus-labor (appropriated by the capitalist) and necessary labor (the labor required to reproduce the value of labor-power), as necessary labor-time in relation to surplus labor-time or, more formally, as the ratio of the value laid out to purchase labor-power versus the total value produced minus that paid for labor-power. The problem, however, is that while all these ratios make sense, there is no way we can observe them in practice. It is not as if a bell rings the moment in the working day when laborers have reproduced the value of v (or spent the time necessary to produce v), so they know that thereafter they are producing surplus-value for (or giving over their time free to) the capitalist. The labor process is a continuous process which ends with a commodity whose value is composed of c + v + s.

While the different elements of value congealed in the commodity are invisible to the naked eye, Marx is going to make the claim, which you may not like, that this mode of analysis actually produces a far better science of political economy precisely because it gets beyond the fetishism of the market. The bourgeoisie had produced good enough science from the standpoint of the market, but they don't understand how the system works from the standpoint of the labor process, and to the degree that they do, they plainly want to disguise it. They have a vested interest in saying to the workers that labor is just one factor of production that you bring to market, and that is your contribution, for which you will receive a fair remuneration at the going wage rate. They cannot possibly concede that labor is the form-giving, fluid, creative fire in the transformation of nature that lies at the heart of any mode of production, including capitalism. Nor can one imagine the capitalist praising workers for all the value they produce, including, of course, the surplus-value that underpins capitalist profit.

Marx ends this chapter with a fantastic piece critiquing a typical bourgeois representation of the world of laboring. This arose when

> one fine morning in the year 1836, Nassau W. Senior … a man famed both for his economic science and his beautiful style, was summoned from Oxford to Manchester, to learn in the latter place the political economy he taught in the former. (333)

The Manchester industrialists were upset at the political agitation to limit the length of the working day to a "civilized" ten hours, after the shallow and not very effective Factory Act of 1833 had shown that the state apparatus was at least in principle prepared to legislate the legal hours of laboring. Senior argued in a detailed pamphlet that what the worker had to do during the first eight hours of the day was to produce the equivalent value of all the means of production used up (constant capital, in Marx's terms). So Senior had no concept that the worker might be transferring the values already congealed in commodities and took the ludicrous view that the worker had to actively reproduce those values. The next three hours were taken up reproducing the value of the labor-power employed (the variable capital), and only in the final hour was the profit of the capitalist (the surplus-value) produced. Therefore, a twelve-hour day was absolutely essential to gaining a profit. If the length of the working day were reduced from twelve to eleven hours then all the profit would disappear, and industry would cease to function. Marx's response is scathing: "and the professor calls this an 'analysis'!" he exclaims (334). "Senior's last hour" is a vulgar economic argument, solely designed to promote the interests of the manufacturers.

In a funny kind of way, however, Senior confirms Marx's own theorization. It is the workers' time that is of crucial value to the capitalists, and that is why they so desperately need that twelfth hour. The struggle to command the worker's time lies at the origin of profit, which is exactly what Marx's theory of surplus-value posits. This reaffirms the relevance of Marx's definition of value as socially necessary labor-*time*. What, then, is socially necessary about the temporalities of laboring? Not only must capitalists command the labor process, the product and the time of the laborer, but they must also strive to command the social nature of temporality itself. Senior recognizes this fundamental truth, and Marx, using his critical tools and his situatedness on the side of the workers, turns the dross of Senior's argument into a revelatory moment. The critique of Senior's last hour therefore acquires a double significance. On the one hand, it allows Marx to depict the depths to which the economists can sink in trying to create apologetic arguments for the capitalist class, while on the other it neatly positions Marx to take on the fundamental truth revealed by Senior's polemic: that command over time is a central vector of struggle within a capitalist mode of production. The examination of Senior's last hour therefore makes for a crafty transition to the next chapter, which is all about capitalist time.

CHAPTER FIVE

The Working Day

CHAPTER 10: THE WORKING DAY

Chapter 10 is constructed in a different way and written in a different style than are the preceding chapters. It is light on theory and laden with historical detail. Yet it also invokes abstract categories not yet encountered. This is so because Marx here focuses on the history of class struggle over the length of the working day. I have commented before on the complex interweaving of logical and historical argumentation in *Capital* and for the most part argued that we are on safer ground with the logical argument. But here it is the historical narrative that counts—though it is not bereft of theoretical significance. We here encounter a deep theorization of the nature of time and temporality under capitalism at the same time as we more clearly see why a capitalist mode of production is necessarily constituted through and by class struggle.

Marx begins by reminding us that there is a world of difference between the labor theory of value and the value of labor-power. The labor theory of value deals with how socially necessary labor-time is congealed in commodities by the laborer. This is the standard of value represented by the money commodity and by money in general. The value of labor-power, on the other hand, is simply the value of that commodity sold in the market as labor-power. While this commodity is like other commodities in certain respects, it also has some special qualities because there here enters in a historical and moral element. A failure to distinguish between the value of labor-power and the labor theory of value can generate fundamental misunderstandings.

“We began with the assumption,” writes Marx, “that labour-power is bought and sold at its value” and that “its value, like that of all other commodities, is determined by the labour-time necessary to produce it” (340). This is equivalent to the labor-time taken to produce those commodities needed to reproduce the laborer at a given standard of living. Marx assumes that this value is fixed, even though we know (as does he) that it is perpetually changing, depending on the costs of commodities, the state of civilization and the state of class struggle.

As workers add value to commodities in the labor process, there arrives a point in the day when workers will have created the exact equivalent of the value of their own labor-power. Let us suppose, says Marx, that this occurs after six hours of laboring. Surplus-value arises because workers labor beyond the number of hours it takes to reproduce the value equivalent of their labor-power. How many extra hours do they work? That depends on the length of the working day. This length is not something that can be negotiated in the market as a form of commodity exchange in which equivalent exchanges for equivalent (as is the case with wages). It is not a fixed but a fluid quantity. It can vary from six hours to ten hours to twelve hours to fourteen hours, with an outer limit of twenty-four hours—which is impossible because of "the physical limits to labour-power," and because "the worker needs time in which to satisfy his intellectual and social requirements … The length of the working day therefore fluctuates within boundaries both physical and social" (341).

Marx then sets up a fictitious discussion between a capitalist and a laborer. The capitalist, as purchaser of the labor-power, says he has the right to use it as long as he can. He is, after all, "only capital personified" (recall that Marx deals with roles, not persons). "His soul is the soul of capital," and "capital has one sole driving force, the drive to valorize itself, to create surplus-value." Capital, Marx says, "is dead labour which, vampire-like"—and this is a chapter where we'll get a lot of vampires and werewolves running around, a major departure from usual modes of political-economic theorizing—"lives only by sucking living labour, and lives the more, the more labour it sucks." If the laborer calls time-out or takes time off, "he robs the capitalist … The capitalist therefore takes his stand on the law of commodity-exchange. Like all other buyers, he seeks to extract the maximum possible benefit from the use-value of his commodity" (342).

Workers, unlike machines and other forms of constant capital, answer back. They note that they own this property called labor-power and that their interest is to conserve its value for future use. The capitalist has no right to squeeze so much out of them in each day as to shorten their working life. This is, says the worker,

> against our contract and the law of commodity exchange. I therefore demand a working day of normal length, and I demand it without any appeal to your heart, for in money matters sentiment is out of place … I demand a normal working day because, like every other seller, I demand the value of my commodity. (343)

Notice, both workers and capitalists take their positions according to the laws of exchange. Marx is not, as you might expect from a revolutionary thinker, advocating abolition of the wages system, but has both the workers and the capitalists agree to abide by the laws of market exchange, equivalent for equivalent. The only issue concerns how much use-value (the capacity for congealing values in commodities) the laborer is going to give up to the capitalist. Marx makes this move because, as I have emphasized, a key objective in *Capital* is to deconstruct the utopian propositions of classical liberal political economy on their own terms. "The capitalist maintains his right as a purchaser when he tries to make the working day as long as possible," and

> the worker maintains his right as a seller when he wishes to reduce the working day to a particular normal length. There is here therefore an antinomy, of right against right, both equally bearing the seal of the law of exchange. Between equal rights, force decides. Hence, in the history of capitalist production, the establishment of a norm for the working day presents itself as a struggle over the limits of that day, a struggle between collective capital, i.e. the class of capitalists, and collective labour, i.e. the working class. (344)

So finally, after 344 pages, we get to the idea of class struggle. Finally!

There are a number of issues that call for clarification here. The acceptance by both sides of a notion of "rights" is a statement of fact concerning the hegemony of bourgeois notions of rights. But Marx immediately indicates that the problem of the length of the working day cannot be solved by appeal to rights and the laws and legalities of exchange (this parallels his earlier attack on Proudhon's concept of eternal justice). Issues of this kind can be resolved only through class struggle, in which "force" decides between "equal rights." This finding has ramifications for understanding the politics of contemporary capitalism. In recent times, there has been a remarkable upsurge in "rights talk," and a lot of political energy has been invested in the idea that the pursuit of individual human rights is a way (if not *the* way) to shape a more humane capitalist system. What Marx is signaling here is that there is no way that many of the important questions posed in rights terms can be resolved without being reformulated in class-struggle terms. Amnesty International, for example, deals well enough with political and civil rights but has a hard time extending its concerns to economic rights because there is no way that these can be resolved without taking a side, either that of capital or that of labor. So you can see Marx's point. There is no way to adjudicate "fairly" between equal rights (both bearing the seal of the law of exchange). All you can do is to fight for your side of the argument. This chapter therefore ends on a very skeptical note about some "pompous catalogue of 'the inalienable rights of man'," as opposed to what can be achieved through class struggle (416).

"Force," in this context, doesn't necessarily mean physical force (though there have clearly been instances when this has been crucial). The main thrust of this chapter concerns political force, the capacity to mobilize and to build political alliances and institutions (such as trade unions) to influence a state apparatus that has the power to legislate a "normal" working day. In Marx's account, there are moments of possibility that can be grasped or lost, depending on the contingencies of the political situation and the relations of force in play. The technique here is similar to that so superbly represented in Marx's study in *The Eighteenth Brumaire* of how Louis Bonaparte came to power in France in the wake of the failed 1848 revolution in Paris. The materials in this chapter shed a special light on Marx's way of jointly pursuing a theory of a capitalist mode of production on the one hand and a deep understanding of processes of historical transformation of actually existing capitalist social formations on the other. Class-struggle outcomes are not determined in advance.

The introduction of class struggle marks a radical departure from the tenets of both classical and contemporary economic theory. It radically changes the language in which the economy is depicted and shifts the focus of concern. Introductory courses in economics are unlikely ever to focus on the length of the working day as a serious issue. It was not discussed in classical political economy, either. Yet historically there has been a monumental and ongoing struggle over the length of the working day, the working week, the working year (paid vacations) and the working life (the retirement age), and this struggle is still with us. This is clearly a fundamental aspect of capitalist history and a central issue in a capitalist mode of production. What are we to make of economic theories that ignore it?

Marx's value theory, in contrast, leads directly into this central question. This is so because value is socially necessary labor-*time*, which means that time is of the essence within capitalism. As the old saying has it, "Time is money!" Control over time, other people's time in particular, has to be collectively fought over. It cannot be traded. Class struggle therefore has to move center stage in political-economic theory as well as into all attempts to understand the historical and geographical evolution of capitalism. It is at this point in *Capital* that we can start to appreciate the "use-value" of Marx's labor theory of value and of surplus-value. And while it would be wrong to treat this as some kind of empirical proof of the theoretical apparatus, it certainly illustrates its utility when it comes to the practice of theoretically informed empirical inquiry.

So how, then, does Marx lead us through this history of struggle over the length of the working day? He begins by noting that capitalism is not the only kind of society in which surplus labor and a surplus product is extracted for the benefit of some ruling class:

> Wherever a part of society possesses the monopoly of the means of production, the worker, free or unfree, must add to the labour-time necessary for his own maintenance an extra quantity of labour-time in order to produce the means of subsistence for the owner of the means of production. (344)

But under capitalism, surplus labor is converted into surplus-value. So the production of a surplus product is a means for the capitalist to gain surplus-value. This imposes particular qualities on capitalist exploitation because value accumulation in money-form, as we earlier saw, is without limit.

> In any economic formation of society where the use-value rather than the exchange-value of the product predominates, surplus labour will be restricted by a more or less confined set of needs, and … no boundless thirst for surplus labour will arise from the character of production itself. (345)

Furthermore, because this appropriation occurs in a society characterized by wage labor, laborers are not going to experience their surplus-value production in the same way that serfs and slaves experience surplus labor (the fetishism of market exchange hides it). Marx uses the *corvée* system in central Europe as an illustration. Here, the laborer was forced to contribute a certain number of labor days to the landowner such that the appropriation of surplus labor is totally transparent. The freeing of the serfs through the Russian edict of 1831 actually created a situation in which the *corvée* system that replaced it, organized under the *Règlement organique*, allowed certain definitions of a day's work to be made fluid and open. The landowners (the boyars) argued that a day's labor is not measured by an actual day, but by how much work *should* be accomplished. This work requirement could not possibly be done in a day, so that it took more and more actual days to do a formal day’s work, until “the 12 *corvée* days of the *Règlement organique* … amount to 365 days in the year” (348).

There is the germ of a very important idea here which we are going to encounter several times in *Capital*. The measure of time is flexible, it can be stretched out and manipulated for social purposes. In this instance, 12 labor days become 365 actual days. This social manipulation of time and temporality is a fundamental feature of capitalism also. As soon as the extraction of surplus labor-time becomes fundamental to the replication of class relations, then the question of what time is, who measures it, and how temporality is to be understood moves to the forefront of analysis. Time is not simply given; it is socially constructed and perpetually subject to reconstruction (just think, for example, how time horizons for decision making in, say, the financial sector have shifted in recent years). In the *Règlement organique* case, the stretching of time was obvious. Laborers knew full well how much surplus labor they were giving up to the lord and how time stretching by a ruling class contributed to this result. But the thrust of the Factory Acts in Britain in the nineteenth century—the centerpiece of much of this chapter—was very different: it was to “curb capital’s drive towards a limitless draining away of labour-power by forcibly limiting the working day on the authority of the state, but a state ruled by capitalist and landlord” (348).

Marx’s formulation poses an important question: why would a state ruled by capitalist and landlord agree to, or even contemplate, curbing the length of the working day? So far in *Capital* we have only encountered the figures of the laborer and the capitalist, so what on earth is the landlord doing here? Clearly, as Marx seeks to analyze a real historical situation, he has to look at the existing class configuration and how class alliances might work when the workers do not have direct access to state power. The British state in the first half of the nineteenth century was essentially organized through the power relation of capitalists and landlords, and it would have been impossible to analyze the politics of the period without paying attention to the role of the landed aristocracy. The power of the working-class movement was in the background. “Apart from the daily more threatening advance of the working-class movement,” Marx writes,

> the limiting of factory labour was dictated by the same necessity as forced the manuring of English fields with guano. The same blind desire for profit that in the one case exhausted the soil had in the other case seized hold of the vital force of the nation at its roots. Periodical epidemics speak as clearly on this point as the diminishing military standard of height in France and Germany. (348)

If labor is a key resource, like the land, in the creation of national wealth, and if it is overexploited and degraded, then the capacity to continue production of surplus-value is undercut. But it is also in the state’s interest to have laborers who can become an effective military force. The health and fitness of the working classes is therefore of political and military interest (as is remarked in the lengthy footnote [348–9]). In the Franco-Prussian War of 1870–1, for example, the rapid defeat of the French at the hands of the Germans was in part attributed to the superior health of the German peasantry relative to the impoverished French peasantry and working class. The political implication is that it is militarily dangerous to permit the degradation of the working classes. This issue became important in the US during World War II, particularly when it came to mobilizing elements from impoverished and in some instances racially distinct populations.

The British Factory Acts, which Marx focuses on, were imposed by the state and designed for both economic and political/military reasons, to limit the exploitation of living labor and prevent its excessive degradation. The law is one thing, but enforcement is another. This brings us to the important figure of the factory inspectors: who were they and where did they came from? They were certainly not radical Marxists! They came from the professional bourgeoisie. They were civil servants. But they did a pretty good job of collecting information, and they pushed hard to discipline the industrial interest according to state requirements. Marx would not have been able to write this chapter without the abundant information they supplied. So why would a state regulated by capital and landlords employ factory inspectors to do this work? This is where "the degree of civilization in a country" enters into the picture, as well as bourgeois morality and the military concerns of the state. In nineteenth-century Britain, there were strong currents of bourgeois reformism (e.g., Charles Dickens) that thought some of the labor practices then in play should not exist in any civilized society. This introduces into the discussion that same "historical and moral element" which affects the value of labor-power. So while the working-class movement was indeed growing stronger, it would not have gotten as far as it did without the assistance of bourgeois reformism, particularly that strain represented by the factory inspectors.

The factory inspectors had to confront the problem of how the working day might be defined in practice. At what times should laborers get to work? Is the start-up time inside the factory or outside the factory? And what about breaks for lunch? Marx quotes an inspectors' report:

> 'The profit to be gained by it' (over-working in violation of the Act) 'appears to be, to many, a greater temptation than they can resist' … These 'small thefts' of capital from the workers' meal-times and recreation times are also described by the factory inspectors as 'petty pilferings of minutes', 'snatching a few minutes' or, in the technical language of the workers, 'nibbling and cribbling at meal-times'.

Marx then quotes the key idea: "'Moments are the elements of profit'" (352). I think this a crucial formulation. Capitalists seek to capture every moment of the worker's time in the labor process. Capitalists do not simply buy a worker's labor-power for twelve hours; they have to make sure every moment of those twelve hours is used at maximum intensity. And this, of course, is what a factory disciplinary and supervisory system is all about.

If you can believe old movies, telephone operators once had time to chat with you (I am old enough to remember even flirting with them). Operators now have a strict schedule of calls to handle every hour. If they don't meet that schedule, they get fired. And the schedule is constantly tightening, so you are now privileged if you can claim more than two minutes of their time. I've read about an operator who spent half an hour on the phone with a child whose mother evidently had died; the operator was fired for failing to keep to schedule. This is characteristic of labor processes generally. The capitalist wants the time, wants those moments that are the elements of profit. This is a corollary of the fact that value is socially necessary labor-*time*. For all its abstractness, the value theory reveals something important about daily practices and experiences on the shop floor. It touches the reality of how the capitalist behaves, and it touches the reality of the worker's life.

In the third section of this chapter, Marx discusses at length "Branches of English Industry without Legal Limits to Exploitation." I am not going to go over these, because the appalling accounts of the labor practices in the match industry, wallpaper, linens and baking in particular (where night work and the adulteration of the bread were a big issues) are fairly self-evident. Marx also cites the accidents that can come from overwork, such as one on the railways where the coroner noted that the workers' lack of attention that led to the accident probably resulted from their excessively long hours. Then there is the famous case of Mary Anne Walkley, "20 years old, employed in a highly respectable dressmaking establishment"—in a situation where "girls work, on an average, 16½ hours without a break, during the season often 30 hours, and the flow of their failing 'labour-power' is maintained by occasional supplies of sherry, port or coffee"—who quite simply died from overwork (364–5). Dying from overwork is not something that is confined to the nineteenth century. The Japanese have a technical term for it, *karōshi*. People do die from overwork, and many people's lifetimes are shortened through the overwork they suffer or from the work conditions they encounter. In 2009, the United Farm Workers sued California Occupational Safety and Health Administration for not protecting farmworkers in the state from deadly heat, citing three cases of needless death from heat exhaustion.

Marx is here describing what happens when the power relationship between capital and labor becomes so lopsided that the labor force is reduced to a position of degradation and even driven to untimely deaths. This problem is exacerbated by the rise of the relay system described in the fourth section of this chapter. Unemployed capital is lost capital, and capital, recall, is not a machine or a sum of money, but value in motion. If a machine is not being used, it's dead capital, so there is pressure to use it all the time. The continuity of the production process becomes important, particularly in those industries, such as blast furnaces and heavy-metal engineering, employing large amounts of fixed-capital equipment. The need to keep the fixed capital employed mandates a twenty-four-hour workday. Since individual workers cannot work twenty-four hours, the relay system is devised and then supplemented by night work and the shift system. Remember: workers not only produce surplus-value, they reanimate constant capital. The result is night-shift work via the relay system. There is, therefore, no such thing as a "natural working day," only various constructions of it in relation to the capitalist requirement to maintain a continuity of flow at all costs.

Section 5 takes up the struggle for a normal working day. What is the length of time during which capital may consume the labor-power whose daily value it has paid for? Capital, plainly, is going to take as much as it can get. For capital,

> it is self-evident that the worker is nothing other than labour-power for the duration of his whole life, and that therefore all his disposable time is by nature and by right labour-time, to be devoted to the self-valorization of capital [i.e., the production of surplus-value]. Time for education, for intellectual development, for the fulfilment of social functions, for social intercourse, for the free play of vital forces of his body and his mind, even the rest time of Sunday … what foolishness! But in its blind and measureless drive, its insatiable appetite for surplus labour, capital oversteps not only the moral but even the merely physical limits of the working day. It usurps the time for growth, development and healthy maintenance of the body. It steals the time required for the consumption of fresh air and sunlight. It haggles over the meal-times, where possible incorporating them into the production process itself. (375–6)

I always remember the assembly-line scenes from Charlie Chaplin's *Modern Times* when I read these passages. Capital

> reduces the sound sleep needed for … restoration, renewal and refreshment … [It] asks no questions about the length of life of labour-power. What interests it is purely and simply the maximum of labour-power that can be set in motion in a working day. It attains this objective by shortening the life of labour-power, in the same way as a greedy farmer snatches more produce from the soil by robbing it of its fertility. (376)

The parallel between exhaustion of the soil and of the vital powers of the laborer echoes the formulation in chapter 1 where Marx cites William Petty's comment that "labour is the father of material wealth, the earth is its mother" (134). But this also implies that excessive exploitation of the resources required to produce all wealth poses a danger for capitalism itself. At some point or other, the capitalist will also think that a normal working day might not be a bad idea.

> If then the unnatural extension of the working day, which capital necessarily strives for in its unmeasured drive for self-valorization, shortens the life of the individual worker, and therefore the duration of his labour-power, the forces used up have to be replaced more rapidly, and it will be more expensive to reproduce labour-power, just as in the case of a machine, where the part of its value that has to be reproduced daily grows greater the more rapidly the machine is worn out. It would seem therefore that the interest of capital itself points in the direction of a normal working day. (377)

The problem, however, is that individual capitalists in competition with one another cannot stop pushing toward the overexploitation of their fundamental resource bases, labor and the land. The potential exists for a conflict between the class interest of capitalists in a “sustainable” labor force and the short-term individual behaviors of capitalists faced with competition. Therefore some limit has to be put on competition between them.

Slave owners, Marx points out, can, if they wish, afford to kill off their slaves through excessive work provided they have a new source of cheap slaves at hand. But this is also true for the labor market:

> for slave trade, read labour-market, for Kentucky and Virginia, Ireland and the agricultural districts of England, Scotland and Wales, for Africa, Germany. We have heard how over-work has thinned the ranks of the bakers in London. Nevertheless, the London labour-market is always overstocked with German and other candidates for death in the bakeries. (378)

Marx here introduces another important concept: that of a surplus population. This permits capitalists to super-exploit their workers without regard for their health or well-being. Of course, the surplus population has to be accessible to capital. Marx here cites the case of the Poor Law commissioners, who were instructed to “send the ‘surplus population’ of the agricultural districts to the north, with the explanation ‘that the manufacturers would absorb and use it up.” (378). Agricultural districts conveniently rid themselves of their Poor Law obligations, at the same time as they provided surplus labor for the manufacturing districts.

> What experience generally shows to the capitalist is a constant excess of population, i.e. an excess in relation to capital’s need for valorization at a given moment, although this throng of people is made up of generations of stunted, short-lived and rapidly replaced human beings, plucked, so to speak, before they were ripe … Experience shows too how the degeneration of the industrial population is retarded only by the constant absorption of primitive and natural elements from the countryside, and how even the agricultural labourers, in spite of the fresh air and the ‘principle of natural selection’ that works so powerfully amongst them, and permits the survival of only the strongest individuals, are already beginning to die off. (380)

A surplus population affects whether the capitalist has to care about the health, well-being and life expectancy of the labor force. As individual human beings, capitalists may care. But forced to maximize profit come what may under conditions of competition, individual capitalists have no choice.

> Après moi le déluge! is the watchword of every capitalist and of every capitalist nation. Capital therefore takes no account of the health and the length of life of the worker, unless society forces it to do so. Its answer to the outcry about the physical and mental degradation, the premature death, the torture of over-work, is this: Should that pain trouble us, since it increases our pleasure (profit)? But looking at these things as a whole, it is evident that this does not depend on the will, either good or bad, of the individual capitalist. Under free competition, the immanent laws of capitalist production confront the individual capitalist as a coercive force external to him. (381)

No matter whether they are good- or bad-hearted, capitalists are forced by competition to engage in the same labor practices as their competitors. If your competitors shorten the lives of their laborers, you have to, too. That is how the coercive laws of competition work. This phrase, “the coercive laws of competition,” is going to come back into the argument several times. And it’s important to notice at what point these coercive laws play a decisive role, as they do here.

This brings Marx to consider the “centuries of struggle between the capitalist and the worker” that have led to “the establishment of a normal working day.” He interestingly notes that “the history of this struggle displays two opposite tendencies” (382). In medieval times, it was very difficult to get people to be wage laborers. If they couldn’t make a living off the land for themselves, people became vagabonds, beggars or even highway robbers (like Robin Hood). So legislation was enacted to codify the wage relation, extend the length of the working day and criminalize beggars and vagabonds. In effect, a disciplinary apparatus was created (and Marx will take this up again in part 8) to socialize the population into the role of wage laborers. Vagabonds were whipped and put into the stocks before being mandated to do a good day’s labor. And a good day’s labor was defined as a workday of twelve hours in the first such statutes, which date from 1349. This was how labor discipline was imposed in Britain. You will find similar issues being raised by colonial authorities during the nineteenth century and later. They would report that, say, the problem in India or Africa is that you can’t get the indigenous population to work a “normal” working day, let alone a “normal” working week. They typically work for a bit and then disappear. The local notion of temporality doesn’t fit with the idea of clock time and hinders the ability of capitalists to extract value as moments that are the elements of profit. The lack of time discipline of local populations was a frequent complaint among colonial administrators, and tremendous efforts were made to instill labor discipline and an appropriate sense of temporality. (I have heard contemporary university administrators make similar complaints about students and even once suffered a course from the educational geniuses of Harvard, who insisted that the first thing we had to do to teach undergraduates properly was to instill a proper sense of time discipline.)

There is now an extensive literature on the medieval and late-medieval attitude toward time, as well as on the transitions that occurred in temporality with the rise of capitalism (or, as some prefer to speak of it, of “modernity”). For instance, we all too easily forget that the hour was largely an invention of the thirteenth century, that the minute and the second became common measures only as late as the seventeenth century and that it is only in recent times that terms like “nanoseconds” have been invented. These are not natural but social determinations, and their invention was not irrelevant to the transition from feudalism to capitalism. When Foucault talks about the rise of governmentality, what he is really talking about is that moment when people started to internalize a sense of temporal discipline and to learn to live by it almost without thinking. To the degree that we all have internalized this sense, we become captive to a certain way of thinking about temporality and the practices that attach thereto. For Marx, this temporality arises in relationship to the emergence of value as socially necessary labor-time. And for him, the role of class struggle is central in ways that Foucault tends to evade or downplay. Says Marx,

> It has been seen that these highly detailed specifications, which regulate, with military uniformity, the times, the limits and the pauses of work by the stroke of the clock, were by no means a product of the fantasy of Members of Parliament. They developed gradually out of circumstances as natural laws of the modern mode of production. Their formulation, official recognition and proclamation by the state were the result of a long class struggle. (394–5)

It is no longer a matter of saying that "between equal rights, force decides," but of recognizing the class character of hegemonic forms of temporal thinking about the world. And it is not only temporality that is involved here, because the issue of spatiality also arises. To ideologists like the anonymous author of *An Essay on Trade and Commerce* of 1770, the problem is a "fatal" inclination to "ease and indolence" on the part of the working population (387). Marx quotes the essay:

> 'The cure will not be perfect, till our manufacturing poor are contented to labour six days for the same sum which they now earn in four days.' To this end, and for 'extirpating idleness, debauchery and excess', promoting a spirit of industry [and] 'lowering the price of labour in our manufactories' … our 'faithful Eckart' … 'proposes the well-tried method of locking up workers who become dependent on public support … in 'an ideal workhouse'. Such an ideal workhouse must be made a 'House of Terror … [where] the poor shall work 14 hours in a day, allowing proper time for meals, in such a manner that there shall remain 12 hours of neat labour.' (388)

Marx then makes his reply. The equivalent of such a House of Terror for paupers, he writes,

> only dreamed of by the capitalist mind in 1770, was brought into being a few years later in the shape of a gigantic 'workhouse' for the industrial worker himself. It was called the factory. And this time the ideal was a pale shadow compared with the reality. (389)

Spatial organization is part of the disciplinary apparatus brought to bear on the worker. This almost certainly inspired Foucault's various studies of spatially organized disciplinary apparatuses (with the panopticon as his template) in books like *Madness and Civilization, Discipline and Punish* and *The Birth of the Clinic*. It is ironic, I think, that Foucault is so often viewed in the English-speaking world as a thinker radically at odds with Marx when he so clearly takes Marx's analysis of the working day as one of his inspirations. Foucault does a magnificent job, in my view, of generalizing Marx's argument and giving it substance. Although in some of his later works he departs from what the Marxists (and more particularly the Maoists and Communists in France at the time) were saying, his early fundamental texts about asylums, prisons and clinics should, in my view, be read as continuations of rather than departures from Marx's arguments concerning the rise of a disciplinary capitalism in which workers have to be socialized and disciplined to accept the spatiotemporal logic of the capitalist labor process.

The problem of how to create and sustain worker discipline is still with us, of course. Then there is the problem of what to do with people who don't conform and are therefore dubbed odd or even deviant. And this is Foucault's as well as Marx's point: they are called mad or antisocial and incarcerated in insane asylums or prisons; or as Marx notes, they get put in the stocks, mocked and punished. To be a "normal" person, therefore, is to accept a certain kind of spatiotemporal discipline convenient to a capitalist mode of production. What Marx demonstrates is that this isn't normal at all—it's a social construct that arose during this historical period in this particular way and for these particular reasons.

Clearly, capitalists initially had to struggle mightily to extend the working day and normalize it to, say, ten or twelve hours (as it was in Marx's time). "Working time" in precapitalist societies varied a great deal depending on circumstances, but in many instances it was not much more than four hours a day, the rest of the day given over to socializing and other activities that could not be deemed "productive" in the sense of contributing to material survival. In our form of society, a four-hour workday would be considered ludicrous, unfortunate and uncivilized, which raises some questions about the "degree of civilization" that exists in our own culture. Presumably, a socialist alternative would aim to restore the four-hour workday!

In section 6, we get the story of what happened through the 1830s and 1840s as workers sought to fight back against the excessive lengthening of the working day in industrial Britain. Marx relates a particular political dynamic, which goes something like this (and here I tell it my way to help clarify Marx's description). In the 1820s in Britain, the landed aristocracy still dominated political power. It had Parliament, it had the House of Lords, it had the monarchy and dominated the military and the judiciary. But there was also a rising bourgeoisie, partly constituted by traditional mercantile and financial interests (located in London and the port cities like Bristol and Liverpool that made a lot of their money out of the slave trade) but now supplemented by an increasingly powerful industrial interest centered on cotton manufacturers in the Manchester region. The latter became powerful advocates for a particular version of economic theory that was dominated by freedom of the market and free trade (Manchester was, recall, where Senior went to learn his economics). Although increasingly wealthy, the industrial capitalists were politically disempowered relative to the landed aristocracy. They therefore sought to reform the parliamentary system in such a way as to gain greater power within the state apparatus. In this they had to fight a serious battle against the landed aristocracy. And in fighting that battle, they looked for support from the mass of the people, particularly the professional middle classes and an articulate, self-educated, artisanal working class (distinct from the mass of uneducated laborers). The industrial bourgeoisie, in short, sought an alliance with artisanal working-class movements against the landed aristocracy. And through massive agitations toward the end of the 1820s, they forced through the Reform Act of 1832, which transformed the system of parliamentary representation in their favor and liberalized the electoral qualification so that modestly endowed property owners could vote.

But all kinds of political promises had been made to the working classes in the agitation leading up to the reform, including extending the vote to artisans, regulating the length of the working day and doing something about oppressive conditions of labor. The Reform Act was soon dubbed “the great betrayal” by the workers. The industrial bourgeoisie got most of the reforms it wanted, while the working classes got nothing very much. The first Factory Act regulating the length of the working day in 1833 was weak and ineffectual (although it did set the precedent of state legislation on the topic). The workers, angered by the betrayal, organized a political movement, called Chartism, which started to agitate against the conditions of life of the mass of the population as well as against the appalling conditions of industrial labor. During this time, the landed aristocracy became even more antagonistic toward the rising power of the industrial bourgeoisie (read a Dickens or a Disraeli novel and this tension is omnipresent). They were therefore inclined to support the workers’ demands in part on the grounds of the national (military) interest but also through the typical aristocratic politics of *noblesse oblige*, depicting themselves as the good paternalistic folk who don’t exploit people the way those nasty industrialists do. This was, in part, where the factory inspectors are coming from. They were being promoted by the landed aristocracy in order to curb the power of a ruthless industrial bourgeoisie. By the 1840s, the industrial bourgeoisie was being pushed hard by this coalition of landed aristocracy and a working-class movement that was “daily more threatening,” as Marx puts it (348). Stronger versions of the Factory Act were mooted and passed in 1844, 1847 and 1848.

There is, however, another piece in this jigsaw puzzle of class relations and alliance formation. The Manchester School of economics was a great advocate of *laissez-faire* and free trade. This led to a struggle over the Corn Laws (N.B., in Britain at that time “corn” referred to “wheat” and not, as in America, to what the British called “maize”). High tariffs on imported wheat protected the incomes of the landed aristocracy from foreign competition. But the result was a high cost of bread, a basic foodstuff for the working classes. The industrial bourgeoisie launched a political campaign, led by Cobden and Bright in Manchester, for the abolition of the Corn Laws, pointing out to the workers that this would mean cheaper bread. Attempts were made (not very successful, since workers remembered the “great betrayal” all too well) to forge an alliance with workers. Eventually there were Corn Law reforms in the 1840s which reduced tariffs on wheat in ways that seriously impacted the wealth of the landed aristocracy. But when bread became cheaper, the industrial bourgeoisie reduced wages. In Marx’s terms, since the value of labor-power is determined in part by the price of bread, cheaper imports of wheat lead to lower bread prices which lead in turn (other things being equal) to a fall in the value of labor-power. The industrialists could pay their workers less because the workers needed less money to buy their daily bread! At this point in the 1840s, the Chartist movement strengthens, and workers' demands and worker agitation escalate, but there is not a solid alliance against them because of the intense division between industrial (bourgeois) and landed (aristocratic) interests.

The industrial bourgeoisie sought to undermine the operation of the Factory Acts of the 1840s. Like the boyars, they played around with notions of temporality. Since the workers did not have timepieces, the employers altered the factory clock times to get extra labor-time. The employers organized work schedules to work in bits, "hounding him hither and thither, in scattered shreds of time" (403), so that, like an actor on the stage, they participated for ten hours of work but had to be present for fifteen. Workers had "to gulp down [their] meals in a different fragment of time" (404). The employers used the relay system to confuse the times and "denounced the factory inspector as a species of revolutionary commissioner reminiscent of the Convention, who would ruthlessly sacrifice the unfortunate factory workers to his mania for improving the world" (396–7). The earlier legislation tended to focus particularly on the employment of women and children, which sparked a debate as to the age at which children become adults. "According to the anthropology of the capitalists, the age of childhood ended at 10, or, at the outside, 11" (392). So much for the degree of civilization among the industrial bourgeoisie! And as one of the factory inspectors, Leonard Horner, vociferously complained, there was no point going to the courts, since all they ever did was to exonerate the employers. But as Marx notes, "the Tories"—the landed aristocracy—"were panting for revenge" (395) over the Corn Laws and pushed through a new Factory Act that would limit the working day to ten hours in 1848.

But in 1848, there erupted one of those periodic crises of capitalism, a major crisis of overaccumulation of capital, a huge crisis of unemployment across much of Europe that sparked intense revolutionary movements in Paris, Berlin, Vienna and elsewhere; at the same time, Chartist agitation in Britain peaked. In the face of this, the whole of the bourgeoisie got nervous about the revolutionary potential of the working class. In Paris, in June of 1848, there was a violent repression of working-class movements that had asserted power, followed by the establishment of an authoritarian regime which became the Second Empire, led by Louis Bonaparte in 1852.

In Britain, events were not so dramatic, but the fear of unrest was widespread. There,

> the fiasco of the Chartist party whose leaders had been imprisoned and whose organization dismembered, had shattered the self-confidence of the English working class. Soon after this the June insurrection in Paris and its bloody suppression united, in England as on the Continent, all fractions of the ruling classes, landowners and capitalists, stock-exchange sharks and small-time shopkeepers, Protectionists and Freetraders, government and opposition, priests and free-

thinkers, young whores and old nuns [frankly, I have no idea what they had to do with it] under the common slogan of the salvation of property, religion, the family and society. (397)

It is amazing to contemplate how frequently "property, religion, the family and society" gets trotted out as an ideological mantra in the quest to protect the established bourgeois order. We don't have to look much further than the recent history of the United States, where the Republican Party in particular would not exist were it not for its vehement declaration of loyalty to these principles. In Britain in 1848 it meant that "everywhere the working class was outlawed, anathemized, placed under the '*loi des suspects*'. The manufacturers no longer needed to restrain themselves" and "broke out in open revolt" against "all the legislation since 1833 that had aimed at restricting to some extent the 'free' exploitation of labour-power." This "rebellion" was prosecuted "with a cynical recklessness and a terroristic energy which were so much the easier to achieve in that the rebel capitalist risked nothing but the skin of his workers" (397–8). All of which sounds very much like the Reagan/Thatcher neoliberal counterrevolution of the 1980s. Under the Reagan administration, much of the work that had been done on labor relations (via the National Labor Relations Board and the Occupational Safety and Health Administration) was reversed or left unenforced. In this case, too, it was the shifting character of class power and class alliances within the state apparatus that played the vital role.

In Britain, something interesting happened after 1850. The

apparently decisive victory of capital was immediately followed by a counter-stroke. So far, the workers had offered a resistance which was passive, though inflexible and unceasing. They now protested in Lancashire and Yorkshire in threatening meetings. The so-called Ten Hours' Act, they said, was thus mere humbug, a parliamentary fraud. It had never existed! The factory inspectors urgently warned the government that class antagonisms had reached an unheard-of degree of tension. Some of the manufacturers themselves grumbled: 'On account of the contradictory decisions of the magistrates, a condition of things altogether abnormal and anarchical obtains. One law holds in Yorkshire, another in Lancashire; one law in one parish of Lancashire, another in its immediate neighbourhood.' (405)

What the capitalists had in effect done was to use the law to fragment decisions here, there and everywhere so that actually the law was no longer consistent. But the serious threat of unrest in 1850 forced a

compromise between manufacturers and men, given the seal of parliamentary approval in the supplementary Factory Act of 5 August 1850. The working day for 'young persons and women' was lengthened from 10 to 10½ hours for the first five days of the week, and shortened to 7½ hours on Saturdays. (405)

Certain groups, such as the silk manufacturers, procured exemptions, and there the children "were quite simply slaughtered for the sake of their delicate fingers" (406). But by 1850,

the principle had triumphed with its victory in those great branches of industry which form the most characteristic creation of the modern mode of production. Their wonderful development from 1853 to 1860, hand-in-hand with the physical and moral regeneration of the factory workers, was visible to the weakest eyes. The very manufacturers from whom the legal limitation and regulation of the working day had been wrung step by step in the course of a civil war lasting half a century now pointed boastfully to the contrast with the areas of exploitation which were still 'free'. The Pharisees of 'political economy' now proclaimed that their newly won insight into the necessity for a legally regulated working day was a characteristic achievement of their 'science'. It will easily be understood that after the factory magnates had resigned themselves and submitted to the inevitable, capital's power of resistance gradually weakened, while at the same time the working class's power of attack grew with the number of its allies in those social layers not directly interested in the question. (408–9)

Who were these allies? Marx does not say, but it probably comes back mainly to professional classes and the progressive wing of the reformist bourgeoisie. These were crucial elements in a situation where the working classes did not vote. "Hence the comparatively rapid progress since 1860" (409).

While Marx does not comment on it, this reformism was not confined to the conditions of factory labor, and to the degree that it became clear that they, too, could benefit, even the industrial interest increasingly participated. This was best symbolized by the Birmingham industrialist Joseph Chamberlain, who became mayor of the city and was often then referred to as "Radical Joe" because of his commitments to municipal improvements in education, infrastructure (water supply, sewage, gas lighting, etc.) and better housing for the poor. At least a segment of the industrial bourgeoisie had learned by the 1860s that it did not necessarily have to be reactionary on these topics if it was to maintain its profits.

This whole dynamic calls for some commentary. It's clear from the data that up until 1850 or so, the rate of exploitation in the British industrial system was horrendous and that the hours of work were equally horrendous, with dreadful consequences for the conditions of working and living. But this super-exploitation slackened after 1850 without any marked negative effect on profitability or output. This occurred in part because the capitalists found another way to gain surplus-value (to be taken up shortly). But they also discovered that a healthy and efficient labor force, on a shorter working day, could be more productive than an unhealthy, inefficient, falling-apart, constantly turning-over and dying-off labor force of the sort that it had utilized during the 1830s and 1840s. The capitalists could then trumpet this discovery and their benevolence and sometimes overtly support a certain level of collective regulation and state interference to limit the effects of the coercive laws of competition. If, from the standpoint of the capitalist class as a whole, curbing the length of the working day turned out to be a good idea, then what does this say about the struggle by workers and their allies to limit it? It says that workers may well be doing capital a favor. Capitalists get pushed into a reform which is not necessarily against their class interest. In other words, the dynamics of class struggle can just as easily help equilibrate the system as disrupt it. Marx in effect concedes here that capitalists, when they finally succumbed after fifty years of struggle to the idea of regulating the working day, found it worked for them just as well as it did for the workers.

In section 7, Marx examines the impact of British factory legislation on other countries, chiefly France and the United States. In so doing, he first recognizes that a mode of analysis that focuses merely on the individual worker and his or her contract is insufficient.

> The history of the regulation of the working day in certain branches of production, and the struggle still going on in others over this regulation, prove conclusively that the isolated worker, the worker as 'free' seller of his labour-power, succumbs without resistance once capitalist production has reached a certain stage of maturity. The establishment of a normal working day is therefore the product of a protracted and more or less concealed civil war between the capitalist class and the working class. (412–13)

In other countries, this struggle is affected by the nature of political traditions (the "French revolutionary method," for example, is far more heavily dependent on declarations of "universal rights") and actual conditions of labor (in the United States, under conditions of slavery, "labour in a white skin cannot emancipate itself where it is branded in a black skin") (414). But in all cases, the laborer who appears as a "free agent" in the marketplace discovers he is no free agent in the realm of production, where "the vampire will not let go 'while there remains a single muscle, sinew or drop of blood to be exploited'" (415–16) (here Marx quotes Engels). The lesson that must be learned is that

> for 'protection' against the serpent of their agonies, the workers have to put their heads together and, as a class, compel the passing of a law, an all-powerful social barrier by which they can be prevented from selling themselves and their families into slavery and death by voluntary contract with capital. In place of the pompous catalogue of the 'inalienable rights of man' there steps the modest Magna Carta of the legally limited working day, which at last makes clear 'when the time which the workers sells is ended, and when his own begins'. (416)

There are a couple issues that arise from this conclusion. Marx's dismissal of the "inalienable rights of man" is a reaffirmation that "rights talk" is not going to be able to address fundamental issues, such as the determination of the length of the working day. The courts cannot do it, either. But here, for the first time, Marx argues that workers have to "put their heads together" and work as a class, and how they do so is going to have a huge impact on the conditions of labor and the dynamics of capitalism. This struggle is central to the very definition of freedom itself. I here quote from the third volume of *Capital*:

> The realm of freedom really begins only where labour determined by necessity and external expediency ends; it lies by its very nature beyond the sphere of material production proper. Just as the savage must wrestle with nature to satisfy his needs, to maintain and reproduce his life, so must civilized man, and he must do so in all forms of society and under all possible modes of production. This realm of natural necessity expands with his development, because his needs do too; but the productive forces to satisfy these expand at the same time. Freedom, in this sphere, can consist only in this, that socialized man, the associated producers, govern the human metabolism with nature in a rational way, bringing it under their collective control instead of

being dominated by it as a blind power; accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature. But this always remains a realm of necessity. The true realm of freedom, the development of human powers as an end in itself, begins beyond it, though it can only flourish with this realm of necessity as its basis. The reduction of the working day is the basic prerequisite.[1]

But we also see that capitalists, impelled onward by the coercive laws of competition, are likely to behave in such a way as to seriously impair the prospects for their reproduction as a class. If the laborers organize as a class, and thereby force the capitalists to modify their behavior, then the collective power of the workers helps save the capitalists from their own individual stupidity and short-sightedness, thus forcing them to recognize their class interest. The implication is that collective class struggle can be a stabilizer within the capitalist dynamic. If workers are completely powerless, then the system goes awry because *Après moi le déluge!* is no way to run a stable capitalist economy. Clearly, the coercive laws of competition that drive the capitalists down such a self-destructive path need to be contained. This is as serious a problem with respect to the super-exploitation of the land and the pillaging of natural resources as it is for the qualities and quantities of labor supply.

Now, this is a difficult conclusion to reach since Marx is purportedly a revolutionary thinker. In this chapter, he hemmed himself in by the initial assumption that both capital and labor pursue their rights in terms of the laws of exchange. In these terms, the only possible outcome for the workers is a “modest Magna Carta” of a fair day’s wage for a fair day’s labor. There is no overthrow of the capitalist class or abolition of class relations here. Class struggle merely equilibrates the capital-labor relation. Class struggle can all too easily be internalized within the capitalist dynamic as a positive force that sustains the capitalist mode of production. While this does mean that class struggle is both inevitable and socially necessary, it sheds very little light on the prospects for a revolutionary overthrow of capitalism.

How are we to interpret the politics of all this? My own view is to agree with the proposition that a certain empowerment of the workers’ movement is socially necessary for capitalism to function effectively, and that the sooner the capitalists recognize this and submit to it, the better off they will be. There is plenty of historical evidence to support this conclusion, even to the point where the state, as happened in the United States during the New Deal, deliberately empowered the trade-union movement in order not to overthrow capitalism but to help stabilize it. Struggles over the value of labor-power and over the length of the working day are fundamental to the achievement of a modicum of stability within capitalism for social and political as well as purely economic reasons. It is perhaps no accident that the phase of strong social-democratic governance in the 1950s and 1960s in Europe and the social compact between capital and labor in the United States were associated with strong capitalist growth and that the Scandinavian states with their strong social support systems have remained relatively successful competitors on the international stage even during the recent turn toward neoliberalism elsewhere. Marx will also insist that this finding as to the socially necessary state of class struggle has to be inserted theoretically into an otherwise silent bourgeois political economy in order to understand the dynamics of capitalism.

But there is also a point at which struggle over the length of the working day and the empowerment of a working-class movement can go beyond trade-union consciousness and morph into more revolutionary demands. It is one thing to say that the working day should be limited to ten or eight hours, but what happens when it drops to four? At that point, capitalists get a little jumpy. As happened in France, even a thirty-five-hour week and six weeks' mandated vacation time have been seen as excessive and sparked a strong movement on the part of the capitalist class and their allies for much greater "flexibility" in labor laws. The question here is, at what point does reform go too far and actually challenge the very basis of capitalism?

If there is an equilibrium point for class struggle, it is not fixed, nor is it known. But it does depend on the nature of the class forces and the degree of flexibility that capitalists have in relation to new requirements. For example, a far shorter working day permits capitalists to push toward intensification and increasing efficiency of labor in ways that compensate for the shorter hours. It is virtually impossible to maintain a high level of intensity over a twelve-hour workday. An interesting example of this occurred in the miner's strike against the Edward Heath government in Britain in the early 1970s. In the face of power shortages, Heath mandated a three-day workweek, but the subsequent evidence showed that productive activity did not diminish in the same proportion. He also mandated no television broadcasting after ten at night, which ensured he got booted out at the next election (there was also, I recall, an interesting blip upward in the birthrate some nine months later).

I cannot resist ending consideration of this chapter with a few comments on its relevance to contemporary conditions. Plainly, the dynamics of class struggle (including class-alliance formation) have continued ever since Marx's time to play a crucial role in the determination of working days, weeks, years and lifetimes as well as in the degree of regulation of working conditions and levels of wages. While in certain places and times, the more horrendous and appalling conditions that Marx dwells on at length have been very much circumscribed, the general issues he describes (such as much lower life expectancies than average in many occupations such as mining, steel and construction) have never disappeared. But over the past thirty years, with the neoliberal counterrevolution that places much greater emphasis on deregulation and the pursuit of more vulnerable workforces through globalization, there has been a recrudescence of the sorts of conditions that the factory inspectors so graphically described in Marx's time. By the mid-1990s, for example, I would give the students in my *Capital* class the following exercise. I would ask them to imagine they had had a letter from home that noted they were taking a course on *Capital* and that commented that while the book perhaps was historically relevant, the conditions it describes had long ago been superseded. I gave the students bundles of excerpts from official reports (by the World Bank, for instance) and clippings from respectable newspapers (the *New York Times*, etc.) describing working conditions in plants producing Gap clothing in Central America, Nike plants in Indonesia and Vietnam or Levi Strauss products in Southeast Asia and describing how that great lover of children Kathy Lee Gifford was shocked to find that her line of clothing for Wal-Mart was produced either in plants in Honduras employing young children at almost no wages or in sweatshops in the New York region where people had not been paid for weeks. The students wrote great essays, though they balked when I suggested they might like to send them home.

Regrettably, conditions have grown worse. In May 2008, an Immigration and Customs Enforcement raid on an Iowa meatpacking plant netted 389 suspected illegal immigrants, several of whom were underage and many of whom worked twelve-hour days six days a week. The immigrants were treated as criminals; many of the 297 convicted were jailed for five months or more prior to deportation, while the authorities only began slowly to move against the company for its appalling labor practices as the moral outrage began to build through public exposure. As the students in my class had also concluded, it is all too easy to insert any number of contemporary accounts of labor practices into Marx's chapter on the working day without noticing the difference. This is where the neoliberal counterrevolution and the loss of power on the part of the labor movement have brought us. Sad to report, Marx's analysis is all too relevant to our contemporary condition.

CHAPTER 11: RATE AND MASS OF SURPLUS-VALUE

Chapter 11 is a typical link chapter. It moves out of one set of questions in order to pose another. Marx's method returns to the somewhat dryly algebraic before taking a substantive twist. Capitalists, he suggests, are most interested in maximizing the mass of surplus-value because their individual social power depends on the total money power they command. The mass of surplus-value is given by the rate of surplus-value multiplied by the number of laborers employed. If the number of laborers employed diminishes, the same mass of surplus-value can be gained by increasing the rate of surplus-value. But there is a limit on the rate of surplus-value given not only by the twenty-four hours in a day but also by all the social and political barriers discussed earlier. Faced with this limit, capitalists can increase the number of laborers employed. But at some point, another limit is encountered, which is the total variable capital available and the total supply of the laboring population. The outer limit here would be, of course, the total population, but again there are reasons why the available workforce is far less than this. Faced with these two limits, capital has to come up with an entirely different strategy for increasing the mass of surplus-value.

As often happens in transitional chapters, Marx provides us, in capsule form, with a conceptual map as to where we have been and where we are going:

> Capital developed within the production process until it acquired command over labour, i.e. over self-activating labour-power, in other words the worker himself. The capitalist, who is capital personified, now takes care that the worker does his work regularly and with the proper degree of intensity … [But] capital also developed into a coercive relation, and this compels the working class to do more work than would be required by the narrow circle of its own needs. (424–5)

Capital personified, in its thirst for surplus labor and its incessant pursuit of surplus-value,

> surpasses all earlier systems of production … in its energy and its quality of unbounded and ruthless activity … [But] at first capital subordinates labour on the basis of the technical conditions within which labour has been carried on up to that point in history. It does not therefore directly change the mode of production. The production of surplus-value in the form we have so far considered, by means of simple extension of the working day, appeared therefore independently of any change in the mode of production itself. (425)

But all that is about to change, both logically and historically. When "we view the production process as a process of valorization," then the means of production are changed into "means for the absorption of the labour of others. It is no longer the worker who employs the means of production, but the means of production which employ the worker." This historical and logical reversal lies at the core of an astonishing transformation in how a capitalist mode of production has to be understood. "Instead of being consumed by him as material elements of his productive activity," the means of production "consume him as the ferment necessary to their own life-process, and the life-process of capital consists solely in its own motion as self-valorizing value" (425). This all follows from the simple fact that the only way in which the value of the means of production (the dead labor congealed in factories, spindles and machines) held by the capitalists can be preserved (let alone augmented in the form of surplus-value) is by the absorption of fresh supplies of living labor. To the "bourgeois brain" it then follows that laborers exist only to valorize capital through the application of their labor-power!

Capitalism abhors limits of any sort, precisely because the accumulation of money power is in principle limitless. Capitalism perpetually strives, therefore, to transcend all limits (environmental, social, political and geographical) and to convert them into barriers that can be bypassed or circumvented. This gives a definite and special character to the capitalist mode of production and imposes specific historical and geographical consequences on its development. We now turn to consider how the limits encountered in this chapter—of total available labor force and rate of exploitation—are converted by capital into a barrier that can be overcome.

CHAPTER SIX

Relative Surplus-Value

CHAPTER 12: THE CONCEPT OF RELATIVE SURPLUS-VALUE

Chapter 12 proposes a simple argument with a few complicated wrinkles. Yet it is a chapter that it is all too easy to get wrong. The initial argument goes like this:

The value of a commodity is determined by the socially necessary labor-time congealed in it, and this value diminishes with increasing productivity. “In general, the greater the productivity of labour, the less the labour-time required to produce an article, the less the mass of labour crystallized in that article, and the less its value” (131).

The value of labor-power as a commodity is affected by all manner of historical, cultural and social circumstances. But it is also tied to the value of the commodities that laborers need to reproduce themselves and their dependents at a given standard of living.

> The value of labour-power can be resolved into the value of a definite quantity of the means of subsistence. It therefore varies with the value of the means of subsistence, i.e. with the quantity of labour-time required to produce them. (276)

Other things remaining equal, therefore, the value of labor-power will decline with rising productivity in those industries producing the goods laborers need to reproduce themselves.

> In order to make the value of labour-power go down, the rise in the productivity of labour must seize upon those branches of industry whose products determine the value of labour-power, and consequently either belong to the category of normal means of subsistence, or are capable of replacing them. (432)

For the capitalists, this means that they can lay out less in the way of variable capital because the workers need less money to meet their needs (as fixed by a given standard of living). If capitalists have to lay out less for variable capital, then even if the length of the working day is fixed, the ratio s/v, or the rate of exploitation, rises. A greater mass of surplus-value thereby accrues to the capitalist even though the length of the working day is fixed.

This process in no way involves any infringement of the laws of exchange. To be sure, capitalists will seek to purchase whatever labor-power they can at less than its value, and that will augment the mass of surplus-value they receive. “Despite the important part which this method plays in practice, we are excluded from considering it here by our assumption that all commodities, including labour-power, are bought and sold at their full value” (431). So once again, acceptance of the market logic and the theses of classical political economy take precedence over the study of actual practices, demonstrating once more Marx’s commitment to deconstructing the utopian theses of classical political economy on their own terms. One other peculiar result arises out of Marx’s mode of reasoning. “An increase in the productivity of labour in those branches of industries which supply neither the necessary means of subsistence nor the means by which they are produced leaves the value of labour-power undisturbed" (432). Therefore, reducing the value of luxury goods by increasing productivity does not yield relative surplus-value. It is only the declining value of wage goods that matters.

This produces a conundrum. Why would individual capitalists raise the productivity in their own particular industry producing a wage good, when all capitalists will benefit? This is what is now called a free-rider problem. The individual capitalist who goes out, innovates, reduces the price of a wage good and so reduces the value of all labor-power gains no particular or singular benefit from so doing. The benefit accrues to the whole capitalist class. Where is the individual incentive to do that?

Could relative surplus-value arise through a class strategy? While Marx does not mention it in this chapter, he earlier related a case where this was so—the abolition of the Corn Laws (tariffs on wheat imports) as a result of the collective agitation of the Manchester industrialists. The cheaper wheat imports that resulted brought down the price of bread, and this allowed wages to be reduced. This sort of class strategy turns out to have been of great historical importance. The same reasoning exists now in the United States with respect to the supposed advantages of free trade. The Wal-Mart phenomenon and cheap imports from China are welcomed because cheap goods reduce the cost of living to the working classes. The fact that money wages have not risen much for workers over the past thirty years is made more palatable since the physical quantity of goods they can acquire has increased (provided they shop at Wal-Mart). In exactly the same way that the nineteenth-century British industrial bourgeoisie wanted to reduce the value of labor-power by allowing cheap imports, so the reluctance to block cheap imports in the United States today derives from the need to keep the value of labor-power stable. Protectionist tariffs, while they might help keep jobs in the United States, would result in price increases which would create pressures for higher wages.

It turns out historically that there have been many state-organized strategies to intervene in the value of labor-power. Why, for example, does the State of New York not charge sales taxes on food? Because that is seen as fundamental to the determination of the value of labor-power. On occasion, the industrial bourgeoisie has supported rent control, cheap (social) housing and subsidized rents and agricultural products because that, too, keeps the value of labor-power down. So we can identify many situations where there have been and still are class strategies worked out through the state apparatus to reduce the value of labor-power. To the degree that the working classes gained a modicum of access to state power, they could use it to increase their income in kind (through state provision of many goods and services) and so raise the value of labor-power (in effect claiming back a part of the potential relative surplus-value for themselves).

Marx eschews any mention of these kinds of issues in this chapter almost certainly for the same reason he dismissed the way capitalists perpetually seek to purchase labor-power at less than its value. Conscious class strategies and state interventions are not admissable in the theoretical framework Marx has established. We don't necessarily have to follow him all the way on this, particularly to the degree we are interested in actual histories. But he nevertheless accomplishes something very profound by sticking to the restrictive assumptions of free-market utopianism. He shows how and why individual capitalists might be impelled to innovate (without any class or state interventions) even though the return on their innovation goes to the whole capitalist class.

"When an individual capitalist cheapens shirts, for instance, by increasing the productivity of labour, he by no means necessarily aims to reduce the value of labour-power and shorten necessary labour-time in proportion to this." The individual capitalist does not act on the basis of a generalized class consciousness even though "he contributes towards increasing the general rate of surplus-value" through his actions. Marx then warns: "the general and necessary tendencies of capital must be distinguished from their forms of appearance." This peculiar phrasing signals that something special is going on (the odor of fetishism is in the air). So what's he getting at?

> While it is not our intention here to consider the way in which the immanent laws of capitalist production manifest themselves in the external movement of the individual capitals, assert themselves as the coercive laws of competition, and therefore enter into the consciousness of the individual capitalist as the motives which drive him forward, this much is clear: a scientific analysis of competition is possible only if we can grasp the inner nature of capital, just as the apparent motions of the heavenly bodies are intelligible to someone who is acquainted with their real motions, which are not perceptible to the senses. (433)

Now we need to think long and hard, critically and carefully, about what he is saying. I earlier suggested you remain alert for when the coercive laws of competition come into the argument, and plainly they do so here. Yet Marx seems to want to downplay their import even as he recognizes that he cannot do without them. At this point, I can only offer my own interpretation, knowing full well that many will disagree with me. I think there is a certain parallel between the way in which Marx analyzes the role of supply and demand fluctuations and the role of competition. In the case of supply and demand, Marx concedes that these conditions play a vital surface role in generating price movements for a particular commodity, but when supply and demand are in equilibrium, he argues, supply and demand fail to explain anything. Supply and demand cannot explain why shirts exchange for shoes on average in the ratio that they do. This has to be explained by something totally different, congealed socially necessary labor-time, or value. This does not mean that supply and demand are irrelevant, because without them there could be no equilibrium price. Supply and demand relations are a necessary but not sufficient aspect of a capitalist mode of production. Competition between individual capitalists within a particular line of commodity production plays a similar role. In this instance, however, it redefines the equilibrium position—the average price or value of the commodity—through changes in the general level of productivity in that line of commodity production. Competition as Marx here depicts it is a sort of epiphenomenon that occurs on the surface of society, but, like exchange itself, it has some deeper consequences that cannot be understood by reference to competition. This was the position he took in the *Grundrisse*: competition does not establish the laws of motion of capitalism

> but is rather their executor. Unlimited competition is therefore not the presupposition for the truth of the economic laws, but rather the consequence—the form of appearance in which their necessity realizes itself … Competition therefore does not explain these laws; rather it lets them be seen, but does not produce them.[1]

Let use see how this process works out in this instance. "For the understanding of the production of relative surplus-value, and merely on the basis of the results already achieved, we may add the following remarks" (433). The value of a commodity, recall, is fixed by the socially necessary "labour-time required to produce any use-value under the conditions of production normal for a given society and with the average degree of skill and intensity of labour prevalent in that society" (129). What happens if an individual capitalist departs from this social average and sets up a productive system which is super-efficient and instead of producing ten widgets in an hour produces twenty? If one capitalist does that but all the others still produce at the rate of ten, then this one capitalist can sell at or close to the social average of ten while producing and selling twenty. "The individual value of these articles is now below their social value; in other words, they have cost less labour time than the great bulk of the same article produced under the average social conditions" (434). The innovative capitalist gains an extra profit, extra surplus-value, by selling at or close to the social average while producing at a rate of productivity far higher than the social average. This gap is crucial and yields a form of relative surplus-value to the individual capitalist. In this case, it does not matter whether the capitalist is producing wage goods or luxuries. But how does this capitalist sell the extra ten widgets per hour at the old social-average price? Here the laws of supply and demand come into play. And the answer is, probably, that they cannot be sold at the old price. So prices begin to decline. As prices decline, the other capitalists are faced with less profit. This amounts to a redistribution of surplus-value from those with inferior technologies to those with superior technologies. Those working with an inferior technology, therefore, have an increasing competitive incentive to adopt the new technology. Once all capitalists in this line of production follow suit and adopt the new technology to produce twenty widgets an hour, so the socially necessary labor-time congealed in widgets declines.

This form of relative surplus-value, which accrues to the individual capitalist, only lasts as long as he or she has a superior technology in relationship to everybody else. It is ephemeral.

This extra surplus-value vanishes as soon as the new method of production is generalized, for then the difference between the individual value of the cheapened commodity and its social value vanishes. The law of the determination of value by labour time makes itself felt to the individual capitalist who applies the new method of production by compelling him to sell his goods under their social value; this same law, acting as a coercive law of competition, forces his competitors to adopt the new method. (436)

So the first form of relative surplus-value considered in this chapter is a class phenomenon. It accrues to the whole capitalist class, and it is as permanent as conditions of class struggle over the value of labor-power allow. The second form is individual and ephemeral. It is this second form, the one that confers individual advantage, that individual capitalists are forced to pursue via the coercive laws of competition. The result is that all capitalists at some point or other are forced to adopt the same technology. The two forms of relative surplus-value are not unrelated, since ephemeral innovations in the wage-goods sector will also drive down the value of labor-power at a physically fixed standard of living. “Capital therefore has an immanent drive, and a constant tendency, towards increasing the productivity of labour, in order to cheapen commodities, and, by cheapening commodities, to cheapen the worker himself” (436–7).

But if you are a savvy capitalist, you will know that you can always get this second ephemeral form of relative surplus-value, provided you always have a superior technology. This generates some interesting results. Suppose the new technology is a new machine. Marx has argued that machines, since they are dead labor, can’t produce value. But what happens when you get extra relative surplus-value because of your new machine? While machines are not a source of value, they can be a source of relative surplus-value to the individual capitalist! Once these machines become general, they can then appear to be a source of the relative surplus-value to the whole capitalist class because of declines in the value of labor-power. This produces a peculiar result: machines cannot be a source of value, but they can be a source of surplus-value.

From the way Marx has set up the argument, we see that there is a tremendous incentive for leapfrogging technological innovations among individual capitalists. I get ahead of the pack, I have a superior, more efficient production system than you, I get the ephemeral surplus-value for three years, and you then catch up with me or even go beyond me and get the ephemeral surplus-value for three years. Individual capitalists are all hunting ephemeral surplus-value through new technologies. Hence the technological dynamism of capitalism.

Now, most other theories of technological change treat it as some sort of *deus ex machina*, some exogenous variable outside the system, attributable to the inherent genius of entrepreneurs or simply to the immanent capacity of human beings for innovation. But Marx is typically reluctant to attribute something as crucial as this to some external power. What he does here is find a simple way to explain why capitalism is so incredibly technologically dynamic from the inside (endogenously, as we like to say). He also explains why capitalists hold the fetishistic view that machines are a source of value, and why all of us are also subject to the same fetish conception. But Marx is resolute. Machines are a source of relative surplus-value but not of value. Since capitalists are interested in the mass of surplus-value, and since they would generally prefer to gain relative surplus-value rather than confront class struggles over absolute surplus-value, then the fetish belief in a "technological fix" as an answer to their ambitions is all too understandable. We even have a hard time disabusing ourselves of it.

But there is another interesting inference to be drawn that Marx refrains from examining, though he does lightly allude to it elsewhere. Suppose workers live on bread alone, and the cost of bread is cut in half because of increases in productivity. Suppose that capitalists cut wages by a quarter. They gain the collective form of relative surplus-value, thus increasing the general rate of exploitation. But at the same time, the workers can buy more bread and raise their physical standard of living. The general question this poses is, how are gains from increasing productivity shared between the classes? One possible result, which Marx unfortunately neglects to emphasize, is that the physical standard of living of workers can rise, as measured by the material goods (use-values) they can afford, at the same time as the rate of exploitation, s/v, increases. This is an important point, because one of the criticisms frequently heard about Marx is that he believes in a rising rate of exploitation. How can that be, ask the critics? Workers (at least in the advanced capitalist countries) now have cars and all these consumer goods, so obviously the rate of exploitation cannot be increasing! Are not the workers so much better off? One part of the answer is that it is perfectly feasible, in the terms postulated in Marx's theory, for steady increases to occur in the standard of living of labor at the same time as the rate of exploitation either increases or remains constant. (The other part might be to point to the benefits that accrue to one portion of the global working class as a return on imperialist practices of exploitation of the other portion, but that cannot be appealed to here.)

I say it was unfortunate that Marx did not emphasize this point in part because it would have easily forestalled an erroneous, spurious line of theoretical and historical criticism. But it would have also made us focus more clearly on the question of how benefits from gains in productivity get shared as a crucial aspect of the history of class struggle. In the case of the United States, some share of the gains from higher productivity went to the workers from the Civil War period onward. A typical union bargaining strategy is to agree to collaborate with increasing productivity in return for higher wages. If the benefits from technological dynamism are spread around, then opposition to that technological dynamism becomes muted even as capitalists are cheerfully raising the rate of exploitation. Political opposition to capitalism in general also may become less strident, even if the rate of exploitation is increasing, because workers are at least gaining a higher physical standard of living. The odd thing about the United States is that it is only in the past thirty years or so that workers have failed to gain from rising productivity. The capitalist class has appropriated almost all the benefits. This lies at the core of what the neoliberal counterrevolution has been about and what distinguishes it from the Keynesian welfare-state period, when gains from productivity tended to be shared more evenly between capital and labor. The result has been, as is well documented, a tremendous increase in levels of social inequality in all those countries that have moved down neoliberal lines. In part this has to do with the balance of class forces and the dynamics of class struggle in different places, while in the United States, cheaper imports (and imperialist practices) have also helped workers maintain an illusion that perhaps they may be benefiting from capitalist imperialism. But all this lies way beyond what Marx's text is proposing. I find it helpful, however, to extend his key insights in these directions.

CHAPTER 13: CO-OPERATION

The three chapters that follow deal with the various ways in which capitalists can procure relative surplus-value of the individual sort. The overall focus is on whatever it is that raises the productivity of labor, and it is clear that this depends on organizational forms (cooperation and divisions of labor), as well as on machinery and automation (technology, as we usually think of it). This can create some confusion, since Marx sometimes bundles all these strategies together under the heading "productive forces," but then on occasion uses the term "technology" as if it were the same thing. He is clearly as interested in organizational form (the software, as it were) as he is in the machines (the hardware). I think it best to assume that Marx's theory of technology/productive forces is machinery plus organizational form. I find his stance on this particularly relevant since, in recent times, transformations in organizational form—subcontracting, just-in-time systems, corporate decentralization and the like—have played a major role in the quest to increase productivity. While the profitability of Wal-Mart has its basis in the exploitation of cheap Chinese labor, the efficiency of its organizational form sets it apart from many of its competitors. Similarly, the Japanese conquest of the US auto market at the expense of Detroit had as much to do with the organizational form (just-in-time and subcontracting) of the Japanese car companies as with the new hardware and automation they deployed. Indeed, ever since time-and-motion studies (and what became known as Taylorism) became fashionable around 1900, there has always been a strong link between the hardware and the software of capitalist production systems.

Marx begins by examining how two organizational forms—cooperation and divisions of labor—can be used by capital under existing technological conditions of artisanal and handicraft labor to increase productivity. Innovations in these two aspects of organizational form have been integral to the acquisition of relative surplus-value throughout the history of capitalism, and we should never forget them. As in the chapter on the labor process, however, where the potential nobility of the process is stressed in contrast to its alienated form under capitalism, Marx casts neither cooperation nor division of labor in an inherently negative light. He views them as potentially creative, beneficial and gratifying for the laborer. Cooperation and well-organized divisions of labor are wonderful human capacities that add to our collective powers. Socialism and communism would presumably have great need of them. What Marx will seek to show is how these positive potentialities are seized on by capital to its own particular advantage and thereby turned into something negative for the laborer.

"When numerous workers work together side by side in accordance with a plan, whether in the same process, or in different but connected processes, this form of labour is called co-operation." Note the word "plan" here, since it's going to become an important idea. Cooperation permits, for example, an increasing scale of production, and the resultant economies of scale can generate increases in labor efficiency and productivity. This is made much of in conventional economic theory, and Marx does not demur. "Not only do we have here an increase in the productive power of the individual, by means of co-operation, but the creation of a new productive power, which is intrinsically a collective one" (443). This collective power

> begets in most industries a rivalry and a stimulation of the 'animal spirits', which heightens the efficiency of each individual worker. This is why a dozen people working together will produce far more, in their collective working day of 144 hours than twelve isolated men each working for 12 hours. (443–4)

Furthermore, "co-operation allows work to be carried on over a large area" while rendering

> possible a relative contraction of its arena. This simultaneous restriction of space and extension of effectiveness, which allows a large number of incidental expenses … to be spared, results from the massing together of workers and of various labour processes, and from the concentration of the means of production. (446)

There is an interesting tension here between geographical expansion (work conducted over a large area) and geographical concentration (bringing workers together for purposes of cooperation in a particular space). The latter, as Marx points out, can have political consequences as workers get together and organize.

He insists, however, that "the special productive power of the combined working day is, under all circumstances, the social productive power of labour, or the productive power of social labour. This power arises from co-operation itself." Furthermore, "when the worker co-operates in a planned way with others, he strips off the fetters of his individuality, and develops the capabilities of his species" (447). This is one of those instances where

Marx reverts to some notion of universal species being, which was an important theme in the *Economic and Philosophical Manuscripts* of 1844. At this point, it is hard to view this discussion of cooperation in a negative light. We strip off the fetters of our individuality and develop the capability of the species. To the degree that this capability has not been realized, we have yet to realize the potentiality of our species being.

But what happens when we return to the world of "our would-be capitalist"? First off, the capitalist needs an initial mass of capital in order to organize cooperation. How much, and where does it come from? There are what we now usually refer to as barriers to entry into any production process. In some instances, the start-up costs can be considerable. But there are ways to ameliorate this problem. Marx here introduces an important distinction. "At first, the subjection of labour to capital was only a formal result of the fact that the worker, instead of working for himself, works for, and consequently under, the capitalist." But as time goes on, "through the co-operation of numerous wage-labourers, the command of capital develops into a requirement for carrying on the labour process itself, into a real condition of production" (448). The distinction here is between the "formal" subsumption of labor under capital versus its "real" subsumption.

What does this difference mean? Under what was called the putting-out system, merchant capitalists would take materials to laborers in their cottages and return to collect the worked-up product at a later date. The laborers would not be supervised, and the labor process would be left up to the cottagers (it often entailed family labor and was dovetailed with subsistence agricultural practices). But the cottagers depended on the merchant capitalists for their monetary incomes and did not own the product they worked up. This is what Marx means by formal subsumption. When laborers are brought into the factory for a wage, then both they and the labor process are under the direct supervision of the capitalist. This is real subsumption. So the formal is out there, dependent, while the real is inside the factory under the supervision of the capitalist. The latter entails more start-up costs, more initial capital; in the early stages of capitalism, when capital was scarce, the formal system of exploitation could well be more advantageous. Marx believed that over time, the formal would give way to the real. But he was not necessarily correct in this. The revival of contract work, home working and the like in our times indicates that some reversion to formal kinds of subjection and subsumption is entirely possible.

When laborers are brought into a collective structure of cooperation in a factory, they come under the directing authority of the capitalist. Any cooperative endeavor requires some directing authority, much as a conductor directs an orchestra. The problem is that "the work of directing, superintending and adjusting becomes one of the functions of capital, from the moment that the labour under capital's control becomes co-operative." Furthermore, "as a specific function of capital, the directing function acquires its own special characteristics." This function is to recognize that moments are the elements of profit and to squeeze as much labor-time out of the laborer as possible. On the other hand, “as the number of co-operating workers increases, so too does their resistance to the domination of capital, and, necessarily, the pressure put on by capital to overcome this resistance” (449).

The struggle between capital and labor, which we earlier encountered in the labor market, gets internalized on the shop floor. This happens because cooperation is organized through the power of capital. What was once a power of labor now appears as a power of capital.

> The interconnection between their various labours confronts [the laborers], in the realm of ideas, as a plan drawn up by the capitalist, and, in practice, as his authority, as the powerful will of a being outside them, who subjects their activity to his purpose. (450)

The capitalist’s purpose is to secure “on the one hand a social labour process for the creation of a product, and on the other hand capital’s process of valorization,” i.e., the production of surplus-value. This entails the development of a specific kind of labor process in which the “work of direct and constant supervision of the individual workers and groups of workers” results in “a special kind of wage-labourer. An industrial army of workers under the command of a capitalist requires, like a real army, officers (managers) and N.C.O.s (foremen, overseers).” A certain structure of supervision of the workers emerges which is both authoritarian and “purely despotic.” In this, the capitalist acquires a distinctive role as orchestrator of the labor process in all its aspects. “It is not because he is a leader of industry that a man is a capitalist; on the contrary, he is a leader of industry because he is a capitalist. The leadership of industry is an attribute of capital” (450–1). Only by way of command over the labor process can capital be both produced and reproduced. Laborers, on the other hand,

> enter into relations with the capitalist, but not with each other. Their cooperation only begins with the labour process, but by then they have ceased to belong to themselves. On entering the labour process they are incorporated into capital. As co-operators, as members of a working organism, they merely form a particular mode of existence of capital.

Workers lose their personhood and become mere variable capital. This is what Marx means by the real subsumption of the laborer under capital.

> The socially productive power of labour develops as a free gift to capital whenever the workers are placed under certain conditions, and it is capital which places them under these conditions. Because this power costs capital nothing, while on the other hand it is not developed by the worker until his labour itself belongs to capital, it appears as a power which capital possesses by its nature—a productive power inherent in capital. (451)

An inherent power of labor, the social power of cooperation, is appropriated by capital and made to appear as a power of capital over the workers. Historical examples of enforced cooperation abound—the Middle Ages, slavery, colonies, slave labor—but under capitalism the connection of organized cooperation to wage labor is manifest in special ways. This had a key role in the rise of capitalism.

> The simultaneous employment of a large number of wage-labourers in the same labour process … forms the starting-point of capitalist production. This starting-point coincides with the birth of capital itself. If then, on the one hand, the capitalist mode of production is a historically necessary condition for the transformation of the labour process into a social process, so, on the other hand, this social form of the labour process is a method employed by capital for the more profitable exploitation of labour, by increasing its productive power. (453)

This originary status of a certain form of cooperation is perpetuated throughout the whole history of capitalism.

> Simple co-operation has always been, and continues to be, the predominant form in those branches of production in which capital operates on a large scale, but the division of labour and machinery play only an insignificant part … Co-operation remains the fundamental form of the capitalist mode of production, although in its simple shape it continues to appear as one particular form alongside the more developed ones. (454)

It is impossible to imagine the capitalist mode of production without cooperation, albeit cooperation under the despotism of capitalists who organize and direct a supervisory authority and fragment the working class into distinctive hierarchical groupings. It is, therefore, no longer adequate to think merely about *the* wage laborer, because the working class is stratified according to both the status and the differential financial reward attached to the different functions required to constitute the despotism of a cooperative apparatus dedicated solely to the production of surplus-value.

CHAPTER 14: THE DIVISION OF LABOUR AND MANUFACTURE

Chapter 14 examines divisions of labor. Marx concentrates here on the reorganization of existing handicrafts, existing skills, existing tool technologies and the like into a new system that he calls “manufacturing.” The reorganization can be done in two ways. The first is to bring together in the same workshop, “under the control of a single capitalist … workers belonging to various independent handicrafts” (455). The example he uses is carriage making, where wheels, upholstery, frame, etc. all have to be made separately and then assembled. This contrasts with making nails or needles. In this case, the process starts with raw materials and passes through a continuous process until it comes out as a nail or a needle. But in both cases, “whatever may have been its particular starting-point, its final form is always the same—a productive mechanism whose organs are human beings.” That is, human beings are brought together into a certain kind of relationship to one another inside the cooperative regime of the production space.

Such reorganizations do not, however, leave the original skills untouched. “The analysis of a process of production into its particular phases here coincides completely with the decomposition of a handicraft into its different partial operations” (457). When the production process is seen as a whole, opportunities arise to split it up into smaller fragments and get specialized workers to engage on each fragment, either in terms of the continuous sequence or in terms of the heterogeneity of many different handicrafts. Nevertheless, “handicraft remains the basis, a technically narrow basis which excludes a really scientific division of the production process into its component parts." This plainly constitutes a barrier to the progress of capitalist production, and as I have already argued, capital doesn't like barriers and perpetually seeks to overcome them. The difficulty in this case is that

every partial process undergone by the product must be capable of being done by hand, and of forming a separate handicraft. It is precisely because the skill of the craftsman thus continues to be the foundation of the production process that every worker becomes exclusively assigned to a partial function and that his labour-power becomes transformed into the life-long organ of this partial function.

The result is that workers, instead of having the freedom to move from one activity to another, are increasingly locked into a particular skill, a particular handicraft, the use of a particular set of specialized tools. "A worker who performs the same simple operation for the whole of his life converts his body into the automatic, one-sided implement of that operation" (458). Is the worker in control of the tool or is the tool in control of the worker? Marx suggests that the social imprisonment of workers in a particular specialization within the division of labor puts them in a position of being so connected to their specialized tools that they lose their freedom. This has not always been so.

A craftsman who performs the various partial operations … must at one time change his place, at another time his tools. The transition from one operation to another interrupts the flow of his labour and creates gaps in his working day, so to speak.

But capital doesn't like such gaps in the working day, since moments are the elements of profit. These gaps "close up when he is tied to the same operation the whole day long." On the other hand, this can be counterproductive since "constant labour of one uniform kind disturbs the intensity and flow of a man's vital forces, which find recreation and delight in the change of activity itself" (460).

This is a partial concession to Fourier's view of the importance of variety and stimulus in the labor process as opposed to the dull imprisonment of one person, with one tool, in the division of labor, for a lifetime. The positive and negative aspects of how the division of labor is organized under capitalist control start to enter into the argument. This argument has not gone away, even within capitalism. The attempt to raise efficiency and productivity in the labor process by introducing "quality circles" and variety of tasking to counteract the monotony of labor has been the focus of many experiments by capitalist firms in certain lines of production.

In section 3, Marx sets up a more systematic contrast between two fundamental forms of manufacture—heterogeneous (bringing together many skills, as in carriage and locomotive making) and organic (continuous, like nail making). But he here takes the opportunity to introduce the concept of the "collective worker," who, he says, is

formed from the combination of the many specialized workers, draws the wire with one set of tooled-up hands, straightens the wire with another set, armed with different tools, cuts it with another set, points it with another set, and so on. The different stages of the process, previously successive in time, have become simultaneous and contiguous in space. (464)

Productivity and efficiency depend not on the individual worker but on the proper organization of collective work.

This means careful attention must be paid to the space-time organization of production and the efficiencies that can be gained through spatiotemporal reconstruction of the labor process as a whole. Marx points out that by *not* losing any time, you gain in productivity. By rationalizing the way in which space is organized, you can save on movement costs. So the whole space-time structure becomes an organizational question for how capitalism works. This was the big innovation that the Japanese introduced into the labor process in the 1970s with just-in-time production, the tight scheduling of flows of goods in space and time such that you had almost no inventory anywhere in the system. This was *the* innovation which gave the Japanese car industry its competitive advantage over all others during the 1980s, and the Japanese raked in the ephemeral form of relative surplus-value until everyone else caught up. The downside of this system is that it is vulnerable to disruption. If one link in the spatiotemporal chain is stopped by, for example, a strike, then everything has to close down because there is no inventory.

Marx here clearly recognizes that a major organizational aspect of a capitalistic system is how space and time get set up and understood. The capitalist has to come up with a plan for an efficient spatiotemporal production system. But this in turn implies an important distinction between what happens in the marketplace and what happens within the firm. "The rule that the labour-time expended on a commodity should not exceed the amount socially necessary to produce it is one that appears, in the production of commodities in general, to be enforced from outside by the action of competition" (note the importance of competition once more). But "in manufacture, on the contrary, the provision of a given quantity of the product in a given period of labour is a technical law of the process of production itself" (465). This distinction (contradiction) between what market logic enforces and what can be done by internal planning is vital for the argument that follows. But the full flowering of this contradiction is hindered by the existence of a barrier due to the fact that we are still dealing with handicrafts and artisanal labor. This prompts a general comment of some importance:

The Roman Empire handed down the elementary form of all machinery in the shape of the water-wheel. The handicraft period bequeathed to us the great inventions of the compass, gunpowder, type-printing and the automatic clock. But on the whole, machinery played that subordinate part which Adam Smith assigns to it in comparison with division of labour. (468)

That is, up until the end of the eighteenth century, capitalists were not really homing in on new machinery as a primary way to improve their productive efficiency. They were generally content to use existing methods of production and reorganize them. Of course there were innovations, like compass and gunpowder and all the rest of it, but capitalism had not yet internalized the dynamic of perpetual technological innovation in the heart of the labor process itself. That happened later on, with the rise of machinery and modern industry (the subject of chapter 15).

The capitalist reorganization of labor processes has serious impacts on the worker. “The habit of doing only one thing converts him into an organ which operates with the certainty of a force of nature, while his connection with the whole mechanism compels him to work with the regularity of a machine.” Workers “are divided, classified and grouped according to their predominant qualities,” and the result is “a hierarchy of labour-powers, to which there corresponds a scale of wages” (468–9). The distinction between skilled and unskilled laborers becomes particularly marked.

> Alongside the gradations of the hierarchy, there appears the simple separation of the workers into skilled and unskilled. For the latter, the cost of apprenticeship vanishes; for the former, it diminishes, compared with that required of the craftsman … In both cases the value of labour-power falls.

Capitalist reorganizations and reconfigurations of tasks tend to produce deskilling, as tasks that were once complicated become simplified into component parts. This also has the effect of reducing the value of labor-power employed.

> The relative devaluation of labour-power caused by the disappearance or reduction of the expenses of apprenticeship directly implies a higher degree of valorization of capital; for everything that shortens the necessary labour-time required for the reproduction of labour-power, extends the domain of surplus labour.

But “an exception to this law occurs whenever the decomposition of the labour process gives rise to new and comprehensive functions, which either did not appear at all in handicrafts or not to the same extent” (470). In any reorganization of the labor process there can be a double movement, it must be conceded, of mass deskilling alongside usually a much smaller group that’s reskilled (e.g., assembly-line engineers). The latter segments of the working class are usually empowered and privileged relative to other segments of labor.

Section 4, titled “The Division of Labour in Manufacture, and the Division of Labour in Society,” is significant and has some potentially fraught implications. Marx here returns to the distinction between the detailed division of labor in the workshop, which occurs under the planned design and direct supervision of the capitalist, and the division of labor achieved through competition in the market. These two forms originate from “diametrically opposed” starting points but relate to each other. Marx provides a brief and, I have to say, not at all satisfactory discussion of the historical movement. “Within a family and, after further development, within a tribe, there springs up naturally a division of labour caused by differences of sex and age, and therefore based on a purely physiological foundation.” This is an oversimplification based, as is the case with some of his other historical commentaries, on very little evidence. “Exchange,” he hypothesizes,

> springs up at the points where different families, tribes or communities come into contact; for at the dawn of civilization it is not private individuals but families, tribes, etc. that meet on an independent footing. Different communities find different means of production and different means of subsistence in their natural environment. Hence their modes of production and living, as well as their products, are different.

Exchange relations arise between different communities with different assets, different resources, different products. “The foundation of every division of labour which has attained a certain degree of development, and has been brought about by the exchange of commodities, is the separation of town from country.” The dialectic of town-country relations is, he suggests (correctly, in my view), important historically, but he does not elaborate on how and where. Furthermore, an adequate “number and density of the population” is relevant to the rise of capitalism (471–2). This is, he says, “a pre-condition for the division of labour within society.”

> [But] this density is more or less relative. A relatively thinly populated country, with well-developed means of communication, has a denser population than a more numerously populated country with badly developed means of communication. In this sense, the northern states of the U.S.A. for instance, are more thickly populated than India.

Marx’s appeal here to a relative theory of space-time relations is quite innovative. The geographical terrain on which capitalism developed was not fixed but varied, depending not only on density of populations but also on transport and communication technologies. His central point is that the division of labor in manufacture assumes that society has already “attained a certain degree of development. Inversely, the division of labour in manufacture reacts back upon that … society, developing and multiplying it further” (473). He argues for what is called increasing roundaboutness in and complexity of production. The movement is from a simple situation where somebody makes one thing to a situation where several people make parts of that thing and trade those parts in the market until all the parts get assembled by someone else at the end. This increasing roundaboutness generates increasing possibility for territorial specialization.

> The territorial division of labour, which confines special branches of production to special districts of a country, acquires fresh stimulus from the system of manufacture, which exploits all natural peculiarities. The colonial system and the extension of the world market, both of which form part of the general conditions for the existence of the manufacturing period [an important point that we should note well], furnish us with rich materials for displaying the division of labour in society.

But while there are “analogies and links” between the division of labor in society and within the workshop, they “differ not only in degree, but also in kind” (something that Adam Smith, as Marx rightly acknowledges, was concerned with) (474).

> The division of labour within society is mediated through the purchase and sale of the products of different branches of industry, while the connection between the various partial operations in

> a workshop is mediated through the sale of the labour-power of several workers to one capitalist, who applies it as combined labour-power. The division of labour within manufacture presupposes a concentration of the means of production in the hands of one capitalist; the division of labour within society presupposes a dispersal of those means among many independent producers of commodities. While, within the workshop, the iron law of proportionality subjects definite numbers of workers to definite function, in the society outside the workshop, the play of chance and caprice results in a motley pattern of distribution of the producers and their means of production among the various branches of social labour.

In the latter case, he argues, "the different spheres of production constantly tend towards equilibrium," but they do so only through market mechanisms. And he then explains why, going back over the laws of exchange of commodities. This means that the "constant tendency on the part of the various spheres of production towards equilibrium comes into play only as a reaction against the constant upsetting of this equilibrium" (475–6). That is, when demand and supply get out of kilter (and here, note, we cannot do without supply and demand mechanisms), market-price fluctuations force the necessary adjustment toward the underlying value relations as producers change what they are producing and how much. The result is a marked contrast between "the planned and regulated *a priori* system on which the division of labour is implemented within the workshop" and, on the other hand, "the division of labour within society," ruled by

> an a posteriori necessity imposed by nature, controlling the unregulated caprice of the producers, and perceptible in the fluctuations of the barometer of market prices. Division of labour within the workshop implies the undisputed authority of the capitalist over men, who are merely the members of a total mechanism which belongs to him. The division of labour within society brings into contact independent producers of commodities, who acknowledge no authority other than that of competition, of the coercion exerted by the pressure of their reciprocal interests, just as in the animal kingdom, the 'war of all against all' more or less preserves the conditions of existence of every species. (476–7)

In these passages, note the dependence on both supply and demand mechanisms and the coercive laws of competition as necessary to the achievement of some sort of equilibrium in which value relations prevail.

Capitalism, Marx concludes, lives always in the midst of contradiction between "anarchy in the social division of labour and despotism in the manufacturing division of labour." These two aspects of the division of labor, furthermore, "mutually condition each other." Marx attaches, however, some controversial and fraught political commentary to this conclusion:

> The same bourgeois consciousness which celebrates the division of labour in the workshop, the lifelong annexation of the worker to a partial operation, and his complete subjection to capital, as an organization of labour that increases its productive power, denounces with equal vigour every conscious attempt to control and regulate the process of production socially, as an inroad upon such sacred things as the rights of property, freedom and the self-determining 'genius' of the individual capitalist. It is very characteristic that the enthusiastic apologists of the factory

system have nothing more damning to urge against a general organization of labour in society than that it would turn the whole of society into a factory. (477)

These statements require some careful parsing. Capitalists love the planned organization of production within their factory but abhor the idea of any kind of social planning of production in society. The ideological complaint that planning is a bad thing, and in particular for capitalists to attack it on the grounds that it would remake the world in the image of their own awful factories, is revealing. The condemnation of planning does not mesh with what goes on inside Toyota or Wal-Mart. Successful corporations deploy sophisticated planning techniques of total quality management, input-output analysis and optimal scheduling and design, and plan everything down to the finest detail. But it is one thing for Marx to point out the hypocritical approach of the capitalists to planning in the social realm, quite another to suggest that their undoubtedly sophisticated techniques, deployed in the quest for relative surplus-value, might be adequate for the planning of a socialist society seeking to augment the material well-being of everyone. Would it, in short, be reasonable to turn the world into a centrally planned economy, in effect into one large factory, in the quest for socialism? Obviously, there would be problems in doing so given Marx's account of the appalling conditions of factory labor. But if the problem is not the techniques but the fact that they are used to gain relative surplus-value for the capitalist rather than to produce enough output to satisfy the material needs of all, then Lenin's advocacy for Fordist productionism as a goal for Soviet industry becomes more understandable. We will return to this question later.

Certainly, the argument that centralized planning is impossible because of the level of complexity or because it infringes on private property relations does not wash, given the complexity involved in any large corporation, producing, say, electronics, and the dispossession of the laborer's right to the fruits of his or her own labors. The incredible inefficiencies of the market system (particularly with respect to the environment) and the periodic brutality of the coercive laws of competition, along with the increasing despotism this coercion typically produces in the workplace, are hardly great advertisements for the superiority of market coordinations. And the idea that innovation is only possible given individual property rights and the coercive laws of competition is surely far-fetched both logically and historically. For what I think impresses Marx most here is the appropriation of the productive powers of labor by capital. Again and again, he insists to the working class that all these powers of cooperation and of divisions of labor are *their* productive powers and that capital is appropriating them.

The productive power which results from the combination of various kinds of labour appears as the productive power of capital. Manufacture proper not only subjects the previously independent worker to the discipline and command of capital, but creates in addition a hierarchical structure amongst the workers themselves.

The implications for the workers are far-reaching.

> It converts the worker into a crippled monstrosity by furthering his particular skill as in a forcing-house, through the suppression of a whole world of productive drives and inclinations, just as in the states of La Plata they butcher a whole beast for the sake of his hide or his tallow. Not only is the specialized work distributed among the different individuals, but the individual himself is divided up, and transformed into the automatic motor of a detail operation, thus realizing the absurd fable of Menenius Agrippa, which presents man as a mere fragment of his own body. (481–2)

So the body politics of this is that workers are reduced to being fragments of themselves. "Unfitted by nature"—and Marx is being ironic here—"to make anything independently, the manufacturing worker develops his productive activity only as an appendage of [the capitalist's] workshop." Sadly,

> the possibility of an intelligent direction of production expands in one direction, because it vanishes in many others. What is lost by the specialized workers is concentrated in the capital which confronts them. It is the result of the division of labour in manufacture that the worker is brought face to face with the intellectual potentialities … of the material process of production as the property of another and as a power which rules over him.

Intellectual labor becomes a specialized function, separating mental from manual labor, with the former brought increasingly under the control of capital.

> This process of separation starts in simple co-operation … It is developed in manufacture, which mutilates the worker, turning him into a fragment of himself. It is completed in large-scale industry, which makes science a potentiality for production which is distinct from labour and presses it into the service of capital. (482)

The result of this is an "impoverishment of the worker" and a serious loss of "individual productive power." Political and intellectual subjectivities do not remain immune. And here Marx cites Adam Smith, not necessarily approvingly but as voicing what increasingly becomes a matter of fact:

> 'The understandings of the greater part of men,' says Adam Smith, 'are necessarily formed by their ordinary employments. The man whose whole life is spent in performing a few simple operations … has no occasion to exert his understanding … He generally becomes as stupid and ignorant as it is possible for a human creature to become.' After describing the stupidity of the specialized worker, he goes on: 'The uniformity of his stationary life naturally corrupts the courage of his mind … It corrupts even the activity of his body and renders him incapable of exerting his strength with vigour and perseverance in any other employments than that to which he has been bred. His dexterity at his own particular trade seems in this manner to be acquired at the expense of his intellectual, social, and martial virtues. But in every improved and civilized society, this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall.' (483)

Marx seems partially inclined here to accept to some degree Smith's characterization of the situation, and I, too, think it important to ask the general question: to what degree do our ordinary employments corrupt the courage of our minds? I think the problem is widespread, not confined to workers at all. Journalists, media personalities, university professors—we all have this problem (I have plenty of personal experience of it). The widespread reluctance to protest the militarism, the social injustices, the repressions, that surround us at every turn have as much to do (and in a more insidious way) with the mentalities and political subjectivities that derive from our ordinary employments as they do with the sophisticated organization of bourgeois repression. “Some crippling of body and mind is inseparable even from the division of labour in society as a whole,” Marx concedes, and results in what he calls “industrial pathology” (484). Again, we are treading on dangerous ground here. Surely it would not be right to pathologize the whole of the working class? Yet it would be utopian to suppose that all of this has no impact on people’s abilities to react, to think. For those of you who have ever organized with those working two jobs (eighty hours a week), you will know the problem all too well. Workers in that condition have little or no time to think about (let alone read about) most of the things that we think they should think about, given their working-class position. They are so busy trying to make ends meet, get enough food on the table for their kids and do other domestic chores that they don’t have time for anything else outside work. Smith took the argument to an extreme, drawing the unfortunate conclusion that therefore it was both the job and the duty of a small elite to do all the thinking and organizing, but there is something to Marx’s description that we deny at our political peril.

The reorganization of the division of labor, both within the labor process and in society at large, is the hallmark of what Marx dubs the “manufacturing period” in capitalism’s history. But this manufacturing system has limits. “Manufacture was unable either to seize upon the production of society to its full extent, or to revolutionize that production to its very core. It towered up”—and Marx is really admiring of it—

> as an artificial economic construction, on the broad foundation of the town handicrafts and the domestic industries of the countryside. At a certain stage of its development, the narrow technical basis on which manufacture rested came into contradiction with requirements of production which it had itself created. (490)

The pressure was on to go beyond these barriers. It is, of course, “machines that abolish the role of the handicraftsman as the regulating principle of social production” (491). This takes us into the next chapter, in which machines and the organizational form of the modern factory move to center stage.

CHAPTER SEVEN

What Technology Reveals

CHAPTER 15: MACHINERY AND LARGE-SCALE INDUSTRY

In the introduction, I noted that Marx rarely comments on his methodology. It has therefore to be reconstructed by way of careful perusal of occasional side comments, supplemented by a study of his practices. Chapter 15, "Machinery and Large-Scale Industry," provides an opportunity to grapple with this question at the same time as it advances the general arguments as to the character of a capitalist mode of production. The chapter is long, but the sections are logically ordered. It repays to go over this logical ordering both before and after studying this chapter.

An Important Footnote

I begin, however, with the chapter's fourth footnote, where Marx, in the cryptic fashion he often deploys in describing methodological considerations, links together a slew of concepts in a configuration that actually provides a general framework for dialectical and historical materialism. The footnote unfolds in three phases. The first focuses on Marx's relation with Darwin. Marx had read *On the Origin of Species* and was impressed with the historical method of evolutionary reconstruction that Darwin had outlined. Marx clearly envisaged his work as some sort of continuation of Darwin's, with the emphasis on human as well as (rather than opposed to) natural history. His aim, he stated in the preface to the first edition, is to view "the development of the economic formation of society" from "the standpoint" of "natural history." From this standpoint, the individual cannot be held "responsible for relations whose creature he remains, socially speaking, however much he may subjectively raise himself above them" (92).

In the footnote, Marx first focuses on "a critical history of technology." This

> would show how little any of the inventions of the eighteenth century are the work of a single individual. As yet such a book does not exist. Darwin has directed attention to the history of natural technology, i.e. the formation of the organs of plants and animals, which serve as the instruments of production for sustaining their life. Does not the history of the productive organs of man in society, of organs that are the material basis of every particular organization of society, deserve equal attention? And would not such a history be easier to compile, since, as Vico says, human history differs from natural history in that we have made the former, but not the latter? (493)

Vico's argument was that natural history was God's domain and that since God moved in mysterious ways, it was beyond human understanding, but we could certainly understand our own history since we had made it. Marx earlier broached the historical approach to technological change and noted some vital transitions associated with transformations in the mode of production. Having followed Benjamin Franklin in defining man "as a tool-making animal" in chapter 7, he went on to observe that the relics of bygone instruments of labour possess the same importance for the investigation of extinct economic formations as do fossil bones for the determination of extinct species of animals. It is not what is made but how, and by what instruments of labour, that distinguishes different economic epochs. Instruments of labour not only supply a standard of the degree of development which human labour has attained, but they also indicate the social relations within which men work.

Then, in a footnote: “the writers of history have so far paid very little attention to the development of material production, which is the basis of all social life, and therefore of all real history” (286). In chapter 14 he argued that

the Roman Empire handed down the elementary form of all machinery in the shape of the water wheel. The handicraft period bequeathed to us the great inventions of the compass, gunpowder, type-printing and the automatic clock. But on the whole, machinery played that subordinate part which Adam Smith assigns to it in comparison with division of labour. (468)

This idea that there has been a human evolutionary process in which we can discern radical shifts not only in technologies but in whole modes of social life is clearly very important to Marx.

Marx did not read Darwin uncritically. “It is remarkable,” he wrote to Engels, “how Darwin recognizes among beasts and plants his English society with its division of labour, competition, opening up of new markets, ‘inventions’ and the Malthusian struggle for existence.”[1] The problem, as Marx sees it, is Darwin’s ahistorical approach to a purely natural evolution without reference to the role of human action in changing the face of the earth. The reference to Malthus is also telling because in his introduction to *On the Origin of Species*, Darwin attributed some of his key ideas to Malthus. And since Marx couldn’t abide Malthus, it must have been hard for Marx to swallow the thought that Malthus had so inspired Darwin. Interestingly, the Russian evolutionists who were not exposed to ruthless British industrialism (Darwin was married to a daughter of Josiah Wedgwood, the famous pottery industrialist, and so was familiar at first hand with competition and the division of labor and of function) put much greater emphasis on cooperation and mutual aid, ideas which were translated by the Russian geographer Kropotkin into the fundamentals of social anarchism.

But what Marx appreciated was Darwin’s approach to evolution as a process open to historical reconstruction and theoretical investigation. Marx is committed to understanding the human evolutionary process in like fashion. This is where Marx’s emphasis on processes rather than things comes in. The chapter on machinery and large-scale industry should be read as an essay on the history of technology in this spirit. It is about how the industrial form of capitalism emerged out of the world of handicraft and manufacturing. Up until this point, nobody had really thought of writing such a history, so this chapter constitutes a pioneering effort that later spawned a whole field of academic study called the history of science and technology. Read in this way, the chapter’s argument makes a lot more sense. But like Darwin's theory, there is far more here than just history. There is a theoretical engagement with processes of social transformation, and as such, there is a good deal to debate and discuss.

The second part of the footnote proffers a short, but in my view extremely important, statement that requires elaboration:

> Technology reveals the active relation of man to nature, the direct process of the production of his life, and thereby it also lays bare the process of the production of the social relations of his life, and of the mental conceptions that flow from those relations. (493)

Marx here links in one sentence six identifiable conceptual elements. There is, first of all, technology. There is the relation to nature. There is the actual process of production and then, in rather shadowy form, the production and reproduction of daily life. There are social relations and mental conceptions. These elements are plainly not static but in motion, linked through "processes of production" that guide human evolution. The only element he doesn't explicitly describe in production terms is the relation to nature. Obviously, the relation to nature has been evolving over time. The idea that nature is also something continuously in the course of being produced in part through human action has also been long-standing; in its Marxist version (outlined in chapter 7), it is best represented in my colleague Neil Smith's book *Uneven Development*,[2] where capitalist processes of production of nature and of space are explicitly theorized.

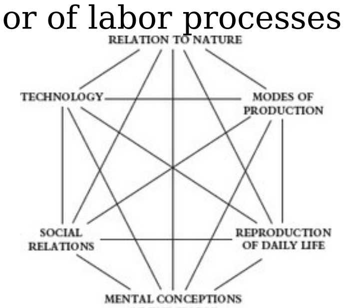
How, then, are we to construe the relationships between these six conceptual elements? Though his language is suggestive, Marx leaves the question open, which is unfortunate since it leaves lots of space for all manner of interpretations. Marx is often depicted, by both friends and foes alike, as a technological determinist, who thinks changes in the productive forces dictate the course of human history, including the evolution of social relations, mental conceptions, the relation to nature and the like. The neoliberal journalist Thomas Friedman, for example, in his book *The World Is Flat*,[3] happily admits to the charge of being a technological determinist; when someone pointed out to him (erroneously) that this was Marx's position, he expressed his admiration for Marx and approvingly cited a lengthy passage from the *Communist Manifesto* to prove his point. In a review of Friedman's book, the conservative political philosopher John Gray confirmed Marx's technological determinism and argued that Friedman was indeed merely following in Marx's footsteps.[4] These observations by those generally unsympathetic to Marx are paralleled within the Marxist tradition. The strongest version of the thesis that the productive forces are the leading agent in history comes from G. A. Cohen in his book *Karl Marx's Theory of History: A Defence*.[5] Cohen, having inspected all Marx's texts from the standpoint of analytic philosophy, defends this interpretation of Marx's theory.

I do not share this interpretation. I find it inconsistent with Marx's dialectical method (dismissed by analytic philosophers such as Cohen as rubbish). Marx generally eschews causal language (I defy you to find much of it in *Capital*). In this footnote, he does not say technology “causes” or “determines,” but that technology “reveals” or, in another translation, “discloses” the relation to nature. To be sure, Marx pays a lot of attention to the study of technologies (including organizational forms), but this does not warrant treating them as leading agents in human evolution. What Marx is saying (and plenty of people will disagree with me on this) is that technologies and organizational forms *internalize* a certain relation to nature as well as to mental conceptions and social relations, daily life and labor processes. By virtue of this internalization, the study of technologies and organizational forms is bound to “reveal” or “disclose” a great deal about all the other elements. Conversely, all these other elements internalize something of what technology is about. A detailed study of daily life under capitalism will, for example, “reveal” a great deal about our relation to nature, technologies, social relations, mental conceptions and the labor processes of production. Similarly, the study of our contemporary relation to nature cannot go very far without examining the nature of our social relations, our production systems, our mental conceptions of the world, the technologies deployed and how daily life is conducted. All these elements constitute a totality, and we have to understand how the mutual interactions between them work.

I find this a helpful way to think about the world. For instance, I was on a jury to select ideas for the design of a new city in South Korea. We, the members of the jury, had all the designs in front of us. The jury was made up mainly of engineers and planners, with a few distinguished architects and landscape designers. The latter dominated the initial discussion on the criteria we should deploy in reaching our decisions, and it mainly devolved into a discussion of the relative symbolic strengths and practical implications of circles and cubes in built forms. In other words, decisions were to be made largely on the basis of geometric and symbolic criteria. At some point, I intervened to ask: if you are building a new city, what are the things you would want to know? I would want to know, what kind of relation to nature is going to be created here (the ecological footprint, etc.)? What kinds of technologies are going to be embodied in this city, and why? What kinds of social relations are envisaged? What systems of production and reproduction are going to be incorporated? What is daily life going to be like, and is that the kind of daily life we would want? And what mental conceptions, symbolic and all the rest of it, are going to be engaged here? Is this going to be built as a nationalist monument or as a cosmopolitan place?

The other jurors seemed to find this formulation both innovative and interesting. We discussed it for a while until it got a bit too complicated relative to the time at our disposal. One of the architects then suggested that out of the six criteria, only mental conceptions really mattered, which came down to the symbolism of forms, which brought us neatly back to the question of the relative strengths of circles and cubes! But afterward I was asked where they could find out more about such an interesting way of thinking. I made the mistake of saying it's in footnote 4 of chapter 15 of Marx's *Capital*. I should have known better, because there are two typical reactions to saying this kind of thing. One is nervous and even fearful, for to concede that Marx might have said something so powerfully obvious and interesting is tantamount to admitting Marxist sympathies, and that would be horrible for one's professional and even personal prospects. The other is to regard me as an idiot, so lacking in ideas that I can only parrot Marx and, even worse in this instance, fall so low as to cite a mere footnote! So the conversation stopped. But this is, I think, an interesting way to evaluate urban design and to critique the qualities of urban life.

This framework helps ground the theory of historical materialism in a fundamental way, and there is strong evidence, as I hope to show, that it grounds much of Marx's tangible approach to understanding the evolution of capitalism. Let me expand on this for a moment. Imagine a framework of thought in which these six elements hang together in a single space but in intense interrelation (see figure opposite). Each of the elements is internally dynamic such that we consider each constituting a "moment" in the process of human evolution. We can study this evolution from the perspective of one of the moments or examine interactions among them, such as transformations in technologies and organizational forms in relationship to social relations and mental conceptions. How are our mental conceptions altered by the technologies available to us? Do we not see the world differently once we have microscopes, telescopes and satellites, X-rays and CAT scans? We understand and think about the world in a very, very different way now, because of the technologies we have. But by the same token, somebody somewhere must have had the mental conception that making a telescope was an interesting thing to do (recall Marx's take on the labor process and the worst of architects). And when that person had that idea, he had to be able to find lens grinders and glassmakers and all the elements necessary in order to make the idea a reality through the production of the telescope. Technologies and organizational forms do not descend from the sky. They get produced out of mental conceptions. They also arise out of our social relations and concretely arise in response to the practical needs of daily life or of labor processes.



I like the way Marx sets this up, provided it is viewed dialectically, not causally. This way of thinking permeates *Capital*, and the book should be read with this framework in mind. It also provides a standard of critique, because we can analyze Marx's own performance by how well he links these different elements together. How exactly does Marx bring together mental conceptions, social relations and technologies, and does he do it adequately? Are there aspects, such as the politics of daily life, that are left in the shadows? In other words, the dialectic between this formulation and Marx's practices needs to be scrutinized.

So let me summarize. The six elements constitute distinctive moments in the overall process of human evolution understood as a totality. No one moment prevails over the others, even as there exists within each moment the possibility for autonomous development (nature independently mutates and evolves, as do ideas, social relations, forms of daily life, etc.). All these elements coevolve and are subject to perpetual renewal and transformation as dynamic moments within the totality. But it is not a Hegelian totality in which each moment tightly internalizes all the others. It is more like an ecological totality, what Lefebvre refers to as an "ensemble" or Deleuze as an "assemblage," of moments coevolving in an open, dialectical manner. Uneven development between and among the elements produces contingency in human evolution (in much the same way that unpredictable mutations produce contingency in Darwinian theory).

The danger for social theory is to see one of the elements as determinant of all the others. Technological determinism is as wrongheaded as environmental determinism (nature dictates), class-struggle determinism, idealism (mental conceptions are in the vanguard), labor-process determinism or determinism arising out of (cultural) shifts in everyday life (this is the political position taken by Paul Hawken in his influential text *Blessed Unrest*[6]). Major transformations, such as the movement from feudalism (or some other precapitalist configuration) to capitalism, occur through a dialectic of transformations across all the moments. This coevolution developed unevenly in space and time to produce all manner of local contingencies, albeit contingencies limited by the interplay within the assemblage of elements implicated in the evolutionary process and the growing spatial (and sometimes competitive) integration of economic-development processes in the world market. Perhaps one of the biggest failures of the conscious attempt to build socialism and communism on the basis of capitalism was the failure to recognize the need to engage politically across all these moments in a way that was sensitive to geographical specificities. The temptation for revolutionary communism was to reduce the dialectic to a simple causal model in which one or another moment was placed in the vanguard of change, and that was supposed to be that. This approach inevitably failed.

On the surface, the third phase of the footnote appears to contradict my interpretation of the second:

> Even a history of religion that is written in abstraction from this material basis is uncritical. It is, in reality, much easier to discover by analysis the earthly kernel of the misty creations of

religion than to do the opposite, i.e. to develop from the actual, given relations of life the forms in which these have been apotheosized. The latter method is the only materialist, and therefore the only scientific one. (493–4)

Marx considered himself a scientist, and he is here asserting that this means a commitment to materialism. But his materialism is different from that of the natural scientists. It is historical. “The weaknesses of the abstract materialism of natural science, a materialism which excludes the historical process, are immediately evident from the abstract and ideological conceptions expressed by its spokesmen whenever they venture beyond the bounds of their own speciality” (494). Darwin’s findings on evolution were flawed because he ignored the impact of the historical context on his theorizing (the power of the metaphors that he drew from British capitalism) and failed to carry over his argument onto and integrate his findings with human evolution. Marx was writing before Social Darwinism became popular, of course, but he prefigures a critical response to the way in which the Social Darwinists legitimized capitalism as “natural” by appealing to Darwin’s theory of evolution. Since Darwin’s theory drew its guiding metaphors from capitalism and was inspired by the social theory of Malthus, it was hardly surprising to see capitalism confirmed as wholly consistent with supposedly natural processes of competition, struggle for survival and, of course, survival of the fittest (without paying attention to Kropotkin’s mutual aid).

Marx’s general point is that natural scientists, because they failed to understand their historical moment and were barred by their methodological commitments from integrating human history into their models of the world, frequently ended up with at best partial and at worst serious misinterpretations of that world. At worst, they concealed their historical and political assumptions under a supposedly neutral and objective science. This critical perspective, which Marx pioneered, is now standard practice within the field of science studies, where it has repeatedly been shown that the importation into science of social metaphors about gender, sexuality or social hierarchies leads to all kinds of misreadings of what the natural world is actually about, even as it is understood that without metaphors scientific inquiry would go nowhere.

But there is a much deeper issue here that needs to be addressed. In the first lecture, I talked about Marx’s way of moving by descent: you start with the surface appearance, then dive deep down beneath the fetishisms to uncover a theoretical conceptual apparatus that can capture the underlying motion of social processes. That theoretical apparatus is then brought step by step back to the surface to interpret the dynamics of daily life in new ways. This is, Marx confirms in the footnote, “the only materialist and therefore the only scientific (method).” We have already seen a specific example of this method at work in the chapter on the working day. Value as socially necessary labor-time internalizes a specific capitalist temporality, and a vast field of social struggles on the surface of society ensues, concerning the appropriation of the time of others. The fact that "moments are the elements of profit" leads capitalists to be obsessed with time discipline and time control (and will shortly also explain why they are obsessed with speed-up).

But how are we to think about the relation between, say, the deep-value theory and the unpredictable ferment of surface struggles over the length of the working day? Back on page 175, Marx approvingly cites (in yet another footnote!) a famous passage from an earlier work, *A Contribution to the Critique of Political Economy* :

My view is that each particular mode of production, and the relations of production corresponding to it at each given moment, in short 'the economic structure of society', is 'the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness' [mental conceptions, if you like], and that 'the mode of production of material life conditions the general process of social, political, and intellectual life.

He leaves out the following sentence from the *Critique*, which explains that it is in the superstructure that we become conscious of political issues and fight them out.

This is what is usually referred to as the base-superstructure model. The supposition is that there is an economic base on which there arise frameworks of thought as well as a political and legal superstructure that collectively define how we become conscious of problems and fight them out. This formulation is sometimes read deterministically: the economic base *determines* the political and legal infrastructure, determines the forms of struggle that are found there and, to the degree that there are transformations occurring in the economic base, actually determines the outcomes of political struggles. But I can't see how the argument can be viewed as deterministic or even causal. This is not how the chapter on the working day unfolds at all. There are class alliances, conjunctural possibilities, discursive shifts in sentiments, and the outcome is never certain. But there is always such a deep concern over the appropriation of the time of others that the issue never goes away. It is a perpetual point of contestation "between equal rights" within capitalism that can never arrive at some ultimate solution. Struggles over time are fundamental to the capitalist mode of production. This is what the deep theory tells us, and no matter what happens in the superstructure, that imperative cannot be overcome without overthrowing capitalism.

In any case, productive forces and social relations cannot exist without expression and representation in the political and legal superstructure. We have seen this with money, which is a representation of value surrounded by all manner of institutional and legal arrangements, and certainly an object of struggle and political manipulation (as is also the case with legal frameworks of private property rights). But Marx has also shown that without money (or a legal framework of private property rights), value could not exist as a foundational economic relation. Things get worked out in the monetary sphere in very particular ways depending on the dynamics of class struggle, and this has implications for how the value theory works. Is money in the political superstructure or down in the economic base? The answer, surely, has to be both.

Similarly, one would not say, from the chapter on the working day, that the outcome of the working-day struggle was determined by movements in the economic base. Furthermore, the political restriction on the length of the working day in part led capitalists to look for another way to gain surplus-value, i.e., relative surplus-value. Marx clearly does not intend this base-superstructure model to operate mechanically or causally, but he does use it dialectically.

Yet it is also true that the "working out" that goes on in the realm of struggle over the length of the working day is a working out of the fundamental fact that moments are the elements of profit, which derives from the definition of value as socially necessary labor-time. There was not a concerted struggle over the length of the working day in precapitalist societies or even in ancient Rome. Only within the rules of a capitalist mode of production does this sort of struggle make sense. Formal issues such as the length of the working day (week, year, lifetime) get thrown up precisely because of the deep structure of what capitalism has become. How these struggles get resolved depends on you and me and everybody else. And indeed, the struggle could potentially be resolved in such a way as to entail the abolition of the capitalist mode of production. A society would be constructed in which moments are *not* the elements of profit. Can you imagine what that would look like? Sounds rather nice, no?

My main point here is that the ways in which these things get worked out—through political and legal means, the balance of class forces, hegemonic mental conceptions and the like—are not ineffectual in relation to the deep concept of the circulation of value as capital. The real scientific method is to identify those deep elements which explain to you why certain things go on in our society the way they do. We saw that in the struggle over the length of the working day. We also see it in the struggle over relative surplus-value, which explains why capitalism has to be so technologically dynamic. We seem not to have choices over whether or not to grow or to invent because that's what the deep structure of capitalism mandates. The only interesting question is, therefore, how is growth going to occur, and with what kinds of technological change? This forces us to consider the implications for mental conceptions, the relation to nature and all the other moments. If we don't like these implications then we have no recourse except to engage in struggle with respect not only to one or another of the moments but to all of them simultaneously, until we ultimately come to terms with having to transform the very rule of value itself.

The circulation of capital is, however, the driver of the dynamics under capitalism. But what is socially necessary for this process to be sustained? Consider, for example, the necessary mental conceptions. If you go down to Wall Street with a big banner saying, "Growth Is Bad, Stop It Now," would that be considered an anticapitalist sentiment? You bet it would. You would be dismissed, however, not necessarily for being anticapitalist but for being antigrowth, because growth is considered both inevitable and good. Zero growth signals serious problems. Japan hasn't grown much at all in recent times, poor folk. But the growth in China has been spectacular, so the Chinese are the grand success story. How can we emulate them? We all happily sit around and say growth is good, technological change is good and so capitalism, which requires both, must also be good. This is the sort of common belief system that Gramsci often referred to as "hegemony." The same sorts of issues arise concerning institutional arrangements. Capitalism requires adequate legal arrangements to function effectively. The more the Chinese moved down a capitalistic path, the less plausible it was for them to maintain a legal system that didn't acknowledge some sorts of private property rights. But there is a great deal of latitude and contingency in the institutional arrangements that might work.

Sections 1–3: Machine Development, Value Transfers and Effects on Workers

So, finally, let us take up the materials assembled in this long chapter. I suggest you pay careful attention to the sequence of the section headings. These define a logical line of argument that structures Marx's inquiry into the rise of the factory system and the use of machinery. He begins, however, with John Stuart Mill's surprise at the fact that mechanical inventions, supposedly designed to lighten the load of labor, had done nothing of the kind. In fact, they had generally made matters worse. Marx himself is in no way surprised, since machines are used to produce surplus-value, not to lighten the load of labor. But this means, notice, that "the machine is a means for producing surplus-value" (492). This sounds odd, since Marx has argued that machines are dead labor (constant capital) and cannot produce value. Yet they can, however, be a source of surplus-value. The reduction in the value of labor-power through rising productivity in the wage-goods sector yields relative surplus-value to the capitalist class, while the capitalist with the best machinery will acquire the temporary form of relative surplus-value that accrues to the producer with higher productivity. No wonder capitalists hold to the fetish belief that machines produce value!

Marx then considers the difference between tools and machines. To "call a tool a simple machine and a machine a complex tool" and "see no essential difference between them" misses something essential, most notably "the historical element" (that element that he, incidentally, makes so much noise about in the footnote) (492–3). Marx was one of the first people ever to use the phrase "industrial revolution" and to make it central to his historical reconstruction. So what constitutes the heart of this industrial revolution? Was it simply a change of technology, the fact that tools become machines? Is the difference between machines and tools that machines have an external source of power? Does it entail a radical shift in social relations to parallel the transformations in productive forces? The answer is all of the above.

> The machine, which is the starting-point of the industrial revolution, replaces the worker, who handles a single tool, by a mechanism operating with a number of similar tools and set in motion by a single motive power, whatever the form of that power. Here we have the machine, but in its first role as a simple element in production by machinery. (497)

This is predicated, however, on a transformation in the positionality (social relation) of the worker. This is just as important as the machine itself. While workers can continue to provide the motive power, at some point or other the need arose to supplement that power from an external source. Water power had long been pressed into service, but its application was limited and restricted by location.

> Not till the invention of Watt's second and so-called double-acting steam-engine was a prime mover found which drew its own motive power from the consumption of coal and water, was entirely under man's control, was mobile and a means of locomotion, was urban and not—like the water-wheel—rural, permitted production to be concentrated in towns instead of—like the water-wheels—being scattered over the countryside and, finally, was of universal technical application, and little affected in its choice of residence by local circumstances. (499)

The steam engine liberated capital from dependence on localized sources of power, because coal was a commodity that could, in principle, be shipped anywhere. But be careful not to read too much into this invention, because "the steam-engine itself … did not give rise to any industrial revolution. It was, on the contrary, the invention of machines that made a revolution in the form of steam-engines necessary" (496–7).

And while Marx doesn't mention it, coal also eliminated the acute rivalry, which had limited industrial development before this time, between the use of land for food production and the use of land's biomass as an energy source. All the time wood and charcoal were primary fuel sources, the competition for land between food and biofuels raised the cost of both. With coal it became possible to mine the stored energy of the Carboniferous period; then, with oil, that of the Cretaceous period. This liberated the land for food and other forms of raw-material production and liberated industry to proliferate using cheap fuels, with all kinds of implications both for urbanization and, of course, for the way we live our lives right now. Interestingly, a response to fuel scarcities in recent times has been to go back to the land for fuel (ethanol, in particular), and this has had the predictable consequence of rapidly increasing food and other raw-material prices (with all manner of social consequences, such as food riots and increasing hunger; even my bagel has gone up in price by thirty cents). We are currently re-creating the barriers to capital accumulation that the shift to fossil fuels in the late eighteenth century so successfully circumvented by revolutionizing the relation to nature.

But the hallmark of the industrial revolution was more than just a shift in energy production. The "co-operation by division of labour which is peculiar to manufacture" now appears "as a combination of machines with specific functions." There is a significant evolution in social relations.

> In manufacture, it is the workers who, either singly or in groups, must carry on each particular process with their manual implements. The worker has been appropriated by the process; but the process had previously to be adapted to the worker. This subjective principle of the division of labour no longer exists in production by machinery. Here the total process is examined objectively, viewed in and for itself, and analysed into its constitutive phases. The problem of how to execute each particular process, and to bind the different partial processes together into a whole, is solved by the aid of machines, chemistry, etc.

The result is the evolution of "an articulated system composed of various kinds of single machine, and of groups of single machines," and this "becomes all the more perfect the more the process as a whole becomes a continuous one" (501–2).

There are a number of points to make about this statement. First is the importance of continuity in the production process, which is crucial because the continuity of the circulation of capital requires it, and machinery helps achieve this. Second, note that social relations are being transformed alongside the technical relations. Third, the analysis of the production process into its constitutive phases entails a mental transformation which brings a science (such as chemistry) to bear on technology. In other words, there is an evolution in mental conceptions. At least three of the elements examined in the footnote come into play here, while the relation to nature and to locational requirements also shifts as coal resources replace waterfalls and biomass as primary sources of energy. We see in paragraphs of this sort how Marx's formulation in the footnote is working. The different elements flow easily together to constitute a compelling narrative of coevolution rather than causation. The outcome is an "organized system of machines to which motion is communicated by the transmitting mechanism from an automatic centre," and this, he says, "is the most developed form of production by machinery. Here we have, in place of the isolated machine, a mechanical monster"—Marx loves images of this sort, as we have already seen—"whose body fills whole factories, and whose demonic power, at first hidden by the slow and measured motions of its gigantic members, finally bursts forth in the fast and feverish whirl of its countless working organs." But, Marx reminds us, "the inventions of Vaucanson, Arkwright, Watt and others could be put into practice only because each inventor found a considerable number of skilled mechanical workers available, placed at their disposal by the period of manufacture." That is, the new technologies could not have come on line if the necessary social relations and labor skills had not already been in place. In some cases, these workers "were independent handicraftsmen of various trades," while others were already "grouped together" (503).

But the evolutionary process had its own momentum. "As inventions increased in number, and the demand for the newly discovered machines grew larger, the machine-making industry increasingly split up into numerous independent branches, and the division of labour within these manufactures developed accordingly.” Social relations were in full flood of transformation. “Here, therefore in manufacture, we see the immediate technical foundation of large-scale industry. Manufacture produced the machinery with which large-scale industry abolished the handicraft and manufacturing systems in the spheres of production it first seized hold of.” After the system had “undergone further development in its old form,” it finally created “for itself a new basis appropriate to its own mode of production” (503–4). Capitalism, in short, discovered a technological basis more consistent with its rules of circulation.

This is, in my view, an evolutionary, not a determinist, argument. The contradictions of capitalism as they arose in the manufacturing and handicraft period could not be resolved given the nature of the technologies which existed. Therefore, there was considerable pressure to come up with a new technological mix. Marx is telling the story of how capitalism came to “create for itself a new basis appropriate to its own mode of production.” But this whole process was

> dependent on the growth of a class of workers who, owing to the semi-artistic nature of their employment, could increase their numbers only gradually, and not by leaps and bounds. But, besides this, at a certain stage of its development large-scale industry also came into conflict with the technical basis provided for it by handicrafts and manufacture. (504)

The expansionary force of capital encountered limits. The capitalist system had arrived at the point where it needed skilled workers to make the machines that would facilitate its development at the same time as its own technological basis acted as a drag on the capacity of built machines.

But the evolutionary process was hard to stop. “The transformation of the mode of production in one sphere of industry necessitates a similar transformation in other spheres.” Note here, by the way, Marx’s use of the term “mode of production.” He sometimes uses this term, as he does in the opening paragraph of *Capital*, to contrast, say, the capitalist and feudal modes of production. But here it means something much more specific: the mode of production in a particular industry. These two meanings interrelate: the mode of production in a particular industry creates new machine forms which actually are consistent with the capitalist mode of production understood in the broader sense. Here, however, we are talking about specific transformations in modes of production in particular spheres of industry and the dynamic interactions between them.

> This happens at first in branches of industry which are connected together by being separate phases of a process, and yet isolated by the social division of labour … Thus machine spinning made machine weaving necessary, and both together made a mechanical and chemical revolution compulsory in bleaching, printing and dyeing.

Spill-over effects between different segments of a production process create mutually reinforcing changes. Furthermore, “the revolution in the modes of production of industry and agriculture made necessary a revolution in the general conditions of the social process of production, i.e. in the means of communication and transport" (505–6). This introduces one of the other themes that I find extremely interesting in Marx: that is the importance of what he calls in the *Grundrisse* the "annihilation of space by time."[7] The evolutionary dynamic of capitalism is not neutral in terms of its geographical form. We've already seen hints of this in his discussion of urbanization, the concentration that could arise through the steam engine, and the locational freedoms conferred by steam power. Connectivity in the world market also changed.

Hence, quite apart from the immense transformation which took place in shipbuilding, the means of communication and transport gradually adapted themselves to the mode of production of large-scale industry by means of a system of river steamers, railways, ocean steamers and telegraphs. But the huge masses of iron that had now to be forged, welded, cut, bored and shaped required for their part machines of Cyclopean dimensions, which the machine-building trades of the period of manufacture were incapable of constructing.

And here comes the final link in the argument:

Large-scale industry therefore had to take over the machine itself, its own characteristic instrument of production, and to produce machines by means of machines. It was not till it did this that it could create for itself an adequate technical foundation, and stand on its own feet. (506)

The capacity to produce machines with the aid of machines is, in short, *the* technical foundation of a fully fledged, dynamic capitalist mode of production. In other words, the growth of engineering and the machine-tool industry is the ultimate phase of a revolution that created the "adequate technical foundation" for the capitalist mode of production in general. "As machinery, the instrument of labour assumes a material mode of existence which necessitates the replacement of human force by natural forces, and the replacement of the rule of thumb by the conscious application of natural science." This entails a revolution not only in mental conceptions but also of their application.

In manufacture the organization of the social labour process is purely subjective: it is a combination of specialized workers. Large-scale industry, on the other hand, possesses in the machine system an entirely objective organization of production, which confronts the worker as a pre-existing material condition of production. (508)

The nature of cooperation is fundamentally changed, for example.

I have gone over this section at length, in order to show how the synergistic spread of revolutions in technology both rests on and provokes transformations in social relations, mental conceptions and modes of production (in the concrete and particular sense), as well as in spatial and natural relations. The rise of this new technological system which is suited to a capitalist mode of production (in the grand sense) is an evolutionary story in which all the elements in the footnote coevolve.

In the chapter's second section, Marx asks the following question: how is value transferred from the machine to the product? The other two modes of acquiring relative surplus-value—through cooperation and division of labor—cost capital nothing, apart from some incidental expenses. But a machine is a commodity that has to be bought in the market. This is very different from, say, merely reconfiguring the division of labor in a workplace. Machines have a value, and that value has to be paid for. Somehow the value congealed in the machine must be transferred into “the product it serves to beget,” even though no physical transfer of matter is involved (509). Initially, Marx appeals to the idea of straight-line depreciation. If the machine lasts ten years, one-tenth of the value of the machine ends up in the product each year over that time. But then he goes on to derive an important limit to the deployment of machinery:

> The use of machinery for the exclusive purpose of cheapening the product is limited by the requirement that less labour must be expended in producing the machinery than is displaced by the employment of that machinery. For the capitalist, however, there is a further limit on its use. Instead of paying for the labour, he pays only the value of the labour-power employed; the limit to his using a machine is therefore fixed by the difference between the value of the machine and the value of the labour-power replaced by it. (515)

This assumes (as most economists tend to) that capitalists are rational in their decisions. If the machine is expensive and you save very little labor by it, then why buy it? The cheaper the machine and the more expensive the labor, the greater the incentive to employ machinery. The calculation that the capitalist has to make, therefore, is between the value expended to buy the machine and the value saved on labor (variable capital) employed. This limit on the deployment of machinery is typically enforced by the coercive laws of competition. Capitalists who buy costly machines but save little labor by them are going to be driven out of business.

How much variable capital gets saved depends, however, on the value of labor-power. “Hence the invention nowadays in England of machines that are employed only in North America” (516). In North America, the relative scarcity of labor meant high labor costs, so employing machines made sense, but in Britain the existence of surplus labor meant cheap labor and less incentive to use machines. This calculation on the limiting conditions to the employment of machinery is significant, both theoretically and practically. There are contemporary examples in China where, with the abundance of cheap labor, something which is made with a sophisticated and expensive machine in the United States has been broken down into smaller labor processes that can be done by hand. Instead of employing one very expensive machine with twenty laborers in the United States, you employ two thousand laborers in China using hand tools. This example counters the idea that capitalism inevitably marches onward toward ever-greater mechanization and technological sophistication. Given the importance of the limiting conditions and the value relations, then all manner of oscillations can occur in the deployment of machine technologies.

In the third section, Marx considers three consequences of machine deployment for the worker. Machinery facilitated the “Appropriation of Supplementary Labour-Power by Capital. The Employment of Women and Children.” Machine technologies effectively destroyed the skill basis that existed in the handicraft period. It then became much easier to employ unskilled women and children. A number of consequences followed. It became possible to substitute the family wage for the individual wage. The latter could be reduced, but the family wage could remain constant as women and children entered the workforce. This has been an interesting and persistent theme in capitalist history. In the United States since the 1970s, individual wages have either declined or remained fairly constant in real terms, but family wages have tended to rise as more women have gone to work. What the capitalists class gets is two laborers for close to the price of one. The Brazilian economic miracle of the 1960s was likewise dominated by a catastrophic diminution of individual wages under the military dictatorship, but family wages managed to stabilize because not only women but kids went to work (child labor in the iron mines surged). This led to the famous comment by the Brazilian president Emílio Garrastazu Médici that "the economy" (he should have said the capitalist class) "is doing very well but the people are doing very badly." There are many historical circumstances where capitalists have pursued this solution to gaining surplus-value.

This also raises the question of the relationship between the individual and the family wage. The latter is necessary for the reproduction of the working class. But who bears the cost of this reproduction? Marx is not very sensitive, as many have pointed out, to questions of gender, but he does in a footnote acknowledge the importance of the relation between household work and the buying and selling of labor-power in the market. If women enter the labor force, then

> domestic work, such as sewing and mending, must be replaced by the purchase of ready-made articles. Hence the diminished expenditure of labour in the house is accompanied by an increased expenditure of money outside. The cost of production of the working-class family therefore increases, and balances its greater income. In addition to this, economy and judgement in the consumption and preparation of the means of subsistence become impossible. (518)

Consideration of the family wage raises other issues. It was very common in Marx's time for the male, particularly in the countries Marx was familiar with, to be deliverer of the whole family labor. The result was the creation of a "gang system" for labor supply. One male figure would be held responsible for delivering the labor-power of several kids, maybe the labor-power of a wife and a sister, as well as the labor-power of nephews and kin. In France, the labor market was frequently constituted as a gang system whereby a patriarchal figure would command the labor of everybody around him and deliver that labor to his employers, leaving the question of the remuneration of that labor and distribution of the benefits to the patriarchal figure. Systems of this sort are not at all uncommon in Asia and are frequently found in the organization of immigrant groups in Europe and North America. Some of the worst aspects of this, then as now, as Marx points out in a footnote, arose (and arise) through trafficking in children and the equivalent of slave dealing. Relying very much on the reports of the factory inspectors (suffused with Victorian morality that Marx does not criticize) and Engels's account in *The Condition of the Working Class in England*, Marx focuses on the "moral degradation which arises out of the exploitation by capitalism of the labour of women and children," and the weak attempts by the bourgeoisie to counter this moral degradation through education (522). As in the case of the Factory Acts, a contradiction emerges between what individual capitalists are compelled to do by the coercive laws of competition and what the state tries to do in the way of educating children. Marx does therefore raise, albeit in a not very adequate way, issues concerning the reproduction of life (again an important but somewhat neglected element in footnote 4).

The second subsection deals with "The Prolongation of the Working Day". Machinery in fact creates new conditions not only permitting capital to lengthen the working day but also creating "new incentives" to do so.

> Because it is capital, the automatic mechanism is endowed, in the person of the capitalist, with consciousness and a will. As capital, therefore, it is animated by the drive to reduce to a minimum the resistance offered by man, that obstinate yet elastic natural barrier.

The machine is in part designed to overcome worker resistance, which is in any case "lessened by the apparently undemanding nature of work at a machine, and the more pliant and docile character of the women and children employed by preference" (526–7). This is, of course, a typical Victorian prejudice. In fact the women were by no means docile, any more than the children were.

But the heart of the problem here is the temporality and continuity of production. The machine wears out faster the more it is used, and there are strong incentives to use up the machine as fast as possible. To begin with, "the physical deterioration of the machine is of two kinds. The one arises from use," and the other from non-use, i.e., it just rusts away. "But in addition to the material wear and tear, a machine also undergoes what we might call a moral depreciation." I always find this term strange. What Marx really means is economic obsolescence. If I bought a machine for two million dollars last year, and this year all my competitors can buy it for one million (or, what amounts to the same thing, buy a machine for two million dollars which is twice as efficient as mine), then the value of commodities produced will fall, and I will lose half the value of my machine. "However young and full of life the machine may be, its value is no longer determined by the necessary labour-time actually objectified in it, but by the labour-time necessary to reproduce either it or the better machine." The threat is that the machine will be "devalued to a greater or lesser extent" (528). To protect against this threat, capitalists are impelled to use their machinery up as fast as possible (keeping it employed twenty-four hours a day if possible). This means lengthening the working day (or, as we will see, resorting to shift work and relay systems). Machines supposed to get around lengthening the working day actually stimulate a need to further lengthen it.

Capitalists fall in love with machines because they are a source of surplus and relative surplus-value. The fetish of a “technological fix” becomes ingrained in their belief system. Yet machines are also the source of “an immanent contradiction” because “of the two factors of the surplus-value created by a given amount of capital, one, the rate of surplus-value, cannot be increased except by diminishing the other, the number of workers” (531). And since the mass of surplus-value, so crucial to the capitalist, depends on the rate of surplus-value and the number of workers, labor-saving innovations may leave the capitalist no better off. Throwing workers out of work through technological innovations from this standpoint does not seem a good idea, because the real value producers are lost from production. This contradiction will be made much of in the third volume of *Capital*, where the dynamics of technological innovation are seen as destabilizing and a source of serious crisis tendencies.

But the incentive for capitalists to keep on innovating is all-powerful. The competitive search for the ephemeral form of relative surplus-value becomes overwhelming in spite of the contradictions. Individual capitalists, responding to the coercive laws of competition, behave in a way that is not necessarily in the interests of the capitalist class. But the social consequences for labor can also be catastrophic.

> Partly by placing at the capitalists’ disposal new strata of the working class previously inaccessible to him, partly by setting free the workers it supplants, machinery produces a surplus working population, which is compelled to submit to the dictates of capital. Hence that remarkable phenomenon in the history of modern industry, that machinery sweeps away every moral and natural restriction on the length of the working day. Hence too the economic paradox that the most powerful instrument for reducing labour-time suffers a dialectical inversion and becomes the most unfailing means for turning the whole lifetime of the worker and his family into labour-time at capital’s disposal for its own valorization. (531–2)

Now we see why John Stuart Mill was so right.

The third subsection explicitly takes up the question of intensification. Earlier usually mentioned in passing (as, for example, in the definition of socially necessary labor-time), intensity is here confronted head-on. Capitalists can use machine technology to change and regulate the intensity and pace of the labor process. Reducing what is called the porosity of the working day (moments when work is not being done) is a key objective. How many seconds in a working day can a worker goof off? If they are in charge of their own tools, then they can lay them down and pick them up again. Laborers can work at their own pace. With machine technology, the speed and the continuity are determined internally to the machine system, and workers have to conform to the movement of, say, the assembly line (as in Chaplin’s *Modern Times*). There is an inversion in social relations, such that workers now become appendages of the machine. One of the great advances that occurred after 1850, once the industrial bourgeoisie got over the fact that they were going to have to deal with the Factory Acts and the regulation of the length of the working day, was that capitalists discovered that a shorter working day was compatible with increasing intensity. This repositioning of the laborer as an appendage to the labor process is of utmost importance in what follows.

CHAPTER EIGHT

Machinery and Large-Scale Industry

In the last chapter, I invited you to look at this long chapter on machinery through the lens of Marx's footnote 4, paying particular attention to the way "technology reveals the active relation of man to nature, the direct process of the production of his life, and thereby it also lays bare the process of the production of the social relations of his life, and of the mental conceptions that flow from those relations." When reading this chapter, it is interesting to note how Marx knits together interrelations between these different "moments" in order not only to understand the evolution of capitalist technologies but also to show what it is that the study of this evolutionary process reveals about the capitalist mode of production viewed as a totality (as an ensemble or assemblage of interactive elements). If you read this chapter this way, you will see in it a rather richer set of determinations than just a simple story about technological change.

In reading this gargantuan chapter (where it is all too easy to get lost), I also suggested it would be helpful to pay attention to the section headings in order to maintain a sense of the dynamism of the whole argument. Consider the story so far. In the first sections, he explained how capitalism evolved a unique technological basis by transforming the technologies associated with handicraft and manufacturing industries. This basis is eventually achieved by the production of machines by machines, and by the organization of many machines into a factory system. But machines are commodities that have to be paid for. Their value, therefore, has to circulate as constant capital during the machine's lifetime. If that lifetime is ten years, then one-tenth of the value of the machine ends up in the product every year. But this imposes a limit—the depreciating value of the machine should be less than the value of the labor replaced by it. This creates the possibility for uneven geographical development. If labor costs are high in the United States relative to Britain, then the incentive to employ machinery in the United States is greater. Trade-union power in West Germany from the mid-1970s on sustained high wage rates, which produced a strong incentive for technological innovation. The West German economy then gained relative surplus-value vis-à-vis the rest of the world through technological advantage, but the labor-saving innovations produced structural unemployment.

In the third section, Marx examined the implications for the laborer (the relationship between technologies and social relations). The transformation from skilled crafts to machine minding permits the employment of women and children in ways that might not have been possible earlier on. This allows the substitution of family labor (the family wage) for individual labor (the individual wage), with savings for the capitalist and widespread ramifications for family structures, gender relations and shifts in the role and form of domestic economies. But the introduction of machinery also creates an incentive to prolong the working day to confront the problem of "moral depreciation" (economic obsolescence) and the danger of the devaluation of old machinery by the introduction of new and better machines. Capitalists therefore strive to recuperate the value congealed in the machine as fast as they can, which means keeping the machine employed twenty-four hours a day if possible. Machinery can also be used to intensify the labor process. Capitalists can take control of both the continuity and the speed of the labor process and thereby reduce the porosity of the working day. Intensification emerges as an important capitalist strategy for squeezing more surplus-value out of the laborer. This is the story so far.

Sections 4–10: Workers, Factories, Industry

The seven remaining sections of the chapter on machinery both deepen and broaden our perspectives on what can be "revealed" about capitalism through an examination of technological evolution. In section 4, Marx examines the factory per se. This is the centerpiece of his concern, not simply as a technical thing but as a social order. But here I need to insert some critical caveats. Marx relies heavily on two sources for his understanding of the factory system. Engels's firsthand experience of Manchester-style industrialism was critical and was supplemented by the writings of Babbage and Ure, who were the day's leading pro-capitalist ideologists and promoters of principles of efficient industrial management. Marx tends to universalize what is going on in Manchester as if this is the ultimate form of capitalist industrialism, and he is, in my judgment, a bit too accepting of Babbage and Ure's ideas. If Engels had been in Birmingham, Marx's presentation might have been quite different. The industrial structure there was small-scale but assembled in such a way as to realize economies of agglomeration. It was more craft-oriented, with workshops producing guns, jewelry and various metallurgical products, and it seems to have been highly efficient and characterized by very different labor relations from those found in the huge cotton factories of the Manchester region. Marx evidently knew very little about what we might call the Birmingham model of capitalist industrialism and therefore failed to address a distinction that has been long-lasting in the history of capitalist development. South Korean industrialism since the 1960s has been Manchester-like, but Hong Kong's has been more Birmingham-like. Bavaria, what is called the Third Italy and other similarly organized industrial districts (Silicon Valley being a special case) have been critically important in recent phases of industrialism, and this is very different from the Manchester-like industrial forms in the Pearl River Delta of China. The point, however, is that all the industrial world was not and is not like the factories of Manchester. Marx's account of the factory, while compelling, is one-sided.

Marx begins by noting that

along with the tool, the skill of the worker in handling it passes over to the machine. The capabilities of the tool are emancipated from the restraints inseparable from human labour-power. This destroys the technical foundation on which the division of labour in manufacture was based. Hence, in place of the hierarchy of specialized workers that characterizes manufacture, there appears, in the automatic factory, a tendency to equalize and reduce to an identical level every kind of work that has to be done by the minders of the machines; in place of the artificially produced distinctions between the specialized workers, it is natural differences of age and sex that predominate … In so far as the division of labour reappears in the factory, it takes the form primarily of a distribution of workers among the specialized machines. (545)

Workers can move from one machine to another. They become, in effect, machine minders.

Marx is here describing the deskilling that accompanies the rise of the factory system, such that all labor is rendered increasingly homogeneous. If you can mind this machine, you can mind that machine. The continued significance of deskilling throughout the history of capitalism has been the subject of considerable debate in more recent times (beginning with Harry Braverman's *Labor and Monopoly Capital*,[1] which provoked a lot of commentary and study from the 1970s onward). Furthermore, "the motion of the whole factory proceeds not from the worker but from the machinery," and for that reason "the working personnel can continually be replaced without any interruption in the labour process" (546). The result is that workers are reduced to the lifelong task of serving particular machines. Plainly, the worker and social relations are being transformed along with the worker's work, such that workers become mere appendages of machines.

In handicrafts and manufacture, the worker makes use of a tool; in the factory, the machine makes use of him. There the movements of the instrument of labour proceed from him, here it is the movements of the machine that he must follow. In manufacture the workers are the parts of a living mechanism. In the factory we have a lifeless mechanism which is independent of the workers, who are incorporated into it as its living appendages … Even the lightening of the labour becomes an instrument of torture, since the machine does not free the worker from the work, but rather deprives the work itself of all content … [The] conditions of work employ the worker. However, it is only with the coming of machinery that this inversion first acquires a technical and palpable reality. Owing to its conversion into an automaton, the instrument of labour confronts the worker during the labour process in the shape of capital, dead labour, which dominates and soaks up living labour-power. The separation of the intellectual faculties of the production process from manual labour, and the transformation of those faculties into powers exercised by capital over labour, is, as we have already shown, finally completed by large-scale industry erected on the foundation of machinery. (548–9)

In other words, mental conceptions are now divided from physical labor. The mental conceptions lie with the capitalists—they are the ones who are designing things. Laborers are not supposed to think; they are just simply supposed to mind machines. This may not be true in fact, of course, but the point is that this is the structure for which the capitalist class struggles day and night, and as a consequence the whole structure of mental conceptions, social relations, reproduction of life, relation to nature and so on is being transformed along class lines.

The special skill of each individual machine-operator, who has now been deprived of all significance, vanishes as an infinitesimal quantity in the face of the science [read mental conceptions], the gigantic natural forces [read the relation to nature], and the mass of social labour embodied in the system of machinery, which, together with those three forces, constitutes the power of the 'master'.

But this transformation is predicated on that capacity to so degrade the positionality of workers that they are no more than appendages of machines, unable to use any of their mental powers and subjected to the capitalists' "autocratic power" (549) and despotic rules. Skill now resides only with those who design the machines, the engineers and so on, who become a small group of highly specialized workers. But as Marx earlier remarked, as a counterpoint there emerges "a superior class of workers, in part scientifically educated, in part trained in a handicraft; they stand outside the realm of the factory workers, and are added to them only to make up an aggregate" (545–6).

Transformations of this sort were bound to provoke resistance, particularly from skilled workers. This is the focus of section 5, dealing with "The Struggle Between Worker and Machine." The so-called Luddite movement (named after a fictional character called Ned Ludd) was a machine-breaking movement in which workers would protest their deskilling and loss of jobs by smashing the machines. They saw the machines as their competitors, as the destroyer of their skills and the creator of their job insecurity. But Marx notes an evolution in the politics of this revolt:

The large-scale destruction of machinery which occurred in the English manufacturing districts during the first fifteen years of the nineteenth century, largely as a result of the employment of the power-loom, and known as the Luddite movement, gave the anti-Jacobin government, composed of such people as Sidmouth and Castlereagh, a pretext for the most violent and reactionary measures. It took both time and experience before the workers learnt to distinguish between machinery and its employment by capital, and therefore to transfer their attacks from the material instruments of production to the form of society which utilizes those instruments. (554–5)

This statement calls for careful evaluation. Marx seems to suggest here that the problem is not machines (the technology), but capitalism (the social relations). It may be inferred (wrongly in my view) that machines are in themselves neutral, that they can therefore be used in the transition to socialism. It seems to have been historically true that the workers themselves gave up on indiscriminate machine breaking in favor of targeting those capitalists who were using machine technology in the most brutal manner. But this seems to violate the spirit of Marx's general line of argument, particularly given my reading of the fourth footnote, in which technologies and social relations are integral to each other. Under this reading, there is bound to be a problem with machines, too, since they have been designed and set up in such a way as to internalize certain social relations, mental conceptions and ways of producing and living. That workers are being turned into appendages of machines is not, surely, a good thing. Nor is the deprivation of mental capacities associated with capitalist machine technologies. So when Lenin praised Fordist techniques of production, set up factory systems for production similar to those being created by US corporations and made the argument that the transformation of social relations wrought by the revolution was what fundamentally mattered, he was treading on dangerous ground. Marx himself appears ambiguous in these passages. Elsewhere, he is more critical of the nature of the technologies through which capitalism has found its own basis. The technologies discussed in this chapter are those suited to a capitalistic mode of production. This should lead us automatically to pose the problem of discovering those distinctive technologies appropriate to a socialist or communist mode of production. If you take the technologies of a capitalist mode of production and try to construct socialism with them, what are you going to get? You are likely to get another version of capitalism, which is what tended to happen in the Soviet Union with the spread of Fordist techniques. In the same way that Marx critiqued Proudhon for merely instantiating bourgeois notions of justice, so Marx is in danger here of endorsing the instantiation of capitalist technologies.

One way to defend Marx is to go back to how he depicts the rise of capitalism. In the manufacturing period, capitalist development rested on late feudal handicraft and manufacturing technologies (while changing their organizational form), and this was necessarily so given the conjunctural conditions. It was only later that capitalism came to define its specific technological basis. In exactly the same way, socialism was bound to make use of capitalist technologies in its early revolutionary stages, and given the exigencies of the moment (war and mass disruption), Lenin was therefore correct to turn to the most advanced capitalist technological forms in order to revive production and so protect the revolution. But a socialist revolutionary project in the long term cannot, given my reading of the footnote, avoid the question of the definition of an alternative technological basis as well as alternative relations to nature, social relations, production systems, reproduction through daily life and mental conceptions of the world. And this, it seems to me, has been one of the acute failures in the history of actually existing communisms. This issue is, of course, broader than communism, since the question of appropriate technologies to realize certain social and political aims, be they feminist, anarchist, environmentalist or whatever, is a general matter deserving of close consideration. Technologies, we have to conclude, are not neutral with respect to the other moments in the social totality.

The problematic class character of capitalist technologies is actually confirmed in Marx’s text. “Machinery,” he writes,

> does not just act as a superior competitor to the worker, always on the point of making him superfluous. It is a power inimical to him, and capital proclaims this fact loudly and deliberately,

as well as making use of it. It is the most powerful weapon for suppressing strikes, those periodic revolts of the working class against the autocracy of capital. According to Gaskell, the steam-engine was from the very first an antagonist of ‘human power’, an antagonist that enabled the capitalists to tread underfoot the growing demands of the workers … It would be possible to write a whole history of the inventions made since 1830 for the sole purpose of providing capital with weapons against working-class revolt. (562–3)

So capitalists consciously construct new technologies as instruments of class struggle. These technologies not only serve to discipline the laborer within the labor process but also help to create a labor surplus which will depress wages and worker aspirations.

Marx here introduces the idea of technologically induced unemployment for the first time. Labor-saving innovations put people out of work. Indeed, over the past thirty years, strong technological changes and incredible increases in productivity have generated unemployment and job insecurity and made it much easier to discipline labor politically. The tendency has been to blame outsourcing and competition from low-wage labor in Mexico and China for the ills of the US working class, but studies show that about two-thirds of the job losses there are due to technological change. When I arrived in Baltimore in 1969, Bethlehem Steel was employing more than twenty-five thousand workers, but twenty years later it was employing fewer than five thousand workers, producing about the same amount of steel. “The instrument of labour strikes down the worker” (559).

The claim that technologies are used as weapons of class struggle is not hard to substantiate. I recall reading a memoir of an industrialist, a machine-tool innovator, working in Second Empire Paris. He gave three motivations for innovation: first, to lower the price of the commodity and improve competitive position; second, to improve efficiency and eliminate waste; third, to put labor in its place. From the Luddites onward, the class struggle over technological forms has been an endless feature within capitalism.

Section 6, “The Compensation Theory,” focuses on the aggregate relationship between capital and labor as a consequence of technological changes. If capitalists save variable capital by employing fewer laborers, then what do they do with the capital they save? If they expand their activities, then some of the labor rendered redundant is reabsorbed. On this basis, bourgeois economists of the time invented a compensation theory to prove that machines in aggregate did not cause unemployment. Marx does not deny that there can be some compensation, but how much is problematic. You can pick up 10 percent of the laborers you just made redundant, or 20 percent. There is no automatic reason why all will be reabsorbed. “Machinery necessarily throws men out of work in those industries into which it is introduced,” but it may, “despite this, bring about an increase in employment in other industries. This effect of machinery, however, has nothing in common with the so-called theory of compensation” (570). Even if most workers eventually get re-employed, there is still a serious transitional problem. “As soon as machinery has set free a part of the workers employed in a given branch of industry, the reserve men”—that is, the reserve army which is always out there—“are also diverted into new channels of employment, and become absorbed in other branches; meanwhile, the original victims”—those thrown out of work—“during the period of transition, for the most part starve and perish” (568). There are also adaptation problems: steelworkers cannot become computer programmers overnight.

Therefore, since machinery in itself shortens the hours of labour, but when employed by capital it lengthens them; since in itself it lightens labour, but when employed by capital it heightens its intensity; since in itself it is a victory of man over the forces of nature but in the hands of capital it makes man the slave of those forces; since in itself it increases the wealth of the producers, but in the hands of capital it makes them into paupers, the bourgeois economist simply states that the contemplation of machinery in itself demonstrates with exactitude that all these evident contradictions are a mere semblance, present in everyday reality, but not existing in themselves, and therefore having no theoretical existence either. (568–9)

The machine always has to be seen in relation, therefore, to the capitalist use of it. And there is no question but that capitalist uses are often ruthlessly and needlessly oppressive. But if the machine is viewed “in itself” as a “victory of man over the forces of nature,” as well as “in itself” endowed with potentially virtuous possibilities (such as lightening the load of labor and increasing material well-being), then we are back to the dubious proposition that capitalist technology “in itself” can lay the basis for alternative forms of social organization without any major adjustment, let alone revolutionary transformation. The question is posed once more of the positionality of organizational forms, of technologies and machines in the transition from feudalism to capitalism and from capitalism to socialism or communism. This is one of the big questions raised in this chapter, one that deserves long and hard thought.

Compensation also arises because the introduction of machines increases employment in the machine-tool industry. But recall, “the increase in the labour required to produce the instruments of labour themselves, the machinery, coal, etc. must be less than the reduction in labour achieved by the employment of machinery” (570). Then there is the possibility of increasing employment in raw-material extraction. But in the case of cotton, this unfortunately meant the intensification and expansion of slave labor in the US South rather than the expansion of wage employment. But if all these possibilities for compensation are blocked, then the original problem of what the capitalists should do with their excess capital remains. They acquire this excess, either individually or as a class, as the value of labor-power declines and as the number of laborers they employ tends to decrease.

What is posed here, albeit in somewhat shadowy form, is the problem of what the bourgeoisie should do with all its surplus capital. This is a huge and fundamental problem. I call it the capital-surplus-absorption problem.

Capitalists necessarily end up with more of something, a surplus, at the end of the day, and then they've got the problem of what do they do with that surplus the next day. If they can't find anything to do with it, they are in trouble. This is the central problem that gets taken up in later volumes of *Capital*. Marx does not attempt to analyze this in all its fullness here, but he does throw out some suggestions. "The immediate result of machinery is to augment surplus-value and the mass of products in which surplus-value is embodied. It also increases the quantity of substances for the capitalists and their dependants to consume" (572). So "the production of luxuries increases" while the market for surplus product may also be increased through the expansion of foreign trade.

> The increase in means of production and subsistence, accompanied by a relative diminution in the number of workers, provides the impulse for an extension of work that can only bear fruit in the distant future, such as the construction of canals, docks, tunnels, bridges and so on. (573)

Investments in long-term physical infrastructures which don't bear fruit for many years can become vehicles for surplus absorption. Remarks of this sort eventually led me to theorize, in *The Limits to Capital*, the crucial role of geographical expansions and long-term investments (particularly in built environments) in the stabilization of capitalism.

In addition,

> the extraordinary increase in the productivity of large-scale industry, accompanied as it is by both a more intensive and a more extensive exploitation of labour-power in all other spheres of production, permits a larger and larger part of the working class to be employed unproductively. Hence it is possible to reproduce the ancient domestic slaves, on a constantly extending scale, under the name of a servant class, including men-servants, women-servants, lackeys, etc.

This class of unproductive people includes

> all who are too old or too young for work, all 'unproductive' women, young persons and children; … the 'ideological groups', such as members of the government, priests, lawyers, soldiers, etc.; … all the people exclusively occupied in consuming the labour of others in the form of ground rent, interest, etc. (574)

All this large population has to be supported out of the surplus. With reference to England and Wales, Marx cites the 1861 census figures, which show that "all the persons … employed in textile factories and metal industries, taken together, number 1,039,605," while those in mining accounted for 565,835, compared with the 1,208,648 persons in the servant class (or "modern domestic slaves") (574). We tend to think that the radical shift from manufacturing to services occurred in the past half century, but what these figures illustrate is that this is not a new sector at all. The big difference is that Marx's servant class was not for the most part organized along capitalist lines (a lot of servants lived in). There were no stores whose signs said "Nails," "Cleaners," "Hair Salon" or whatever. But the population numbers involved in this form of employment were always large and too often neglected in economic analyses (including that of Marx), even though they outnumbered the working class in the classic sense of factory workers, miners and the like.

Section 7, on the "Repulsion and Attraction of Workers through the Development of Machine Production," examines the temporal rhythms of employment corresponding to the ebb and flow of business cycles. Profits, Marx argues, "not only form a source of accelerated accumulation, they also attract into the favoured sphere of production a large part of the additional social capital that is constantly being created, and is always seeking out new areas of investment" (578). But as surplus capital flows into these newly favored areas, it encounters certain barriers such as "those presented by the availability of raw materials and the extent of sales outlets" (579). Where are you going to get the new raw materials from, and whom are you going to sell your surplus product to? These, as we shall see, are key questions, and we will come back to them in the final section, "Reflections and Prognoses."

The immediate answer that Marx proffers here is—India! You go wreck the domestic industries of India and turn that vast population into your market, at the same time as you also turn India into a raw-material producer for your own market. That is, you engage in imperialist and colonialist practices and geographical expansions. The problem is solved by what I call a spatial fix. As a result,

> a new and international division of labour springs up, one suited to the requirements of the main industrial countries, and it converts one part of the globe into a chiefly agricultural field of production for supplying the other part, which remains a pre-eminently industrial field. (579–80)

Now all this lies, as yet, outside the grasp of Marx's theoretical apparatus. But what we clearly see from this section is the social necessity within a capitalist mode of production to solve its capital-surplus disposal problem through geographical and temporal displacements.

Ebbs and flows in the industrial cycle are characteristic of capitalism.

> The factory system's tremendous capacity for expanding with sudden immense leaps, and its dependence on the world market, necessarily give rise to the following cycle: feverish production, a consequent glut on the market, then a contraction of the market, which causes production to be crippled. The life of industry becomes a series of periods of moderate activity, prosperity, over-production, crisis and stagnation. The uncertainty and instability to which machinery subjects the employment, and consequently the living conditions, of the workers becomes a normal state of affairs, owing to these periodic turns of the industrial cycle. Except in the periods of prosperity, a most furious combat rages between the capitalists for their individual share in the market. This share is directly proportional to the cheapness of the product. Apart from the rivalry this struggle gives rise to in the use of improved machinery for replacing labour-power, and the introduction of new methods of production, there also comes a time in every industrial cycle when a forcible reduction of wages beneath the value of labour-power is attempted so as to cheapen commodities. (580–2)

This broad-brush description of cyclical movements in the economy lacks any theoretical underpinning, and the exact mechanisms that produce such movements remain unexplored. Marx moves, as it were, from the terrain of theory to a schematic description of the cycles of boom and bust characteristic of the British economy in his time. What follows is a history of the boom and bust cycles in the British cotton industry, the main purpose of which appears to be to simply illustrate his historical point. He summarizes the story:

> We find, then, in the first forty-five years of the English cotton industry, from 1770 to 1815, only five years of crisis and stagnation; but this was the period of monopoly. The second period from 1815 to 1863 counts, during its forty-eight years, only twenty years of revival and prosperity against twenty-eight of depression and stagnation. Between 1815 and 1830 competition with the continent of Europe and with the United States sets in. After 1833, the extension of the Asiatic markets is enforced by 'destruction of the human race'. (587)

A footnote makes clear that the "human destruction" he is referring to was that wrought by the British as they forcibly used the opium grown in India to sell in China in return for Chinese silver that could be used to buy British goods.

In Section 8, "The Revolutionary Impact of Large-Scale Industry on Manufacture, Handicrafts and Domestic Industry," Marx examines what happens as different labor systems are brought into competition with one another. This section raises some intriguing questions. In Marx's time, there were domestic labor systems, handicraft systems, manufacturing systems and factory systems all coexisting, sometimes in the same region. When brought into competition with one another, these systems underwent adaptations, sometimes producing new hybrid forms, but with the general result that conditions of work became absolutely appalling if not totally intolerable in all sectors. Handicraft workers had to work five times as hard to compete with the products of power looms, for example. But Marx seems to believe that, ultimately, the factory system was going to prevail. I say "seems" because he does not explicitly say so. But there are many hints here of some sort of teleological progression, such that capitalism necessarily and increasingly moves toward a factory-based system. The older and hybrid labor systems, hanging on by organizing totally inhumane systems of exploitation (which Marx, with the help of the factory inspectors, will describe in graphic detail), could not possibly last. If this is what he is saying, then there are grounds for disagreement.

I prefer to read him in another way, possibly against the grain of his own thinking. Capitalists, I would argue, like to preserve a choice of labor system. If they can't make sufficient profit by the factory system, they want the option to go back to a domestic system. If they can't make it that way, they'll go off to a kind of quasi-manufacturing system. That is, instead of taking the conditions Marx describes in this chapter as temporary and transitional, I prefer to read them as permanent features (options) of a capitalist mode of production in which competition between different labor systems becomes a weapon to be used by capital against labor in the struggle to procure surplus-value. Using Marx's account of the devastating consequences of competition between labor systems this way provides a better understanding of exactly what's going on in the world right now. The revival of sweatshop and family labor systems, putting-out systems, subcontracting systems and the like has been a marked feature of global neoliberal capitalism over the past forty years. The factory system has not always worked to capital's advantage, and Marx does have some good insights as to why. Workers, brought together in a large factory, can become all too aware of their common interests and become a potentially powerful collective political force. Industrialization in South Korea after 1960 or so produced a large-scale factory labor system, and one result was a strong trade-union movement that became a politically potent force until disciplined in the crisis of 1997–8. The labor system in Hong Kong rested on sweatshop family labor and subcontracting structures, and there is little in the way of a trade-union movement there. There are, of course, all sorts of other factors that come into play, but the point is that the availability of a choice of labor system is important to capital in the dynamics of class struggle.

I therefore find it most valuable to read these sections of *Capital* as a cautionary tale of how capitalists, endowed with a choice of labor process and labor system, use that choice as a weapon in class struggle over surplus generation. The factory workers are disciplined by competition with the sweatshops, and vice versa. The heightening of competition between labor systems has made matters much worse for labor in recent times compared with, say, the 1960s or 1970s, when in many parts of the capitalist world there were largish factory systems and strong labor organizations that supported social movements with some degree of political influence and political power. Back then, it was tempting to think that the factory system was indeed going to drive out all else and that the politics that flowed from this would lead on to socialism. Many people who read *Capital* during the 1960s favored such a teleological interpretation.

Consider, then, Marx's account in greater detail. First we get the subsection "Overthrow of Co-operation Based on Handicrafts and on the Division of Labour," which describes a distinctive displacement of one labor system by another. Second, the impact on manufacture and domestic industries is examined. In this instance, the theme is adaptation and not overthrow.

> The principle of machine production, namely the division of the production process into its constituent phases, and the solution of the problems arising from this by the application of mechanics, chemistry and the whole range of the natural sciences, now plays the determining role everywhere. (590)

In other words, the mental conceptions associated with machine technologies penetrated into the reorganization of the older systems. Science and technology only began to coalesce with industry in the nineteenth century, which indeed entailed breaking down labor processes scientifically into component phases, routinizing and mechanizing them. But this implied a mental revolution in the way we understood the world, such that it became possible to apply scientific method to all labor systems (including artisanal ones). To be sure, this did not happen automatically in manufacture and the domestic industries, where older forms of thinking had long prevailed. But the consequences for those industries that were reorganized according to scientific and technical principles were horrific, if Marx's account of lace production (596–9) is anything to go by.

The form domestic industry now took had, in fact, "nothing but the name in common with the old-fashioned domestic industry." It had "been converted into an external department of the factory, the manufacturing workshop, or the warehouse." In this way, capital "sets another army" of workers in motion holding them together "by means of invisible threads." He cites the example of a shirt factory employing 1,000 workers along with "9,000 outworkers spread over the country districts." This form of labor organization remains common to this day, particularly in Asia where the Japanese automobile industry, to take just one example, rests on the basis of a vast network of domestic subcontractors producing auto parts. "Shameless exploitation" is characteristic of these "modern" forms of domestic industry in part because "the workers' power of resistance declines with their dispersal" and because "a whole series of plundering parasites insinuate themselves between the actual employer and the worker he employs" (591).

The widespread transformations in all labor systems were complicated in their specifics. "The revolution in the social mode of production which is the necessary product of the revolution in the means of production is accomplished through a variegated medley of transitional forms" (602). But, and this is the closest Marx gets to endorsing a teleological perspective, "the variety of these transitional forms does not, however, conceal the tendency operating to transform them into the factory system proper" (603). This is, however, a tendency and not a law, and when Marx uses the word "tendency," it is important to note, he nearly always has in mind counteracting tendencies that make actual outcomes uncertain. But in this instance he does not examine potential countertendencies.

Marx does describe how "this industrial revolution, which advances naturally and spontaneously, is also helped on artificially by the extension of the Factory Acts to all industries in which women, young persons and children are employed" (604). Only the largest businesses, he notes, had the resources to comply with the regulations.

> Though the Factory Acts thus artificially ripen the material elements necessary for the conversion of the manufacturing system into the factory system, yet at the same time, because they make it necessary to lay out a greater amount of capital, they hasten the decline of the small masters, and the concentration of capital. (607)

Big capital consequently often supports the rigorous enforcement of all kinds of regulatory regimes on, for example, occupational safety and health, particularly if small businesses can't afford them, leaving the whole field to the large corporations. What is called "regulatory capture" has long been a feature in the history of capitalism. Corporations capture the regulatory apparatus and use it to eliminate competition. When Mini Coopers first came out in Britain in the early 1960s, the regulatory regime in the United States excluded them by insisting that headlights had to be this much off the ground, whereas for the Mini Cooper, they were only that much. So much for the real practices of free trade!

The seasonality that characterizes some lines of production poses another set of problems to which capital has to adapt. One of the reasons I find *Capital* such a prescient book is that Marx often identifies tendencies at work in the capitalism of his time which are all too easy to identify in ours. There has, for example, been a tendency within capitalism to construct what came to be known in the 1980s, as a result of Japanese innovation, as "just-in-time" systems. Marx noted in his day how fluctuations in demand and supply, both seasonal and annual, called for flexible modes of response. He cites a contemporary commentator:

> 'The extension of the railway system throughout the country has tended very much to encourage giving short notice. Purchasers now come up from Glasgow, Manchester, and Edinburgh once every fortnight or so to the wholesale city warehouses which we supply, and give small orders requiring immediate execution, instead of buying from stock as they used to do. Years ago we were always able to work in the slack times so as to meet the demand of the next season, but now no one can say beforehand what will be in demand then.'

For this flexibility to be achieved, however, the creation of an adequate infrastructure of transport and communications was necessary. "The habit of giving such orders becomes more frequent with the extension of railways and telegraphs" (608).

Section 9, on "The Health and Education Clauses of the Factory Acts," poses another set of interesting contradictions. "Factory legislation," Marx begins by noting,

> that first conscious and methodical reaction of society against the spontaneously developed form of its production process, is, as we have seen, just as much the necessary product of large-scale industry as cotton yarn, self-actors and the electric telegraph. (610)

The Acts not only sought to regulate the hours of work but also had something to say about health and education, topics which most industrialists resisted vociferously. Nevertheless,

> as Robert Owen has shown us in detail, the germ of the education of the future is present in the factory system; this education will, in the case of every child over a given age, combine productive labour with instruction and gymnastics, not only as one of the methods of adding to the efficiency of production, but as the only method of producing fully developed human beings.

Why are we suddenly talking about "fully developed human beings" in a chapter rife with stories of the destruction of the dignity and the appropriation of all the capacities of the laborer by capital? Could it be that individual capitalist resistance to health and education provisions is irrational from a capitalist class perspective? "As we have seen, large-scale industry sweeps away by technical means the division of labour characteristic of manufacture" and reproduces "this same division of labour in a still more monstrous shape … by converting the worker into a living appendage of the machine" (614). The effects on children are particularly devastating. But there are some positive signs in the midst of all this.

> Right down to the eighteenth century, the different trades were called 'mysteries' (*mystères*), into whose secrets none but those initiated by their profession and their practical experience could penetrate. Large-scale industry tore aside the veil that concealed from men their own social process of production and turned the various spontaneously divided branches of production into riddles, not only to outsiders but even to the initiated. (616)

The modern science of technology entailed a veritable revolution in our mental conceptions of the world. "The varied, apparently unconnected and petrified forms of the social production process were now dissolved into conscious and planned applications of natural science, divided up systematically in accordance with the particular useful effect aimed at in each case." (616–17)

The result was an industrial revolution in every sense of the term.

> Modern industry never views or treats the existing form of a production process as the definitive one. Its technical basis is therefore revolutionary, whereas all earlier modes of production were essentially conservative. By means of machinery, chemical processes and other methods, it is continually transforming not only the technical basis of production but also the functions of the worker and the social combinations of the labour process. At the same time, it thereby also revolutionizes the division of labour within society, and incessantly throws masses of capital and of workers from one branch of production to another. Thus large-scale industry, by its very nature, necessitates variation of labour, fluidity of functions, and mobility of the worker in all directions. (617)

This necessity generates a major contradiction. On the negative side, large-scale industry "reproduces the old division of labour with its ossified particularities" and "does away with all repose, all fixity and all security as far as the worker's life-situation is concerned; … it constantly threatens, by taking away the instruments of labour, to snatch from his hands the means." This results "in the reckless squandering of labour-powers, and in the devastating effects of social anarchy" (617–18). But then there is the positive side.

> Large-scale industry, through its very catastrophes, makes the recognition of variation of labour and hence of the fitness of the worker for the maximum number of different kinds of labour into a question of life and death. This possibility of varying labour must become a general law of social production, and the existing relations must be adapted to permit its realization in practice. That monstrosity, the disposable working population held in reserve, in misery, for the changing requirements of capitalist exploitation, must be replaced by the individual man who is absolutely available for the different kinds of labour required of him; the partially developed individual, who is merely the bearer of one specialized social function, must be replaced by the totally developed individual, for whom the different social functions are different modes of activity he takes up in turn. (618)

Capitalism requires fluidity and adaptability of labor, an educated and well-rounded labor force, capable of doing multiple tasks and able to respond flexibly to changing conditions. Herein lies a deep contradiction: on the one hand, capital wants degraded labor, unintelligent labor, the equivalent of a trained gorilla to do capital's bidding without question, at the same time as it needs this other kind of flexible, adaptable and educated labor, too. How can this contradiction be addressed without giving rise to "revolutionary ferments" (619), particularly when it would be difficult for individual capitalists, intensely pursuing their own self-interest and impelled by the coercive laws of competition, to act on it?

One collective class answer lay in the educational clauses inserted into the Factory Acts. Such clauses were not necessarily enforced, Marx notes, particularly in the face of individual capitalist resistance. Nevertheless, the fact that the clauses were deemed necessary in a state which, as we earlier noted, was governed by capitalists and landlords is significant. It suggested that "technological education" for the working class, "both theoretical and practical, will take its proper place in the schools of the workers." Again:

> There is also no doubt that those revolutionary ferments whose goal is the abolition of the old division of labour stand in diametrical contradiction with the capitalist form of production, and the economic situation of the workers which corresponds to that form.

So mark well: the development of these sorts of "contradictions of a given historical form of production is the only historical way in which it can be dissolved and reconstructed on a new basis" (619).

The development of this fundamental contradiction is crucial to understanding transformations in the reproduction of the labor force. Large-scale industry plays an important role in "overturning the economic foundation of the old family system, and the family labour corresponding to it." It has "also dissolved … old family relationships," revolutionized relationships between parents and children and curbed the misuse of parental power that arises through the gang system. The capitalist mode of exploitation, by sweeping away the economic foundation which corresponded to parental power, made the use of parental power into its misuse" (620). But,

> however terrible and disgusting the dissolution of the old family ties within the capitalist system may appear, large-scale industry, by assigning an important part in socially organized processes of production, outside the sphere of the domestic economy, to women, young persons and children of both sexes, does nevertheless create a new economic foundation for a higher form of the family and of relations between the sexes. (620–1)

It is obvious, Marx concludes,

> that the fact that the collective working group is composed of individuals of both sexes and all ages must under the appropriate conditions turn into a source of humane development, although in its spontaneously developed, brutal, capitalist form, the system works in the opposite direction. (621)

The quest for fluidity, flexibility and adaptability of labor revolutionizes the family as well as relations between the sexes! Pressures of this sort continue to be with us, at the same time that the negative side of the contradiction Marx here identifies continues to be omnipresent. This is, we should conclude, a permanent rather than transitory contradiction within the heart of capitalism.

So what we suddenly encounter at the end of this long chapter, full of negative imagery, are some positive and revolutionary potentialities for the education of the working classes and a radical reconfiguration (with the aid of state power) in its conditions of reproduction. Capital needs fluidity of labor and therefore has to educate the laborers while breaking down old paternalistic, patriarchal rigidities. These ideas aren't really well worked out in Marx's text. But it's interesting that he would find it important to insert them into this account. And in the same way that the politics of the working day was derived to save capital from its self-destructive tendencies, here, too, that politics contains the kernel of a working-class politics to overthrow the whole capitalist system.

This brings Marx, after a lengthy and detailed review of the Factory Acts, to his conclusion, in which once again he flirts with a teleological formulation:

> If the general extension of factory legislation to all trades for the purpose of protecting the working class both in mind and body has become inevitable, on the other hand, as we have already pointed out, that extension hastens on the general conversion of numerous isolated small industries into a few combined industries carried on upon a large scale; it therefore accelerates the concentration of capital and the exclusive predominance of the factory system. It destroys both the ancient and the transitional forms behind which the dominion of capital is still partially hidden, and replaces them with a dominion which is direct and unconcealed. But by doing this it also generalizes the direct struggle against its rule. While in each individual workshop it enforces uniformity, regularity, order and economy, the result of the immense impetus given to technical improvement by the limitation and regulation of the working day is to increase the anarchy and the proneness to catastrophe of capitalist production as a whole, the intensity of labour, and the competition of machinery with the worker. By the destruction of small-scale and domestic industries it destroys the last resorts of the 'redundant population', thereby removing what was previously a safety-valve for the whole social mechanism. By maturing the material conditions and the social combination of the process of production, it matures the contradictions and antagonisms of the capitalist form of that process, and thereby ripens both the elements for forming a new society and the forces tending towards the overthrow of the old one. (635)

Section 10, "Large-Scale Industry and Agriculture," brings "the relation of man to nature" back into the picture, making, as it were, a brief but important cameo appearance in the overall argument. "In the sphere of agriculture," Marx claims, "large-scale industry has a more revolutionary effect than elsewhere," in part because "it annihilates the bulwark of the old society, the 'peasant', and substitutes for him the wage labourer," which in turn generates class conflict in the countryside. The extension of rational scientific principles to agriculture simultaneously revolutionizes relations between agriculture and manufacturing and "creates the material conditions for a new and higher synthesis" between agriculture and industry. But this potentially positive outcome occurs at the expense of disturbing

> the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil. (637)

This problem is exacerbated by increasing urbanization. "All progress in capitalist agriculture," Marx concludes,

> is a progress in the art, not only of robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress towards ruining the more long-lasting sources of that fertility. The more a country proceeds from large-scale industry as the background of its development, as in the case of the United States, the more rapid is this process of destruction. Capitalist production, therefore, only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth—the soil and the worker. (638)

The relationships between technology, nature, the production and reproduction of life take a negative turn even as revolutions in mental conceptions and social relations open up positive possibilities. Marx does not advocate going back to a society where production processes were "*mystères*." He plainly believes that the application of science and technology can have progressive implications. But the big problem in this chapter is to figure out where, exactly, these progressive possibilities might lie and how they can be mobilized in the quest to create a socialist mode of production. Marx, while he does not solve this problem, poses it and forces us to reflect on it. Technological and organizational changes are not a *deus ex machina*, but deeply embedded in the coevolution of our relation to nature, processes of production, social relations, mental conceptions of the world and the reproduction of daily life. All these "moments" get combined in this chapter, some far more prominently than others. This chapter can and should be read as an essay on thinking through these relations. But the sense of method that then arises permits an interrogation of Marx's argument on Marx's own terms.

CHAPTER NINE

From Absolute and Relative Surplus-Value to the Accumulation of Capital

Considerable attention has been paid in the preceding chapters to the various ways in which relative and absolute surplus-value can be procured. When Marx sets up a conceptual bifurcation of this kind, he invariably brings the duality back into a state of unity: finally, there is only one surplus-value, and its two forms are conditional on each other. It would be impossible to gain absolute surplus-value without an adequate technological and organizational basis. Conversely, relative surplus-value would have no meaning without a length of working day that allowed the appropriation of absolute surplus-value. The difference is only one of capitalist strategy that "makes itself felt whenever there is a question of raising the rate of surplus-value" (646). As usually happens when Marx moves to a point of synthesis, he both highlights materials already presented and takes them to a different vantage point whence it is possible to see the terrain of capitalism in a novel way. The new perspectives in chapter 16 have been more than a little controversial, and they therefore call for careful scrutiny.

Consider, first, the concept of the collective laborer, already appealed to several times in earlier chapters. Surplus-value is no longer seen as an individual relationship of exploitation but as part of a larger whole in which laborers, in cooperation and spread across the detail division of labor, collectively produce the surplus-value that the capitalists appropriate. The difficulty with this concept is to define where the collective laborer begins and ends. The simplest way would be to take, say, the factory as a whole and designate everyone in it, including the cleaners, janitors, warehouse managers and even trainees, as part of the collective laborer, even though many workers of this sort play no direct part in the actual production of commodities.

> In order to work productively, it is no longer necessary for the individual himself to put his hand to the object; it is sufficient for him to be an organ of the collective labourer, and to perform any one of its subordinate functions. (643–4)

But a lot of labor does not take place in factories, and the tendency in recent times has been to resort to outsourcing and subcontracting behind which lie even other subcontractors. And what do we say about advertising, marketing and design functions as well as business services that are essential to the selling of commodities but are usually but not always separated from immediate production activities? Or do we confine ourselves solely to activities within the factory? The exact definition is hard to come by, and there seems to be no exact solution—hence the controversy. But without the help of such a concept, it would be difficult to make the move toward a more macro-theoretic approach to the dynamics of capitalism. So

Marx plows ahead, asserting that the analysis so far “remains correct for the collective labourer, considered as a whole,” even as “it no longer holds good for each member taken individually.”

The second move is to contrast this broadening of the definition of productive labor with a narrowing of its compass such that “the only worker who is productive is one who produces surplus-value for the capitalist.” To depict everyone else as “unproductive” risks an emotive reaction because it sounds like a slur on all those who work extremely hard to make ends meet. But, as Marx hastens to point out, under capitalism, “to be a productive worker is therefore not a piece of luck, but a misfortune” (644). Marx’s notion of “productive” is not normative or universal, but a definition historically specific to capitalism. As far as capital is concerned, those who do not contribute to the production of surplus-value are considered nonproductive. The task for socialism would therefore be to redefine “productive” in a more socially responsible and beneficial manner.

But even within the context of capitalism, there are legitimate challenges on the issue of how “productive” might be defined. Feminists have long argued, for example, that unpaid domestic labor reduces the market value of labor-power and is therefore productive of surplus-value for the capitalist. Marx does not address this issue, but he does take up the question of the supposedly “natural basis” of productivity, and his analysis provides some clues as to how he might have approached some of these other questions. Productivity, he concedes, can be “fettered by natural conditions” or advantaged because “the greater the natural fertility of the soil and the kindness of the climate, the smaller the amount of labour-time necessary for the maintenance and reproduction of the producer.” All other things being equal, “the quantity of surplus labour will vary according to the natural conditions within which labour is carried on, in particular the fertility of the soil” (647–8). There is no reason not to say, therefore, that surplus labor will equally vary according to the social conditions (e.g., the productivity of family labor). We leave aside some odd passages that echo nineteenth-century thinking on environmental determinism and the domination of nature (“where nature is too prodigal with her gifts, she ‘keeps him in hand like a child in leading strings’”); Marx then concludes that “favourable natural” (to which we might now add social) “conditions can provide in themselves only the possibility, never the reality of surplus labour, nor … the reality of surplus-value and a surplus product” (649–50). That is, the dynamic relation to nature (or to daily life conditions and household labor) forms a necessary but not sufficient backdrop to the social processes and class relations whereby surplus-value is created and appropriated.

Marx urges us to recognize that the “capital-relation arises out of an economic soil that is the product of a long process of development,” such that the productivity of labor “is a gift, not of nature, but of a history embracing thousand of centuries” (647). Furthermore, he reminds us, “before [the laborer] spends [leisure time] in surplus labour for others, compulsion is necessary." And the ultimate irony is that "both the historically developed productive forces … and its naturally conditioned productive forces, appear as productive forces of the capital into which that labour is incorporated" (651). The crux of the matter for Marx, rightly or wrongly, always lies in the specific configuration of surplus-value appropriation by capital from labor in the matrix of elements that define the totality of an ever-evolving capitalist mode of production. Had he addressed the issue, almost certainly Marx would have taken up the travails of domestic labor in the same way as he treats of the relation to nature (hinted at in his footnote on page 518).

The two moves, of both broadening and narrowing the definition of productive labor, are not independent of each other. Taken together, they help Marx move from an individual micro-perspective, in which the dominant image is of the individual worker being exploited by a particular capitalist employer, to a macro-analysis of class relations in which it is the exploitation of one class by another class that takes center stage. This class perspective is going to dominate in the remaining chapters.

Interestingly, all forms of economic theory encounter problems of some sort in moving from a micro- to a macro-theoretical terrain. Bourgeois political economy had no way to make the move since it had (and still has) no theory of the origins of surplus-value. Ricardo ignored the problem entirely and while John Stuart Mill at least recognized that it had something to do with labor he could not identify exactly what because he could not see the difference between what labor gets and what labor makes. Alas poor Mill: "on a level plain," scoffs Marx, "simple mounds look like hills, and the insipid flatness of our present bourgeoisie is to be measured by the altitude of its 'great intellects'" (654). While Marx's theory of surplus-value does facilitate the move, the way he does it, as we have seen, is not above criticism. But we, too, have to plow on in order to harvest the fruits of his thinking.

The following two chapters do not pose any substantial issues. In chapter 17, all that Marx does is to recognize that surplus-value will vary according to three variables: the length of the working day, the intensity of labor and the productivity of labor, so that capitalists have, in effect, three strategies they can deploy. The diminution of possibilities on one dimension can be compensated for by resort to another. The underlying point is to emphasize, as Marx so often does, the flexibility of capitalist strategies in the search for surplus-value: if they cannot get it this way (by increasing intensity) then they will get it that way (by increasing the hours of labor). I emphasize this point because Marx is so often depicted as a rigid thinker operating with rigid concepts. Chapter 18 merely goes over (once again!) various formulae for interpreting the rate of surplus-value. There is a lot of repetition of this sort in *Capital*. It sometimes reads as if Marx is nervous that we have not quite got the point, so he feels constrained to repeat it just to make sure.

CHAPTERS 19–22: WAGES

The short chapters on wages, chapters 19–22, are relatively self-explanatory. Consequences flow, as might be expected, from the fact that it is the *representation* in money-form—wages—rather than the value of labor-power that provides the field of social action. This immediately poses the problem of the fetish mask that hides social relations beneath the ferment of representational politics. Marx begins, however, by reminding us that there is a huge difference between "the value of labor" (the term that classical political economists used) and "the value of labor-power."

It is not labour which directly confronts the possessor of money on the commodity-market, but rather the worker. What the worker is selling is his labour-power. As soon as his labour actually begins, it has already ceased to belong to him; it can therefore no longer be sold by him. Labour is the substance, and the immanent measure of value, but it has no value itself.

To think otherwise is to engage in a tautology, in effect to speak of the value of value.

In the expression 'value of labour', the concept of value is not only completely extinguished, but inverted, so that it becomes its contrary. It is an expression as imaginary as the value of the earth. These imaginary expressions arise, nevertheless, from the relations of production themselves. They are categories for the forms of appearance of essential relations. That in their appearance things are often presented in an inverted way is something fairly familiar in every science, apart from political economy. (677)

In other words, the value of labor is a fetish concept that disguises the idea of the value of labor-power and thereby conveniently evades the crucial question as to how labor-power became a commodity.

The only way in which classical political economy could resolve the problem of what it was that fixed what it incorrectly called the value of labor was to appeal to the doctrine of supply and demand. This doctrine has reappeared several times in *Capital*, but Marx is at his most explicit here in rejecting its explanatory value. Even classical political economy

soon recognized that changes in the relation between demand and supply explained nothing, with regard to the price of labour or any other commodity, except those changes themselves, i.e. the oscillations of the market price above or below a certain mean. If demand and supply balance, the oscillation of prices ceases, all other circumstances remaining the same. But then demand and supply also cease to explain anything. The price of labour, at the moment when demand and supply are in equilibrium, is its natural price, determined independently of the relation of demand and supply. (678)

This independent determination Marx has already defined in his analysis of the buying and selling of labor-power. It is fixed by the value of the commodities needed to reproduce the worker at a given standard of living in a given society at a given time. Continuing to talk about the value of labor instead of the value of labor-power leads into all kinds of confusions. So Marx then tries to clarify matters by offering (once more!) a useful brief résumé of the theory of surplus-value on page 679.

But the laborer can be remunerated in different ways—by the hour, the day, the week or the piece. Chapter 20 is about time wages and how the time-wage system works. There is nothing very problematic here, except we must remind ourselves that the way in which this is being worked out in the market disguises the underlying social relation. Chapter 21 is about piece wages, the advantage of which for the capitalist is that workers can be forced to compete with one another in terms of individual productivity. Excessive competition between workers drives productivity up and wages down, quite possibly below the value of labor-power. On the other hand, competition between capitalists is likely to drive wages upward. So we end up once more with the idea that there is some equilibrium point where competition between capitalists and competition between workers is producing an actual wage in the market which adequately represents the value of labor-power.

The section on wages culminates in chapter 22, with an examination of national differences in wages. Marx here briefly departs from his tendency to analyze capitalism as if it were a closed system. There is an opening here to examine uneven geographical development in a globalizing system. But the treatment is too brief to go far. If the value of labor-power is fixed by the value of the basket of commodities needed to support the laborer at a given standard of living, and if that standard varies according to natural conditions, the state of class struggle and the degree of civilization in a country, then plainly the value of labor-power stands to vary geographically (from country to country, in this case) in significant ways. The history of class struggle in Germany is different from that in Britain or Spain, for example, and so there are national differences in wages (actually, there are often significant regional differences, too, but Marx does not consider that here). Similarly, variations in productivity in those industries that are producing wage goods in different parts of the world produce differentiations in the value of labor-power and wage rates. A low nominal wage in a highly productive country translates into a higher real wage, and vice versa, because workers command more goods with the wages they receive (this is what is now referred to as purchasing-power parity). So what happens to trade between countries under these conditions, and how will competition between the different countries work? Marx does not probe deeply into the question, since he mainly seems interested in how real wages and nominal wages differ primarily because of variations in productivity in the wage-goods industries in the different countries. The result will be contrasting dynamics between countries (for these were Marx’s units of comparison) in how capitalism develops and how surplus-value is being pursued strategically and extracted. Almost certainly this would lead, if Marx had taken the matter further, to a serious questioning of Ricardo’s doctrine of comparative advantage in foreign trade, but for some reason Marx chose not to pursue that line of argument further here. I have to say I find it hard to get excited about these chapters on wages, since the ideas are fairly obvious and the writing rather pedestrian.

PART VII: THE PROCESS OF ACCUMULATION OF CAPITAL

Part 7, however, is immensely interesting and insightful, for it is here that Marx takes up "The Process of Accumulation of Capital" as a whole. He here constructs what might best be called a "macro-analysis" of the dynamics of a capitalist mode of production. This is, unquestionably, the culminating argument of Volume I of *Capital*. A whole battery of earlier insights are brought together to create what we would now call a series of "models" of capitalist dynamics. It is vital, however, in reading part 7 to bear in mind the nature of the assumptions. Marx's conclusions are not universal statements but contingent findings, based on and limited by his assumptions. We forget this at our peril. There are far too many commentaries on Marx's work, both favorable and unfavorable, that pass over into serious misinterpretation because they neglect the impact of his assumptions. One of the most famous theses advanced here, for example, is that of the tendency toward the increasing immiseration of the proletariat and the production of ever greater class inequality. This thesis is contingent on Marx's assumptions, and when those assumptions are relaxed or replaced, the thesis does not necessarily hold. I get extremely irritated with attempts to prove or disprove Marx's findings in these chapters as if he were setting out his conclusions as universal truths rather than as contingent propositions.

Marx specifies the assumptions in the preface to part 7. He states that

> the first condition of accumulation is that the capitalist must have contrived to sell his commodities, and to reconvert into capital the greater part of the money received from their sale. In the following pages, we shall assume that capital passes through its process of circulation in the normal way. The detailed analysis of the process will be found in Volume 2. (709)

The implication of "the normal way" is that capitalists have no problem selling their goods at their value in the market or recirculating the surplus-value they gain back into production. All commodities therefore trade at their value. There is no overproduction or underproduction; everything is traded in equilibrium. In particular, there is no problem in finding a market. There is never any lack of effective demand. Is this a reasonable assumption? The answer is, not at all, for we rule out one of the major aspects of crisis formation that, for example, dominated in the Great Depression of the 1930s and became central in Keynesian theories, i.e., the lack of effective demand. Marx abandoned these assumptions in later volumes, but in the next three chapters, he holds rigorously to them. Holding effective demand to one side permits Marx to identify aspects of the capitalist dynamic that might otherwise remain opaque.

The second assumption is that the division of the surplus-value into profit of enterprise (the rate of return on industrial capital), profit on merchant capital, interest, rent and taxes (Marx does not include the latter here) has no effect. In practice, capitalist producers have to share part of the surplus-value created and appropriated with capitalists who fulfill other functions. "Surplus-value is therefore split up into various parts. Its fragments fall to various categories of person, and take on various mutually independent forms, such as profit, interest, gains made through trade"—that's merchant's profit—"ground rent," taxes, etc. "We shall be able to deal with these modified forms of surplus-value only in Volume 3" (709). Marx assumes, in effect, that there is a homogeneous capitalist class comprised of industrial capitalists alone. In Volume III of *Capital*, it becomes clear that the role of interest-bearing capital, finance capital, merchant capital and landed capital are all of considerable significance to understanding the overall dynamics of capitalism. But here all consideration of these features is laid aside. What we are left with is a highly simplified model of how capital accumulation works, and like any such model, it is only as good as its assumptions allow.

There is another tacit assumption which actually becomes explicit a bit later in a footnote.

> Here we take no account of the export trade, by means of which a nation can change articles of luxury either into means of production or means of subsistence, and vice versa. In order to examine the object of our investigation in its integrity, free from all disturbing subsidiary circumstances, we must treat the whole world of trade as one nation, and assume that capitalist production is established everywhere and has taken possession of every branch of industry. (727)

Marx assumes a closed system within which capital circulates in a "normal" way. This is an important and obviously restrictive assumption. What we are left with is a stripped-down model of the dynamics of capital accumulation derived from the theory of absolute and relative surplus-value operating in a closed system. The model turns out, as we shall see, to be very revealing of certain aspects of capitalism.

Just to set the following chapters in their full context, it is useful to contrast them with what happens in the other volumes of *Capital*. Volume II confronts that which is held constant in Volume I: the difficulties that arise in finding markets and bringing them into a state of equilibrium such that the "normal" process of capital circulation can proceed. But Volume II tends to hold constant that which is treated as dynamic in Volume I, i.e., the extraction of absolute and relative surplus-value, rapid shifts in technologies and productivities, shifting determinations of the value of labor-power. Volume II imagines a world of constant technology and stable labor relations! It then poses the questions, how is capital going to circulate smoothly (given different turnover times, including problems that derive from the circulation of fixed capital of different lifetimes), and how can it always find a market for the surplus-value being produced? Since capital accumulation is always about expansion, how can capitalists find a market when the working class is being increasingly immiserated and the capitalists are reinvesting? There is, in fact, no mention of immiseration at the end of Volume II. The problem is to ensure "rational consumption" on the part of the working classes in order to help absorb the capital surpluses being produced. The model here would be Ford's famous turn to a five-dollar eight-hour day for the workers, backed by an army of social workers to ensure that the workers consumed their wages "rationally" from the standpoint of capital. We in the US now live in a world where about 70 percent of the driving force in the economy depends on debt-fueled consumerism, which is perfectly understandable given the analysis of Volume II but not given that of Volume I.

There is, it turns out, a major contradiction between the equilibrium conditions defined in Volume I and those defined in Volume II. If things are going right according to the Volume I analysis, then they are likely to be going very badly from the standpoint of Volume II, and vice versa. The two distinctive models of the dynamics of capital accumulation do not, and cannot, concur. This prefaces the discussion of the inevitability of crises in Volume III, but my insertion of the phrase "debt-fueled" before "consumerism" signals that the terms of distribution (finance, credit and interest) may actually play a central rather than merely ancillary role in the dynamics of capitalism. Consumer power augmented by everybody (including governments) using their credit cards and going into debt up to the hilt has been central to the stabilization (such as it is) of global capitalism over the past half century. None of this will be encountered in the chapters to follow. But the highly simplified model of capital accumulation that Marx does construct and analyze is incredibly revealing, as well as deeply relevant to understanding the recent history of neoliberalism, which has been characterized by deindustrialization, chronic structural unemployment, spiraling job insecurities and surging social inequalities. We have, in short, been very much in the world of Volume I over the past thirty years. The problems of effective demand revealed in the Volume II analysis have been temporarily resolved through the excesses of the credit system, with predictably disastrous consequences.

CHAPTER 23: SIMPLE REPRODUCTION

The first chapter of part 7 models the qualities of a fictional capitalism characterized by simple reproduction. How does capital accumulation through the extraction of surplus-value get reproduced and perpetuated over time? To answer that question, we need to view capital accumulation as a "connected whole, and in the constant flux of its incessant renewal," such that "every social process of production is at the same time a process of reproduction." Furthermore, "if production has a capitalist form, so too will reproduction" (711).

Part of what the capitalist captures in terms of new wealth has to be put to reproducing the system. But this means that surplus-value has to recirculate back into simple reproduction. "This mere repetition, or continuity, imposes on the process certain new characteristics, or rather, causes the disappearance of some apparent characteristics possessed by the process in isolation" (712). The analysis so far has been concerned solely with the production of surplus-value as a one-shot event. But things look rather different when examined as a continuous process going on over time.

> What flows back to the worker in the shape of wages is a portion of the product he himself continuously reproduces. The capitalist, it is true, pays him the value of the commodity [that is, the value of labor-power] in money, but this money is merely the transmuted form of the product of his labour. While he is converting a portion of the means of production into products, a portion of his former product is being turned into money. It is his labour of last week, or of last year, that pays for his labour-power this week or this year. The illusion created by the money-form vanishes immediately if, instead of taking a single capitalist and a single worker, we take the whole capitalist class and the whole working class. (712–13)

Class relations rather than individual contracts now move center stage in Marx's thinking.

> The capitalist class is constantly giving to the working class drafts, in the form of money, on a portion of the product produced by the latter and appropriated by the former. The workers give these drafts back just as constantly to the capitalists, and thereby withdraw from the latter their allotted share of their own product. The transaction is veiled by the commodity-form of the product and the money-form of the commodity. (713)

The image this conveys is that the working class as a whole is in a "company store" relation to the capitalist class. Workers receive money for the labor-power they sell to the capitalists and then spend that money to buy back a portion of the commodities they collectively produced. This company-store relation is veiled by the wages system and is not readily discernible when the analysis focuses only on the individual worker. The meaning of "variable capital" takes another twist. In effect, the body of the worker, from the standpoint of capital, is a mere transmission device for the circulation of a portion of capital. The worker is in a continuous version of the C-M-C process. But instead of seeing this as a simple linear relation, we now have to think of it as continuous and circular. A portion of the capital flows along as workers congeal value in commodities, receive their money wages, spend the money on commodities, reproduce themselves and come back to work to congeal more value in commodities the next day. Workers stay alive by circulating variable capital in this way.

This gives rise to some interesting observations. To begin with, variable capital "loses its character of a value advanced out of the capitalist's funds … when we view the process of capitalist production in the flow of its constant renewal." Capitalists pay their workers only after the work is done. In effect, therefore, workers advance the equivalent of the value of their labor-power to the capitalist. There is no guarantee that the worker will be paid (if, for example, capitalists declare bankruptcy in the meantime). In China in recent years, the nonpayment of wages owed has been very common, particularly in areas such as construction. But Marx is interested in reshaping our interpretation of capital accumulation in even more radical ways. He points out that the "process must have had a beginning of some kind. From our present standpoint it therefore seems likely that the capitalist, once upon a time, became possessed of money by some form of primitive accumulation” (714). This concept will anchor the discussion of the origins of capitalism in part 8. Here he simply asserts that there must have been some original moment when capitalists somehow or other got hold of enough assets (monetary and otherwise) to start on this process of capital accumulation. The question he poses here is, how and by whom is that original capital reproduced?

Marx gives an example: if a capitalist starts off with one thousand pounds and invests it in variable capital and constant capital to produce a surplus-value of two hundred pounds, then the capitalist appropriates the two hundred pounds as his or her own in addition to gaining back the original thousand pounds. But the original capital has been preserved by the workers’ productive consumption, and the surplus-value has been produced out of the workers’ surplus labor-time. Suppose the next year, the capitalist once again lays out one thousand pounds (having consumed the surplus away) to produce another two hundred pounds of surplus-value. After five years of this, the workers have produced one thousand pounds of surplus-value, which is equivalent to the capitalist’s original capital. Marx here makes the political argument that even if the capitalist had a right to that thousand pounds at the beginning, however he or she came by it, after five years of producing two hundred pounds of surplus-value every year, the capitalist has surely forfeited the right to the original capital. He or she has, according to Marx’s accounting method, consumed the original capital away. The thousand pounds now belongs by right to the workers, given the Lockean principle (not cited here, but clearly Marx has this in mind) that property rights accrue to those who create value by mixing their labor with the land. The workers are the ones who produced the surplus-value, and by rights it should belong to them.

The politics of this argument are important but go radically against the grain of deeply entrenched ways of thinking. We would all be surprised to be told that the original money we placed in a savings account at, say, 5 percent compound interest no longer belonged to us after a number of years. Capitalism appears to be capable of laying its own golden nest eggs, as far as we are concerned. But where that 5 percent comes from is a legitimate question, and it can only be, if Marx is right, through the mobilization and appropriation of surplus-value from someone, somewhere. It is discomforting to think that perhaps the 5 percent comes from the vicious exploitation of living labor in Guangdong province in China. Our legal superstructure is insistent on preserving original property rights and preserving also the right to use those rights to gain a profit. But those property rights in turn derive from the class power of capital to extract and maintain command over the surpluses, because labor-power has, by specific historical processes, become a commodity bought and sold in the labor market. The implication of what Marx is saying here is that in order to challenge capitalism, it is necessary to challenge not only the whole notion of rights, how people think about rights and how people think about property, but also the material processes whereby surpluses are both created and appropriated by capital. Then, indeed, after five years

> not a single atom of the value of his old capital continues to exist … Therefore, entirely leaving aside all accumulation, the mere continuity of the production process, in other words simple reproduction, sooner or later, and necessarily, converts all capital into accumulated capital, or capitalized surplus-value. Even if that capital was, on its entry into the process of production, the personal property of the man who employs it, and was originally acquired by his own labour, it sooner or later becomes value appropriated without an equivalent, the unpaid labour of others. (715)

There happens to be an interesting example of a practical plan that reflects Marx’s way of thinking (whether it derived from Marx, I do not know). A Swedish labor economist called Rudolf Meidner, who played a major role in the construction of the highly successful Swedish welfare state in the 1960s and early 1970s, came up with what became known as the Meidner Plan. Confronting inflation, the powerful trade unions were urged to exercise collective wage restraint. In return, the extra profits (surplus-value) that would accrue to capital because of that restraint would be taxed away and placed in a worker-controlled social-investment fund that would purchase shares in capitalist corporations. The shares purchased were deemed untradeable, and over time (more than the five years of Marx’s example) control over the corporation would pass over to the social-investment fund. In other words, the capitalist class would quite literally be bought out (peacefully) over time and replaced by total worker control over investment decisions. The plan was greeted with horror by the capitalist class (who promptly awarded the so-called Nobel Prize in economics—it actually has nothing whatsoever to do with Nobel—to neoliberals like Friedrich Hayek and Milton Friedman and set up anti-union think tanks and mobilized fierce opposition in the media). The social-democratic government of the time got cold feet and never attempted to implement the plan. But when you think about it, the idea (much more complicated in its details, of course) is broadly consistent with Marx’s argument, at the same time as it offers a peaceful way to buy out capitalist class power. So why not think more about it?

When put together with the company-store relation of labor to capital, Marx’s argument leads to even deeper insights at the same time as it raises crucial (and in this instance, unfortunately, unanswered) questions. “Since, before [the laborer] enters the process, his own labour has already been alienated … from him”—that is, he has given over the use-value of labor-power to the capitalist—“appropriated by the capitalist, and incorporated with capital, it now, in the course of the process, constantly objectifies itself so that it becomes a product alien to him.” Neither the product nor the labor congealed in it belong to him.

> Therefore, the worker himself constantly produces objective wealth, in the form of capital, an alien power that dominates and exploits him; and the capitalist just as constantly produces labour-power, in the form of a subjective source of wealth which is abstract, exists merely in the

physical body of the worker, and is separated from its own means of objectification and realization; in short, the capitalist produces the worker as a wage-labourer. This incessant reproduction, this perpetuation of the worker, is the absolutely necessary condition for capitalist production. (716)

I find this an interesting and troubling formulation, worthy of serious reflection. "The worker himself constantly produces *objective* wealth, in the form of capital," and that objective wealth becomes an alien power that now dominates the worker. The worker produces the instrument of his or her own domination! This is a theme that echoes and reverberates throughout *Capital*. It poses a general historical question of the penchant of human beings to produce all manner of instruments of their own domination. But in this case, the capitalist produces the *subjective* source of wealth, which is abstract, through the "physical body of the worker" which is "separated from its own means of objectification and realization." The capitalist produces and reproduces the worker as the active but alienated subject capable of producing value. And this, please note, is the fundamental socially necessary condition for the survival and maintenance of a capitalist mode of production.

The worker engages in productive consumption and individual consumption (a distinction encountered earlier). Workers not only produce the equivalent of the value of variable capital, i.e., their own living, but they also transfer and thereby reproduce the value of constant capital. Through their labor, workers reproduce both capital and the laborer. The chapters on division of labor and machinery showed how the worker was necessarily transformed into an appendage of capital inside the labor process. But now we also come to see the worker as an "appendage of capital" in the marketplace and in the home. That is what the circulation of variable capital really means: capital circulates through the body of the worker and reproduces the worker as an active subject who reproduces capital. But the worker not only has to be reproduced as an individual person. "The maintenance and reproduction of the working class remains a necessary condition for the reproduction of capital" (719).

This raises a host of questions that Marx glosses over. The politics of class reproduction were, Marx holds, in his time brutal and simple. "The capitalist may safely leave" the daily grind of actual class reproduction to "the worker's drives for self-preservation and propagation. All the capitalist cares for is to reduce the worker's individual consumption to the necessary minimum" (718). But Marx is sliding over something important here that cries out for deeper analysis. The huge and fundamental question of the reproduction of the working class involves questions of propagation, self-preservation, social relations within the class and a host of other issues that Marx conveniently leaves to the workers themselves to sort out because that is what capital supposedly does. Actually, even in a state controlled by capitalists and landlords, matters of social reproduction are never left solely to the workers themselves, and certainly the conditions of class struggle and "the degree of civilization" in a country enter in here with at least the same force as they do with respect to questions of the working day, if not with even greater force. The earlier discussion of the educational clauses of the Factory Acts provided an example of state intervention in the politics of working-class reproduction, and the state has always been active in the fields of public health (given that cholera had the awkward habit of transcending class boundaries) and reproductive rights, population policies and the like. Issues of this sort need far more detailed consideration than Marx provides. But Marx's general point is well taken. Simple reproduction is *not* a technical question. The crucial question is the reproduction of the class relation.

Capitalist production therefore reproduces in the course of its own process the separation between labour-power and the conditions of labour. It thereby reproduces and perpetuates the conditions under which the worker is exploited. It incessantly forces him to sell his labour-power in order to live, and enables the capitalist to purchase labour-power in order that he may enrich himself. It is no longer a mere accident that capitalist and worker confront each other in the market as buyer and seller. It is the alternating rhythm of the process itself which throws the worker back onto the market again and again as a seller of his labour-power and continually transforms his own product into a means by which another man can purchase him. In reality, the worker belongs to capital before he has sold himself to the capitalist. (723)

As a result, Marx concludes,

the capitalist process of production, therefore, seen as a total, connected process, i.e. a process of reproduction, produces not only commodities, not only surplus-value, but it also produces and reproduces the capital-relation itself; on the one hand the capitalist, on the other the wage-labourer. (724)

CHAPTER 24: THE TRANSFORMATION OF SURPLUS-VALUE INTO CAPITAL

For a variety of reasons, as we will shortly see, the idea of a capitalist mode of production in a stable, nongrowth state is improbable if not downright impossible. Chapter 24 examines how and why the surplus-value gained yesterday is converted into tomorrow's new money capital. The resultant "production of capital on a progressively increasing scale" involves combining "additional labour-power, annually supplied by the working class in the shape of labour-powers of all ages, with the additional means of production." For this to happen requires that capital must first produce the conditions for its own expansion.

Accumulation requires the transformation of a portion of the surplus product into capital, But we cannot, except by a miracle, transform into capital anything but such articles as can be employed in the labour process (i.e. means of production), and such further articles as are suitable for the sustenance of the worker (i.e. means of subsistence). Consequently, a part of the annual surplus labour must have been applied to the production of additional means of production and subsistence … In a word, surplus value can be transformed into capital only because the surplus product, whose value it is, already comprises the material components of a new quantity of capital. (726-7)

The production of luxuries or other useless products (such as military hardware and religious or state monuments) does not work no matter how profitable such production may be. The new means of subsistence and of production have to be produced and organized in advance. Then and only then "the cycle of simple reproduction alters its form and … changes into a spiral" (727). Another way of looking at it (given the analysis of the preceding chapter) is that "the working class creates by the surplus labour of one year the capital destined to employ additional labour in the following year. And this is what is called," writes Marx with heavy irony, "creating capital out of capital."

The laborer is, however, the active subject in this process. Marx continues, however, to assume that market processes "conform to the laws of commodity exchange, with the capitalist always buying labour-power and the worker always selling it at what we shall assume is its real value." Again, I emphasize the importance of such assumptions in Marx's analysis. "It is quite evident from this that the laws of appropriation or of private property, laws based on the production and circulation of commodities, become changed into their direct opposite through their own internal and inexorable dialectic." The inversion of Locke's principle of mixing labor with the land to create value as grounding the right to private property is clear.

> The exchange of equivalents, the original operation with which we started, is now turned round in such a way that there is only an apparent exchange, since, firstly, the capital which is exchanged for labour-power is itself merely a portion of the product of the labour of others which has been appropriated without an equivalent. (729)

As a consequence, "the relation of exchange between capitalist and worker becomes a mere semblance belonging only to the process of circulation, it becomes a mere form, which is alien to the content of the transaction itself, and merely mystifies it" (729–30). Amplifying, Marx continues:

> the constant sale and purchase of labour-power is the form; the content is the constant appropriation by the capitalist, without equivalent, of a portion of the labour of others which has already been objectified, and his repeated exchange of this labour for a greater quantity of the living labour of others. Originally the rights of property seemed to us to be grounded in a man's own labour. Some such assumption was at least necessary, since only commodity-owners with equal rights confronted each other, and the sole means of appropriating the commodities of others was the alienation of a man's own commodities, commodities which, however, could only be produced by labour. Now, however, property turns out to be the right, on the part of the capitalist, to appropriate the unpaid labour of others or its product, and the impossibility, on the part of the worker, of appropriating his own product. The separation of property from labour thus becomes the necessary consequence of a law that apparently originated in their identity. (730)

Marx has here returned (once more!) to the question of how equivalent exchange can produce a non-equivalent, i.e., surplus-value, and how the original notion of property rights gets inverted into being a right of appropriation of the labor of others. What then follows is a reprise, for what seems like the umpteenth time, of the theory of surplus-value (so if you are still unsure what it's all about then read it carefully—pages 730–1). But Marx does go on to note that what can be derived from the standpoint of the individual doesn't work out to be the same thing from the standpoint of class relations.

> The matter looks quite different if we consider capitalist production in the uninterrupted flow of its renewal, and if, in place of the individual capitalist and the individual worker, we view them in their totality, as the capitalist class and the working class confronting each other. But in doing so we should be applying standards entirely foreign to commodity production. (732)

This is so because freedom, equality, property and Bentham prevail in the marketplace, rendering invisible the production of surplus-value in the labor process.

> The same rights remain in force both at the outset, when the product belongs to its producer, who, exchanging equivalent for equivalent, can enrich himself only by his own labour, and in the period of capitalism, when social wealth becomes to an ever-increasing degree the property of those who are in a position to appropriate the unpaid labour of others over and over again … This result becomes inevitable from the moment there is a free sale, by the worker himself, of labour-power as a commodity. (733)

Bourgeois freedoms and rights mask exploitation and alienation. "To the extent that commodity production, in accordance with its own immanent laws, undergoes a further development into capitalist production, the property laws of commodity production must undergo a dialectical inversion so that they become laws of capitalist appropriation" (733–4). There is, to revert to the language of the preface to *A Contribution to the Critique of Political Economy*, a superstructural adjustment to legitimate and legalize the appropriation of surplus-value by appeal to concepts of the rights of private property. Hence Marx's fundamental objection to any and all attempts to universalize bourgeois conceptions of right and justice. It merely provides the socially necessary legal, ideological and institutional cover for the production of capital on a progressively increasing scale.

Classical political economy, saddled with bourgeois conceptions of rights, produced all manner of "erroneous conceptions of reproduction on an increasing scale" (as the name of section 2 has it). To begin with, the relationship between capital accumulation and hoarding (saving) was left in a state of utter confusion. The classical political economists were, however, "quite right to maintain that the consumption of the surplus product by productive, instead of unproductive, workers is a characteristic feature of the process of accumulation" (736). But given Marx's definition of "productive," this means that yesterday's surplus product has to be put to creating more surplus product and surplus-value today. The actual dynamics of this are tricky. Classical political economy focused exclusively on the extra labor and therefore extra variable capital (increase in wage outlays) that were called for. But as in the case of Senior's last hour, which Marx so effectively mocked earlier, classical political economy tended to forget entirely about the necessity to procure new means of production (constant capital) with each round of accumulation (which entailed transformations in the relation to nature through raw-material extractions). This was the second "erroneous conception" that Marx had to rectify.

This brings us to the central question: when capitalists have surplus-value at their command, why don't they just have a good time and consume it away? Some of the surplus-value is indeed consumed by the capitalists as revenue. The capitalist class consumes away a portion of the surplus in pursuing its pleasures. But part of it is reinvested as capital. Another question then arises: what governs the relationship between the capitalist consumption of revenues and the reinvestment of surplus-value as capital? Marx's answer is worth quoting at length.

Except as capital personified, the capitalist has no historical value, and no right to that historical existence which, to use Lichnowsky's amusing expression, 'ain't got no date'. It is only to this extent that the necessity of the capitalist's own transitory existence is implied in the transitory necessity of the capitalist mode of production. But, in so far as he is capital personified, his motivating force is not the acquisition and enjoyment of use-values, but the acquisition and augmentation of exchange-values.

Capitalists, Marx avers, are necessarily interested in and therefore motivated by the accumulation of social power in money-form.

He is fanatically intent on the valorization of value; consequently he ruthlessly forces the human race to produce for production's sake. In this way he spurs on the development of society's productive forces, and the creation of those material conditions of production which alone can form the real basis of a higher form of society, a society in which the full and free development of every individual forms the ruling principle. Only as a personification of capital is the capitalist respectable. As such, he shares with the miser an absolute drive towards self-enrichment. But what appears in the miser as the mania of an individual is in the capitalist the effect of a social mechanism in which he is merely a cog. Moreover, the development of capitalist production makes it necessary constantly to increase the amount of capital laid out in a given industrial undertaking, and competition subordinates every individual capitalist to the immanent laws of capitalist production, as external and coercive laws. It compels him to keep extending his capital, so as to preserve it, and he can only extend it by means of progressive accumulation. (739)

The capitalist, according to Marx, has no real freedom, either. Poor capitalists are mere cogs in a mechanism, who have to reinvest because the coercive laws of competition force them into it. As capital personified, their psychology is so focused on the augmentation of exchange-value, on the accumulation of social power in limitless money-form, that money accumulation becomes the fetish focus of their deepest desires. Herein lies the similarity between the miser and the capitalist. They both want social power, but the social power of capitalists comes from constantly augmenting their wealth by releasing it into circulation, whereas the miser tries to hold on to it by not using it. And if capitalists individually show any sign of drifting away from their central mission, then the pesky coercive laws of competition (once more slid into the argument in a central role of policing the system) bring them back into line.

Faced with this reality, the bourgeois apologists create a noble fiction. The capitalists, they say, are creating capital and engaging their noble mission to create that "higher form of society" that even Marx concedes can be a product of their endeavours, through abstinence! I have to say, living in New York, I have never noticed the capitalist class abstaining too much. But Marx does suggest that capitalists face a Faustian dilemma. He even quotes *Faust*: “Two souls, alas, do dwell within his breast; The one is ever parting from the other” (741). They are forced by the coercive laws of competition to accumulate and reinvest on the one hand and are plagued by the desire to consume on the other. Coerced restraint with respect to the latter is then converted into an ideology of voluntary bourgeois virtue. Profit can even be interpreted as a return on virtue! Reinvestment, the story goes, is a virtue (it creates jobs, for example), and therefore deserves to be admired and rewarded. All those tax cuts for the ultrarich that George W. Bush set up during his presidency were construed as a reward for virtuous investors whose abstinence supposedly played a crucial role in job creation and economic growth. The fact that the rich soon acquired the habit of throwing ten-million-dollar parties for their kids’ graduations or their trophy wives’ birthdays hardly squared with this theory. Marx, however, once again heavily influenced by the story of Manchester capitalism, suggests that the struggle between the “two souls” dwelling in the capitalist’s breast underwent a gradual evolution. In the initial stages, capitalists indeed were forced to exercise restraint on consumption (hence the significance of Quaker ideology among some early capitalists in England). But as the spiral of accumulation on a progressively increasing scale got under way, so the restraints on consumption slackened. In Manchester, during “the last thirty years of the eighteenth century … ‘expense and luxury have made great progress,’” Marx reports, quoting an account from 1795 (742). Under such conditions, “production and reproduction on an increasing scale go on their way without any intervention from that peculiar saint, that knight of the woeful countenance, the ‘abstaining’ capitalist” (746).

Driven by the coercive laws of competition and the desire to augment their social power in limitless money-form, capitalists reinvest because this is, in the end, the only way they can stay in business and maintain their class position. This leads Marx to a central conclusion concerning the essence of a capitalist mode of production.

> Accumulate, accumulate! That is Moses and the prophets! ‘Industry furnishes the material which saving accumulates.’ Therefore save, save, i.e. reconvert the greatest possible portion of surplus-value or surplus product into capital! Accumulation for the sake of accumulation, production for the sake of production: this was the formula in which classical economics expressed the historical mission of the bourgeoisie in the period of its domination. Not for one instant did it deceive itself over the nature of wealth’s birth-pangs. But what use is it to lament a historical necessity? If, in the eyes of classical economics, the proletarian is merely a machine for the production of surplus-value, the capitalist too is merely a machine for the transformation of this surplus-value into surplus capital. (742)

What this means quite simply is this: capitalism is always about growth. There can be no such thing as a capitalist social order that is not about growth and accumulation on a progressively increasing scale.

"Accumulation for the sake of accumulation, production for the sake of production." Just read the press reports on the state of the economy every day, and what are people talking about all the time? Growth! Where's the growth? How are we going to grow? Slow growth defines a recession, and negative growth a depression. One or 2 percent growth (compounded) is not enough, we need at least 3, and only when we reach 4 percent is the economy deemed to be "healthy." And look at China with its sustained 10 percent growth rates over many years: that is the real success story of our times compared with Japan, which after decades of stellar growth fell into the sick bay of global capitalism, with close to zero growth throughout the 1990s.

To this imperative attaches a fetish belief, a whole ideology, centered on the virtues of growth. Growth is inevitable, growth is good. Not to grow is to be in crisis. But endless growth means production for production's sake, which also means consumption for consumption's sake. Anything that gets in the way of growth is bad. Barriers and limits to growth have to be dissolved. Environmental problems? Too bad! The relation to nature must be transformed. Social and political problems? Too bad! Repress critics and send recalcitrants to jail. Geopolitical barriers? Break them down with violence if necessary. Everything has to dance to the tune of "accumulation for the sake of accumulation, production for the sake of production."

This is, for Marx, one of the defining characteristics of capitalism. To be sure, he arrives at this conclusion on the basis of his assumptions. But these assumptions are consistent with the inherent vision internalized within classical political economy as to the "historical mission" of the bourgeoisie. And it defines a very important and powerful regulative principle. Has the history of capitalism been about compounding growth rates? Yes. Have capitalist crises come to be defined as lack of growth? Yes. Are policy makers throughout the capitalist world obsessed with stimulating and sustaining growth? Yes. And do you see anybody really questioning the growth principle, let alone doing anything about it? No. To question growth is irresponsible and unthinkable. Only cranks, misfits and weird utopians think that endless growth, no matter what the environmental, economic, social and political consequences, might be bad. To be sure, problems deriving from growth, such as global warming and environmental degradation, need to be addressed, but rarely is it said that the answer to the problem is to stop growth altogether (even though there is evidence that recessions relieve pressures on the environment). No, we have to find new technologies, new mental conceptions, new ways of living and producing, such that growth, endless compounding capital accumulation, can continue.

This has not been a regulative principle of other modes of production. To be sure, empires grew and social orders episodically expanded, but then they also just as often stabilized and in some instances stagnated and even faded away. One of the big criticisms of actually existing communisms in, for example, the former Soviet Union and Cuba, has been that they didn't grow enough and so could not compete with the incredible consumerism and growth performance of the West, centered on the US. I do not say this in praise of the USSR but merely to point up how automatic our responses tend to be to nongrowth—stagnation is unforgivable. So now we have enough SUVs, Coca-Cola and bottled water around to satisfy accumulation for accumulation's sake with all manner of disastrous environmental and health consequences (such as the epidemic of diabetes, which incidentally, continues to be rare in Cuba compared with the US). It bears thinking about that the endless three percent compound rate of growth that has characterized capitalism since the mid-eighteenth century might be singularly hard to maintain. When capitalism was constituted by an economic zone of about forty square miles around Manchester and a few other smaller locations, a three percent compound rate of growth was one thing, but now it covers Europe, North and South America and above all East Asia, with strengthening implantations in India, Indonesia, Russia and South Africa. Starting from this base, the consequences of a three percent compound rate of growth over the next fifty years are unimaginable. At the same time, it makes Marx's suggestion in the *Grundrisse* that it is time for capital to be gone, and to make way for some more sensible mode of production, more imaginable if not absolutely imperative.

There are, it turns out, a variety of ways to gain surplus-value without producing anything. Reducing the value of labor-power by reducing the standard of living opens up one path. Indeed, Marx writes, quoting John Stuart Mill, "if labour could be had without purchase, wages might be dispensed with." But then

if the workers could live on air, it would not be possible to buy them at any price. This zero cost of labour is therefore a limit in a mathematical sense, always beyond reach, although we can always approximate more and more nearly to it. The constant tendency of capital is to force the cost of labour back towards this absolute zero. (748)

And Marx notes some ways to do this, such as providing recipes to workers so they can feed themselves more cheaply. Later this sort of thing became part of the practice of, for example, the Russell Sage Foundation and of the practices of social workers as they sought to educate other workers to proper modes of consumption. But plainly, taking this path creates problems of effective demand, which Marx does not consider here since he has ruled it out by assuming that all commodities trade at their values. Saving on constant capital (including cutting down on waste) can also be helpful while capitalists are constantly on the lookout for "something provided by nature free of charge" (751). "It is once again the direct action of man on nature which becomes an immediate source of greater accumulation, without the intervention of any new capital" (752). Changing the productivity of social labor through other means (motivation and organization) is also free of charge, and using old machines beyond their lifetime helps, as does the mobilization of past assets (e.g., built environments) for new purposes. Finally, “science and technology give capital a power of expansion which is independent of the given magnitude of the capital actually functioning” (754). Accumulation can be expanded by all these different means without resort to the capitalization of surplus-value.

“It has been shown in the course of this inquiry,” Marx concludes at the beginning of section 5,

> that capital is not a fixed magnitude, but a part of social wealth which is elastic, and constantly fluctuates with the division of surplus-value into revenue and additional capital. It has been seen further that, even with a given magnitude of functioning capital, the labour-power, science and land (which means, economically speaking, all the objects of labour furnished by nature without human intervention) incorporated in it form elastic powers of capital, allowing it, within certain limits, a field of action independent of its own magnitude. In this inquiry we have ignored all relations arising from the process of circulation [he is here reminding us of the initial assumptions about the market], which may produce very different degrees of efficiency in the same mass of capital … [and] we disregarded any more rational combination which could be effected directly and in a planned way with the means of production and the labour-power at present available.

Once again, Marx insists on the incredible flexibility and maneuverability of capital. “Classical political economy,” in contrast, “has always liked to conceive social capital as a fixed magnitude of a fixed degree of efficiency.” That poor man Jeremy Bentham, a “soberly pedantic and heavy-footed oracle of the ‘common sense’ of the nineteenth-century bourgeoisie,” had a particularly fixed vision of how capitalism constructed a labour fund (758).

Capital is not a fixed magnitude!! Always remember this, and appreciate that there is a great deal of flexibility and fluidity in the system. The left opposition to capitalism has too often underestimated this. If capitalists cannot accumulate this way, then they will do it another way. If they cannot use science and technology to their own advantage, they will raid nature or give recipes to the working class. There are innumerable strategies open to them, and they have a record of sophistication in their use. Capitalism may be monstrous, but it is not a rigid monster. Oppositional movements ignore its capacity for adaptation, flexibility and fluidity at their peril. Capital is not a thing, but a process. It is continually in motion, even as it itself internalizes the regulative principle of “accumulation for the sake of accumulation, production for the sake of production.”

CHAPTER TEN

Capitalist Accumulation

CHAPTER 25: THE GENERAL LAW OF CAPITALIST ACCUMULATION

In chapter 25, Marx operationalizes a synoptic model of capitalist dynamics under the assumptions laid out at the beginning of part 7: accumulation is occurring in its normal way (there is never any problem in the market and everything trades at its value, with the exception in this chapter of labor-power); the system is closed (no trade with an outside); surplus-value is being produced through the exploitation of living labor in production; and the division of the surplus-value between interest, profit of merchant's capital, rent and taxes has no impact. In this stripped-down model of the accumulation process, everything is contingent on these assumptions. When these assumptions are dropped, as they are in Volume II, the results look different.

A Commentary on the Value Composition of Capital

In this chapter, Marx focuses on one particular substantive issue. He wants to examine the implications of the accumulation of capital for the fate of the working class. This is why he allows the remuneration of labor-power to fluctuate above and below its value. To aid him in this task, he sets up a conceptual apparatus concerning what he calls "the composition of capital" (762). He uses three terms: technical composition, organic composition and value composition. These terms were, it seems, introduced fairly late into the argument, in part to reflect some of the work he was doing in Volume III on contradictions and crises. So the terms don't do that much work in this chapter, and it is possible to understand his argument without them.

If you find this part of the discussion esoteric and perplexing (which it is), then pass straight on to the next section. But since these terms play a key role in Volume III and have been the subject of much argument and controversy in Marxian theory more generally, I think it important to examine them here.

The term "technical composition" simply describes the physical ability of a worker to transform a certain quantity of use-values into a commodity in a given period of time. It is the measure of physical productivity. It refers to the number of socks, tons of steel, loaves of bread, gallons of orange juice or bottles of beer produced by a worker per hour. New technologies transform these physical ratios, so that, for example, the number of socks produced per hour per worker increases from ten to twenty. The concept of technical composition is clear and unambiguous. Problems arise in differentiating between the organic and value compositions, both of which are value ratios. The value composition is the ratio of the value of the means of production consumed in production to the value of the variable capital advanced. Conventionally, we represent this as c/v, the amount of constant capital divided by the variable capital. The organic composition, which is also measured as a value ratio of c/v, is defined as changes in the value composition that arise because of physical changes in productivity.

Why the difference? The implication is that changes in value composition can occur other than those related to physical changes in productivity. Since changes of this nontechnological sort were listed at the end of the preceding chapter, this interpretation is more than merely plausible. But note that these changes, such as gifts of nature, economizing on waste, or depressing the physical standard of living of workers, can affect the value of both the constant and the variable capital laid out, such that the c/v ratio can either increase or decrease as a result. There is another possible interpretation that Marx does not to my knowledge explicitly develop, but we could infer it. This interpretation depends on where the changes in physical productivity are occurring. If I change the physical productivity of sock making by employing new machinery, then the ratio c/v (let's call this the organic composition of capital) typically increases within my firm because of my actions. But this ratio will also likely change without my doing anything because the value of the constant and variable capital I purchase (at its value, given Marx's assumptions) is fixed by the changing physical productivity in the industries producing the wage goods that fix the value of labor-power and the other industries producing the means of production that I purchase (constant-capital inputs). In this instance, the ratio c/v (let's call this the value composition of capital) will rise or fall depending on the relative pace of changes in physical productivity in these two different sectors of the economy (even though physical productivity within my firm has not changed). This interpretation focuses on the difference between what is possible for the individual capitalist to do about the c/v ratio and what happens to the c/v ratio in the market outside individual capitalist control. It is hard to sustain this interpretation here, given that Marx in this chapter is working at the aggregate level of relations between the capitalist and working classes. But yet it is also plausible given the theory of relative surplus-value, which emphasizes that it is the individual capitalist's search, operating under the coercive laws of competition, for the ephemeral form of relative surplus-value that truly drives the technological dynamism that produces relative surplus-value of the aggregate sort.

The reason all this is so important is that in Volume III of *Capital*, Marx takes up the question of why there might be a tendency for the rate of profit to fall. Ricardo had explained this in Malthusian terms, that in the end diminishing returns on the land would so increase the price of natural resources that profits were bound to decline to zero. In other words, the problem resides in the relation to nature (when faced with a falling rate of profit problem, Marx elsewhere quipped, Ricardo "flees from economics to seek refuge in organic chemistry"[1]). Marx dismisses this claim and argues instead that it is the internal dynamics of technological change within capitalism, the search for relative surplus-value, that increases the organic (value?) composition of capital, c/v, which in the long run will lead to a falling rate of profit (s/[c + v]) under the assumption of a limit on the rate of exploitation (s/v). Put differently, labor-saving innovations remove the active value producer from the labor process and so make it more difficult (other things being equal) to produce surplus-value. The argument is ingenious and has the undoubted virtue of (correctly in my view) internalizing the dynamics of crisis formation within the framework of capitalist social relations and the development of its productive forces. Unfortunately, the argument is incomplete and problematic because, given the second line of argument advanced above, there is no definite reason why the ratio c/v should increase in the way Marx suggests it would.

In this chapter, Marx argues forthrightly in favor of a law of rising value composition of capital. He begins by pointing out that from the standpoint of the whole capitalist class, the changing value composition of capital has both direct and indirect aspects in relation to production. We are talking about not only machines and factories but also railways, roads and all manner of physical infrastructures (built environments) that provide the necessary preconditions for capitalist production and realization to proceed. If these preconditions are to be fulfilled, there has to be an astonishing increase in the ratio of the total stock of constant (and increasingly fixed) capital in relationship to the number of laborers employed. (Marx fails to register here a point he makes elsewhere: that if past investments in, say, the built environment have already been amortized, then they operate as a "free good"—much like gifts of nature—for capitalist production to proceed. That is, unless a pesky landlord class gets in the way and starts extracting rent from them.) The movement from relatively simple handicraft production to more complex and integrated processes of production in itself entails a historical tendency for the ratio of c/v to increase with time. This leads Marx to assert that the

> law of the progressive growth of the constant part of capital in comparison with the variable part is confirmed at every step … by the comparative analysis of the prices of commodities, whether we compare different economic epochs or different nations in the same epoch. The relative magnitude of the part of the price which represents the value of the means of production, or the constant part of the capital, is in direct proportion to the progress of accumulation, whereas the relative magnitude of the other part of the price, which represents the variable part of the capital, or the payment made for labour, is in inverse proportion to the progress of accumulation. (773–4)

There is, he clearly proposes here, a "law" of rising value composition of capital over time, and it is this law that plays such a crucial role in the theory of the falling rate of profit in Volume III. But Marx does recognize that there can be a decrease in the value (as opposed to the physical presence) of constant capital because of technological change. Indeed, he suggests that the reason the c/v ratio has not increased more than it has "is simple: with the increasing productivity of labour, the mass of the means of production consumed by labour increases, but their value in comparison with their mass diminishes.” As a result of rising productivity in the production of means of production,

> their value therefore rises absolutely, but not in proportion to the increase in their mass. The increase of the difference between constant and variable capital is therefore much less than that of the difference between the mass of the means of production into which the constant capital, and the mass of the labour-power into which the variable capital, is converted. (774)

The supposed “law” of a rising value composition of capital is subject to modification, but not in a way that controverts its fundamental direction. The accumulation of capital and the search for relative surplus-value “give to each other, that change in the technical composition of capital by which the variable component becomes smaller and smaller as compared with the constant component” (776).

But what Marx needs to do to consolidate his argument is to disaggregate the economy into sectors producing wage goods and means of production, respectively, and then examine relative rates of change in physical productivity in both sectors. He does this at the end of Volume II (written after the drafts of Volume III that have come down to us), but his main concern there is to examine the problem of how the market can keep the two sectors in equilibrium (if at all). He therefore assumes away the technological dynamism that lies at the heart of the Volume I analysis and is so vital to the Volume III analysis of falling profits. The concept of value composition is not mentioned. He does open up the probability of crises of disproportionality (too many wage goods in relation to means of production, or vice versa) and even the possibility of generalized crises of underconsumption (lack of effective demand) but does nothing to illuminate the issue of falling profit rates due to technological changes. What subsequent theoretical work has shown, however, is that there is a pattern of technological change between the two sectors (wage goods and means of production) that can keep the c/v ratio steady in perpetuity, but that no mechanisms exist to ensure such an outcome. Hence the likelihood of frequent crises of disproportionality and occasional generalized crises deriving from the instabilities generated out of technological changes is considerable.

Plainly, we cannot resolve all these issues here. My own view (which many will disagree with) is that Marx’s intuition that patterns of technological change are destabilizing to the point of producing crises is correct but that his explication of rising value compositions and falling profits is not. However, the main line of argument that unfolds in this chapter is readily understandable without deploying the value-composition concept.

The First Model of Capital Accumulation

If capitalists take part of the surplus-value they appropriated yesterday and invest it in more production today, then this requires more labor-power, assuming for the moment that there is no technological change. So the first obvious effect of the accumulation of capital under these conditions is increased demand for labor-power. “Accumulation of capital is therefore multiplication of the proletariat" (764). Where are the extra laborers going to come from, and what are the implications of increasing the demand? At some point, increasing demand will lead to an increase in wages. The "spiral" of accumulation therefore entails more capital being generated, more laborers being employed and at some point higher wages, such that labor-power is either sold above its value (an exception to the assumption that all commodities trade at their value) or that the value of labor-power rises as laborers gain a higher standard of living. But this only means "that the length and weight of the golden chain the wage-labourer has already forged for himself [is] loosened somewhat" (769).

> At the best of times an increase in wages means only a quantitative reduction in the amount of unpaid labour the worker has to supply. This reduction can never go so far as to threaten the system itself. Apart from violent conflicts over the rate of wages … a rise in the price of labour resulting from accumulation of capital implies the following alternatives: … Either the price of labour keeps on rising, because its rise does not interfere with the progress of accumulation. (769–70)

That is, capitalists can afford some increase in the price of labor, because the mass of capital they can appropriate continues to increase as they employ more laborers. Remember, capitalists are primarily interested in the mass of profit, and the mass depends, as we saw in chapter 17, on the number of laborers employed, the rate of exploitation and the intensity. In the face of a diminishing rate of exploitation, increasing the number of laborers employed can increase the mass of capital gained by the capitalist by a substantial amount. In this scenario, there is, therefore, no conflict between rising wages and capital accumulation. "The other alternative" is that

> accumulation slackens as a result of the rise in the price of labour, because the stimulus of gain is blunted. The rate of accumulation lessens; but this means that the primary cause of that lessening itself vanishes, i.e. the disproportion between capital and exploitable labour-power. The mechanism of the capitalist production process removes the very obstacles it temporarily creates. (770)

Marx's model here is quite simple. Accumulation of capital, assuming constant productivity, increases demand for labor. Whether or not this leads to a rise in wages depends on the available population. But as more and more of the available population are brought into employment, wages will go up, which diminishes the rate of exploitation. But the mass of surplus-value can continue to rise because more laborers are employed. If at some point, for whatever reason, the mass of surplus-value begins to diminish, then the demand for labor tails off, the pressure on wages slackens and the rate of exploitation recovers. Over time, therefore, we would likely see countervailing oscillations in wage and profit rates. Wages rise, accumulation slackens, wages fall back, profits and accumulation revive. Marx here describes an automatic adjustment system between the demand and supply of labor and the dynamics of accumulation.

There is, Marx suggests, historical evidence for processes of this sort. In eighteenth-century England there was a tendency, made much of by a contemporary commentator called Eden, for wages to rise because of the rapid expansion of capital accumulation. The working classes were becoming better off alongside a capitalist class that was plainly doing very well. The temptation, to which Eden succumbed, was to declare therefore that capital accumulation was good for the workers as well. But all it does, says Marx, is to lengthen "the golden chain" that ties labor to capital. Besides, this idea had earlier been vigorously contradicted in the famous tract of Mandeville, *The Fable of the Bees*. Mandeville had produced a scurrilous polemic against the "drones" that exist in English society and in so doing established that such a society had a desperate need for poor people, the poorer the better, because they would then demand less in the way of goods and services, leaving more for the rich. If we didn't have the poor, then the rich could not be rich. This pillorying of the conditions in England in the eighteenth century upset Adam Smith and the humanists, who could not accept the proposition that the poor shall always be with us and that the poor serve such a vital function for the rich. Smith's response was to attempt to show that everybody, including the poorest, stood in the end to be better off if the market mechanism was mobilized effectively to increase national wealth. The significance of Mandeville for Marx is the idea that the accumulation of capital requires the prior existence of not only an available population but an available population that is sufficiently impoverished, is sufficiently ignorant, is sufficiently oppressed and desperate, that it can be recruited as low-wage labor into the capitalist system at the drop of the proverbial hat.

The Second Model of Capital Accumulation

The second model of accumulation analyzes what happens when the increasing productivity of social labor becomes "the most powerful lever of accumulation" (772). The impacts of technological and organizational changes on productivity need to be placed in a central position in relation to the dynamics of accumulation. This leads Marx to elaborate at some length on the "law" of increasing value composition of capital in the manner already outlined. But while "the progress of accumulation lessens the relative magnitude of the variable part of capital … this by no means thereby excludes the possibility of a rise in its absolute magnitude," because, as we have seen in the first model, more laborers can be employed to counteract the falling rate of surplus-value (774).

The deployment of cooperation, new divisions of labor and the application of machinery, science and technology as ways to increase labor productivity depends, in the first instance, on there having been sufficient initial or "primitive" accumulation of money wealth to set the whole process in motion. Marx has introduced this term, "primitive accumulation," before, but again prefers to delay any detailed consideration of it until part 8. "How it itself originates we need not investigate as yet" (775). But once accumulation gets under way, the progress of increasing productivity also depends on processes of concentration and centralization of capital. Only in this way can all possible economies of scale be realized. Wealth increasingly concentrates in a few hands, he says, because at each round of accumulation the capitalist acquires an increasing mass of capital in the form of money power. Growth occurs at a compound rate, and the concentration of wealth and power accelerates, though in a way that is limited by the rate of surplus-value and the number of laborers employed. This process of concentration may also be partially offset, however, by the opening up of new small businesses in new lines of production.

> Therefore not only are accumulation and the concentration accompanying it scattered over many points, but the increase of each functioning capital is thwarted by the formation of new capitals and the subdivision of old. Accumulation, therefore, presents itself on the one hand as increasing concentration of the means of production, and of the command over labour; and on the other hand as repulsion of many individual capitals from one another. (776–7)

The "fragmentation of the total social capital into many individual capitals, or the repulsion of its fractions from each other," must also be taken into account. This is typical Marx: there are countervailing tendencies at work: concentration on the one hand, subdivision and fragmentation on the other. Where is the balance between them? Who knows! The balance between concentration and decentralization is almost certainly subject to perpetual flux (countering any teleological interpretation of the evolution of machinery and large-scale industry).

Centralization, on the other hand, arrives at concentration of capital by a different path—takeovers, mergers, the ruthless destruction of competitors. There may be, Marx suggests, laws of the centralization of capital. But he admits he is not in a position to develop these laws here, though he evidently suspects that they may yet be uncovered (which would be consistent with the teleological view!). There is, however, a definite tendency toward centralization, undoubtedly fueled by a "new force [that] comes into existence with the development of capitalist production: the credit system" (777). While he is not yet in a position to introduce the credit system here (it would violate his initial assumption that the division of surplus-value between interest, rent, profit on merchant capital does not matter), he cannot resist some preparatory remarks:

> In its first stages, this (credit) system furtively creeps in as the humble assistant of accumulation, drawing into the hands of individual or associated capitalists by invisible threads the money resources, which lie scattered in larger or smaller amounts over the surface of society; but it soon becomes a new and terrible weapon in the battle of competition and is finally transformed into an enormous social mechanism for the centralization of capitals. (777-8)

The picture is compelling and in Marx's time drew much from the theories of Saint Simon on the power of associated capitals and the practices of Second Empire bankers such as the Péreire brothers in France. It also resonates in our contemporary world. Set up micro-credit and micro-finance institutions to capture what is called "the wealth at the bottom of the pyramid" and then suck out all that wealth to support ailing international financial institutions (all with the help of the World Bank and the IMF) and use that wealth on Wall Street to pay the asset and merger game … "Commensurately with the development of capitalist production and accumulation," Marx acutely observes, "there also takes place a development of the two most powerful levers of centralization—competition and credit" (778–9). Rapid centralization overtakes the slower processes of concentration through compound growth as the main vehicle for achieving the enormous financial scale required to implement entirely new rounds of productivity increase. Centralization can radically improve and increase the scale of production. We wouldn't be able to undertake many of the mega-projects of physical infrastructures (e.g., railways and ports) and urbanization (fixed and constant capital) without centralization (or, as he discusses elsewhere, without involving the state).

Adequate instruments of centralization are, therefore, absolutely critical to the dynamics of accumulation. But this poses the threat of monopoly power and contradicts the vision, so dear to classical political economy as well as to contemporary neoliberal theorists, of a decentralized market economy characterized by highly dispersed and individualistic decision making such that no one can corner or dominate the market. What Marx suggests here is that even if the market economy begins with small-scale, highly competitive firms, it is almost certainly going to be rapidly transformed through centralization of capital and end up in a state of oligopoly or monopoly. The result of competition, he says elsewhere, is always monopoly. Processes therefore exist internal to the capitalist dynamic that are inherently disruptive to the theory of how perfect markets work. The problem is that markets and the struggle for relative surplus-value cannot coexist for long without centralization kicking in and disrupting decentralized decision making in freely functioning markets. While Marx does not explicitly make this point here, it is, surely, one of the implications of his argument. But if the analysis of concentration is anything to go by, increasing centralization cannot entirely be a one-way process lacking any countervailing influences and forces. Unfortunately, Marx does not make this point here, but elsewhere he will talk about the way in which centralization can sometimes be countered by decentralization. Therefore, what we have to look at is the relationship between concentration, deconcentration, centralization and decentralization. But what he's introducing in here is the idea of a market dynamic of the accumulation process in which these forces have to be integrated into the argument and not set aside as some kind of accident of history. This, though, takes him beyond his remit in this chapter, which is about the condition of the working class.

A rising productivity of labor (a rising value composition of capital) has implications for the demand for labor.

> Since the demand for labour is determined not by the extent of the total capital but by its variable constituent alone, that demand falls progressively with the growth of the total capital,

> instead of rising in proportion to it, as was previously assumed. It falls relatively to the magnitude of the total capital, and at an accelerated rate, as this magnitude increases. With the growth of the total capital, its variable constituent, the labour incorporated in it, does admittedly increase, but in a constantly diminishing proportion. (781–2)

This implies that capitalist accumulation "constantly produces, and produces indeed in direct relation with its own energy and extent, a relatively redundant working population, i.e. a population which is superfluous to capital's average requirements for its own valorization, and is therefore a surplus population" (782). It does this by that processes we now call downsizing.

> The working population therefore produces both the accumulation of capital and the means by which it is itself made relatively superfluous; and it does this to an extent which is always increasing. This is a law of population peculiar to the capitalist mode of production. (783–4)

Once again, the theme of the production of the conditions of our own domination emerges as a supreme irony.

Mention of a "law of population" puts Marx on a collision course with Malthus, who, judging by earlier footnotes, is far from being Marx's favorite theorist and whose universal theory of population and overpopulation called for refutation. "Every particular historical mode of production," Marx writes, "has its own special laws of population, which are historically valid within that particular sphere. An abstract law of population exists only for plants and animals, and even then only in the absence of any historical intervention by man" (784). Marx's objection to Malthus is that he naturalizes unemployment and the creation of poverty by turning them into the simple relationship between population increase and pressure on resources. Marx does not hold that population growth is irrelevant or even neutral with respect to capital accumulation; indeed, there are many passages elsewhere in which he depicts strong population growth as a necessary precondition for sustained accumulation. His fundamental objection is to the thesis that poverty is produced by a working class that reproduces itself too numerously (thereby blaming the victim). Marx's concern is to show how capitalism produces poverty no matter what the state or rate of population growth. He proves Mandeville was right, that the poor are and always will be with us under a capitalist mode of production but, *contra* Mandeville, Marx shows how and why this is so.

Capitalism produces poverty by creating a relative surplus of laborers through the use of technologies that throw laborers out of work. A permanent pool of unemployed laborers is socially necessary for accumulation to continue to expand.

> But if a surplus population of workers is a necessary product of accumulation or of the development of wealth on a capitalist basis, this surplus population also becomes, conversely, the lever of capitalist accumulation, indeed it becomes a condition for the existence of the capitalist mode of production. It forms a disposable industrial reserve army, which belongs to capital just as absolutely as if the latter had bred it at its own cost.

It is not, therefore, the technology itself that is the main lever of accumulation, but the pool of surplus laborers to which it gives rise. "Independently of the limits of the actual increase of population, it creates a mass of human material always ready for exploitation by capital in the interests of capital's own changing valorization requirements" (784).

Typically, the reserve army is drawn into production and then thrown out in alternating bursts, creating a cyclical motion in the labor market. "The varying phases of the industrial cycle recruit the surplus population, and become one of the most energetic agencies for its reproduction" (785). Marx describes

> the simple process that constantly 'sets free' a part of the working class; by methods which lessen the number of workers employed in proportion to the increased production. Modern industry's whole form of motion therefore depends on the constant transformation of a part of the working population into unemployed or semi-employed 'hands'.

"Even political economy sees that the production of a relative surplus population—i.e. a population surplus in relation to capital's average requirements for valorization—is a necessary condition for modern industry." (786) Malthus, for example, "recognizes that a surplus population is a necessity of modern industry" but he fails to see that "capitalist production can by no means content itself with the quantity of disposable labour-power which the natural increase of population yields. It requires for its unrestricted activity an industrial reserve army which is independent of these natural limits" (787–8).

The ramifications of this process spread far and wide to influence the deskilling of large segments of the labor force and processes of deindustrialization through technological change that have become all too familiar to us over the past thirty years or so. The existence of this relative surplus population typically results in the overwork of those who are employed since they can be threatened with layoffs unless they work overtime and agree to increase the intensity of their labor. Since capital in our time doesn't like to bear the indirect costs of full-time employees (healthcare benefits and pensions), the preference to push the employed to work overtime, whether they want it or not, increases even as the pool of unemployed labor also increases. Agreeing to overtime sometimes becomes a condition of employment. This has become a serious problem in Europe in recent years. The result is overwork and excessive exploitation of those who are employed.

> The over-work of the employed part of the working class swells the ranks of its reserve, while conversely the greater pressure that the reserve by its competition exerts on the employed workers forces them to submit to over-work and subjects them to the dictates of capital.

This becomes a remarkable "means of enriching the individual capitalists" (789). The impact on wages is also significant. "Taking them as a whole, the general movements of wages are exclusively regulated by the expansion and contraction of the industrial reserve army." Wage movements are driven by capital accumulation. This contradicts the standard view that the pace of accumulation of capital is regulated by fluctuations in wage rates driven either by population growth or, in contemporary rhetoric, by excessively greedy trade unions. The "dogma of the economists" was that "higher wages stimulate the working population to more rapid multiplication, and this goes on until the labour-market becomes over-supplied, and hence capital becomes insufficient in relation to the supply of labour" (790).

Marx's model suggests that whenever capital accumulation runs into problems of labor supply, it throws people out of work by resorting to technological or organizational innovations, the effect of which is either to bring wages down below value or to increase the length of working day and the intensity of labor for those who remain employed.

The industrial reserve army, during the periods of stagnation and average prosperity, weighs down the active army of workers; during the periods of over-production and feverish activity, it puts a curb on their pretensions. The relative surplus population is therefore the background against which the law of the demand and supply of labour does its work. It confines the field of action of this law to the limits absolutely convenient to capital's drive to exploit and dominate the workers. (792)

Hence it is that "the mechanism of capitalist production takes care that the absolute increase of capital is not accompanied by a corresponding rise in the general demand for labour" (793). This provokes "great exploits of economic apologetics" on behalf of the bourgeoisie to justify such practices when they so clearly work to the detriment of the working classes (792). The only thing the apologists can do is to view "the misery, the sufferings, the possible death of the displaced workers during the transitional period when they are banished into the industrial reserve army," as a necessary short-term sacrifice for the greater long-term good of all that can come from progressive capital accumulation. But the reality is far more sinister.

The demand for labour is not identical with increase of capital, nor is supply of labour identical with increase of the working class. It is not a case of two independent forces working on each other. Les dés sont pipés. Capital acts on both sides at once. (793)

That is, capital creates the demand for labor when it reinvests, but it can also manage the supply of labor through reinvestments in labor-saving technologies that produce unemployment. This ability to operate on both sides of the demand and supply equation totally contradicts the way in which markets are supposed to work.

As happened in the case of machinery, workers soon

learn the secret of why it happens that the more they work, the more alien wealth they produce, and that the more the productivity of their labour increases, the more does their very function as a means for the valorization of capital become precarious; as soon as they discover that the degree of intensity of the competition amongst themselves depends wholly on the pressure of the relative surplus population; as soon as, by setting up trade unions [this is, surprisingly, the only time you'll see this term mentioned in *Capital*], etc., they try to organize planned cooperation between the employed and the unemployed in order to obviate or to weaken the ruinous effects of this natural law of capitalist production on their class, so soon does capital and its sycophant, political economy, cry out at the infringement of the 'eternal' and so to speak 'sacred' law of supply and demand. (793)

In a situation where the rules of market exchange are subverted by capital's ability to regulate both the supply and demand for labor-power, attempts by workers to organize on their side to protect their collective interests are fiercely condemned for infringing on the rules of the market!

Marx has constructed two models of accumulation, with and without technological change. Capitalists have a choice: accumulate with an existing technology and enter the world of model 1 (difficult to do in the face of the coercive laws of competition) or invest in technological change and enter the world of model 2. The question in the second model is, what regulates the pace of technological change? The theory of relative surplus-value showed that the pace of that change is impelled onward by the coercive laws of competition as capitalists compete for the ephemeral form of relative surplus-value that accrues to those working at higher productivity. The limit is therefore partially set by the intensity of competition (a point which Marx does not emphasize). But there is also an outer limit. Marx had earlier established that the rationale for adopting new machine technologies entailed a trade-off between the value laid out for the machine and the value of the labor-power saved by using it. Though Marx does not make the point explicitly, this means that technological innovation would continue up until the point where wage rates fall low enough (as they did in England in the nineteenth century relative to the US) to make buying the machine no longer worthwhile. This point would likely be when the working class is reduced to a condition of utter misery.

The Relative Surplus Population

In section 4 of this chapter, Marx examines the condition of the relative surplus population. He identifies three distinct strata: floating, latent, stagnant (794). By "floating" he means people who are already proletarianized, who are already full-time wage workers, who are temporarily thrown out of work for some reason, who survive somehow through a period of unemployment, before being reabsorbed back into employment as conditions for accumulation improve. In contemporary terms, the floating are roughly equivalent to the pool of unemployed, as recorded in the unemployment statistics, plus those classified as underemployed or as "discouraged workers." The latent are people who have not yet been proletarianized. In Marx's time, this particularly referred to peasant populations not yet absorbed into the wage-labor system. The destruction of peasant or indigenous subsistence agricultural systems and the proletarianization of the rural world have pushed massive numbers into the wage-labor force. This continues to be the case up until our own times (witness China, Mexico and India in recent decades). The mobilization of women and children into the wage-labor force through the disruption of domestic systems has likewise long played a role up until today (turning women into the backbone of wage labor in many parts of the developing world). The latent category can also include petty-bourgeois independent producers and artisans who get displaced by large-scale capital and were thus forced to enter the labor market. The cannibalization of family farms in the United States over the past fifty years has released their labor-power from its former confinements. You could say the same of independent producers and people who once ran the corner stores now displaced by the supermarkets. The latent is, therefore, a huge and diverse category of people comprising petty-bourgeois producers of various kinds, women and children, peasants and the like. In our time, it also encompasses groups who had escaped proletarianization only to be brought back into the fold. Medical doctors used to think they were not part of the proletariat, but an insidious process of proletarianization of the medical workforce is not too hard to identify. The proletarianization of higher education has likewise proceeded apace as the corporatist and neoliberal model of the university has become more entrenched. What Marx draws our attention to here are possible shifts in the dynamics of proletarianization and the various ways in which a latent reserve of labor-power can be mobilized. This will obviously vary a great deal from one situation to another. Furthermore, whereas the floating population is roughly confined to the areas of capitalist organization, the latent reserve has a very different geographical spread. It is potentially available everywhere, and the geopolitics of access to it through imperialist and colonial practices can play a very significant role.

The third stratum is the stagnant. This refers to that part of the population that is very irregularly employed and particularly hard to mobilize. The lowest sediment of the stagnant Marx describes as being “in the sphere of pauperism,” including “vagabonds, criminals, prostitutes, in short the actual lumpenproletariat,” for whom he has very little affection. Also among them there are “those [paupers] able to work,” as well as “orphans and pauper children. These are candidates for the industrial reserve army, and in times of great prosperity … they are enrolled in the army of active workers both speedily and in large numbers.” But then there are “the demoralized, the ragged, and those unable to work, chiefly people who succumb to their incapacity for adaptation.” These populate what Marx calls “the hospital of the active labour-army,” and they are almost impossible to mobilize into the wage-labor force (797). This is what William Julius Wilson refers to as an “underclass” (a term I don’t really like).

The final and lengthy section 5 of this chapter describes in gruesome detail the situation as it then existed for those embedded in the industrial reserve army (both floating and latent). While Marx focuses on Britain (and the condition of its rural labor reserve in particular), he pays close attention to the role of urbanization and, with respect to the Irish immigrants into England, identifies something important about how these mobilizations of latent workforces so often utilize differences of ethnicity and religion (in this case), which by extension can encompass all manner of racial, gender, cultural, religious and other differences in the divide-and-rule politics deployed by the capitalist class. We could easily supply parallel materials for our own times. The long history of Puerto Rican labor in the United States neatly parallels that of the Irish in Britain in the nineteenth century. We could also easily write out descriptions of conditions in Mexico, Guatemala, China, Bangladesh, Indonesia and South Africa that would be every bit as distressing as the conditions that Marx describes in section 5.

Marx's second model of accumulation depends primarily on the floating reserves created through technologically induced unemployment. The systemic way in which this floating population is managed (how unemployed workers stay alive and in good enough health to come back into the labor force, for example) is obviously a matter of considerable interest. But there is also a strategic question as to whether it is more advantageous for capitalism to work with floating or with latent reserves (the stagnant might be very hard to mobilize and even harder to work with). The free manipulation of floating reserves poses a number of difficulties. Strong labor organization that procures a modicum of job security can check unemployment. New technologies and new production systems may be challenged by the workers themselves before they become widespread. And the political consequences that result from the production of unemployment when it does occur can be serious under certain circumstances. In the 1950s and 1960s, for example, there was a general reluctance on the part of the bourgeois corporate class throughout much of the capitalist world to create unemployment, in part for fear of social unrest. The preference was to find latent reserves. There were two ways you could do that. You could take capital abroad or import workers. In Sweden in the 1960s and 1970s, unemployment was low, and there was almost no floating reserve at all. In the face of strong union power, lots of social legislation and a powerfully entrenched social-democratic political apparatus, the import of labor from Portugal, Yugoslavia and Central Europe became crucial to the generation of surplus-value. Shortages of labor in the French automobile industries led to state-supported in-migration of Maghrebians, while the labor surplus in Turkey fueled German industry during these years. The changes in immigration laws in the US in the 1960s were also significant in helping to mobilize latent labor-power reserves. The labor surplus in Mexico is crucial to the functioning of firms in the United States, making the current furore over migration, both legal and illegal, a difficult issue (lack of a labor surplus has led to the loss of crops at harvest time in the US West, for example).

We've got a situation today where there is considerable unemployment and a lot of latent labor. It is interesting to think about these categories in relation to the specific political history of labor control within capitalism. The floating population also raises the question of how the reserve is to be maintained in a healthy enough state to compete with the employed. The creation of social-welfare structures has been one answer, but this is less significant now given the trend toward neoliberalization. The right-wing argument is that unemployment arises when laborers put too high a reserve price on their labor. Laborers create unemployment by refusing to work below a certain minimum wage! This typically happens when welfare is too generous. Ergo, the best way to get rid of unemployment is to reduce welfare to zero. But that makes it hard for the floating population to remain a labor reserve. The same problem bedevils immigration policy. Every attempt to regulate immigration in the United States runs up against the corporate need for adequate access to surplus-labor supplies. Industries varying from agribusiness to Microsoft agitate against restrictive immigration policies.

The management of the labor supply becomes crucial. The capitalist class interest is to manage the labor supply in such a way as to create and perpetuate a reserve army (some combination of floating and latent) to keep wages down, threaten the employed laborers with being laid off, disrupt labor organization and increase the intensity of labor for those employed. Since the 1970s, this strategy seems to have succeeded reasonably well in the United States, since real wages have remained essentially flat (with a brief uptick in the 1990s) while profit rates have generally risen. This is the first era in US history in which workers have not benefited from significant increases in productivity. All the benefits from the pursuit of relative surplus-value have accrued to the capitalist class to produce immense concentrations of wealth and surging inequality.

The Liberal Utopian Dream Deconstructed

We saw in Part IV, when analysing the production of relative surplus-value, that within the capitalist system all methods for raising the social productivity of labour are put into effect at the cost of the individual worker; that all means for the development of production undergo a dialectical inversion so that they become means of domination and exploitation of the producers; they distort the worker into a fragment of a man, they degrade him to the level of an appendage of a machine, they destroy the actual content of his labour by turning it into a torment; they alienate … from him the intellectual potentialities of the labour process in the same proportion as science is incorporated in it as an independent power; they deform the conditions under which he works, subject him during the labour process to a despotism the more hateful for its meanness; they transform his life-time into working-time, and drag his wife and child beneath the wheels of the juggernaut of capital. But all methods for the production of surplus-value are at the same time methods of accumulation, and every extension of accumulation becomes, conversely, a means for the development of those methods. It follows therefore that in proportion as capital accumulates, the situation of the worker, be his payment high or low, must grow worse. Finally, the law which always holds the relative surplus population or industrial reserve army in equilibrium with the extent and energy of accumulation rivets the worker to capital more firmly than the wedges of Hephaestus held Prometheus to the rock. It makes an accumulation of misery a necessary condition, corresponding to the accumulation of wealth. Accumulation of wealth at one pole is, therefore, at the same time accumulation of misery, the torment of labour, slavery, ignorance, brutalization and moral degradation at the opposite pole, i.e. on the side of the class that produces its own product as capital. (798–9)

This is the famous concluding thesis about the increasing immiseration of the proletariat as a socially necessary consequence and condition of capitalist accumulation. A typical response to this thesis is to say that it is simply wrong, that many workers of the world are far better off today than they were one hundred years ago and that while it may be true that there are still some terrible work conditions in the factories of China and the sweatshops of Hong Kong, these are typical transitional problems en route to the creation of better material living standards that even in those countries are beginning to be evidenced. So this is one of those statements that is taken, sometimes by Marxists as well as by critics, to be one of Marx's firm predictions that can simply be tested by appeal to the historical record. And insofar as the historical record does not support it wholeheartedly, this is then taken to mean that Marx's analysis is surely wrong.

So I here need to forcefully remind you of the assumptions that govern these chapters and emphasize once again that conclusions of this sort are not absolute but contingent, broadly dependent on the limiting assumptions laid out at the beginning. This is the conclusion to Volume I of *Capital*, in which the focus is exclusively on the dynamics of production. The analysis proceeds purely from that perspective. What we will find at the end of Volume II, written from the standpoint of the realization of capital in the market, is something entirely different. There Marx will concentrate on the problems of effective demand (who has the money power to buy the expanding volume of products?). Part of the solution to this problem has to lie in what he there depicts as "rational consumption" on the part of the working class. He means two things by this. First, the working class must have sufficient purchasing power available to itself to be able to consume; second, the working class will have acquired consumption habits congenial to the absorption of the surplus product that capitalism perpetually generates. So at the end of Volume II, Marx cites the ways in which bourgeois philanthropy concentrates on teaching the working classes "proper" consumption habits (much as what happened when Ford mobilized an army of social workers to make sure those who were benefiting from the five-dollar eight-hour day he instituted in his factories spent their money wisely and not on drink, drugs and women). So what we get at the end of Volume II is a completely different story. Plainly, the working class cannot perform its socially necessary role as a consumer-demand center for capitalist products if the Volume I story is all there is.

So what, then, is the purpose and point of the Volume I story? It says that if the world were to operate in this way, then the outcome would be increasing immiseration of the workers. If we ask whether we see elements of truth in this conclusion, then the answer is surely "yes" if we go to the factories of Indonesia, Bangladesh, Vietnam and Guatemala. In these places, latent reserves of labor are being mobilized under conditions of the utmost brutality. Indeed, you will see all the "agony of toil" that Marx describes. You do not have to look far to find detailed reports of the appalling conditions of labor in many of the world's production centers (NGO and UN reports are full of it, and even the mainstream press has published some searing accounts). Furthermore, it is one of the signal facts of the past thirty years or so of neoliberal practices and policies that income inequalities have soared and billionaires have erupted all over the place (India, Mexico, China, Russia), making the picture of an accumulation of wealth at one pole and of misery at the other a very compelling metaphor for describing the conditions of contemporary global capitalism.

So it is hard to read the Volume I story without recognizing that it depicts a certain, albeit partial, truth, particularly when compared with the situation in the advanced capitalist countries of the 1950s and 1960s, when labor organization was relatively strong, social-democratic tendencies were dominant and state interventions, both in production and with respect to the distribution of wealth, were more widely accepted. In those times, the issues of rational consumption were more salient: how do we ensure that the working class purchases automobiles? Well, we build cities and suburbs in such a way that the automobile becomes a necessity rather than a luxury, which means that workers have to be paid enough to be able to afford automobiles and suburban housing and all that goes with this lifestyle. During these times, the Volume II analysis made a lot of sense, and the Volume I conclusions seemed a bit far-fetched.

Much of this has been reversed by the neoliberal turn that set in during the 1970s. There has been a massive expansion of the proletariat worldwide as some two billion people have been dispossessed of their earlier economic base and brought into the proletariat either through the destruction of rural ways of life and peasant economies (as in Latin America and South Asia) or through direct government action (as in China and East Asia more generally). The predictable result of this influx has been that the working classes in the core traditional centers of capital accumulation have not improved their lot. Astonishing increases in wealth have flowed to the top 1 percent (and even more, proportionately, to the top 0.1 percent) of the population. The pursuit of the neoliberal project has led us back into a world in which the Volume I analysis is more and more relevant.

This was a conscious project on the part of the ruling classes. The "Volcker shock," which raised United States interest rates dramatically beginning in 1979, produced surging unemployment; this, when coupled with President Reagan's attack on organized labor (beginning with taking on the air-traffic controllers' union in the strike of 1981), was clearly intended to discipline labor. The British economist Alan Budd, reflecting on his experience of being Margaret Thatcher's chief economic adviser, later confessed as to how ashamed he felt around his neighbors, because "the 1980s policies of attacking inflation by squeezing the economy and public spending were a cover to bash the workers. Raising unemployment was a very desirable way of reducing the strength of the working class. What was engineered—in

Marxist terms—was a crisis of capitalism, which re-created a reserve army of labor, and has allowed the capitalists to make high profits ever since."[2] Like Reagan, Thatcher attacked union power politically in a violent suppression of the miner's strike in the 1980s. Again, the aim was to discipline labor to secure profits and endless accumulation. The terrifying thing about Marx's analysis is that such an outcome is entirely predictable and that it could be so easily articulated in Marxist terms.

What Marx has done in Volume I of *Capital* is to take the words and theories of the classical political economists seriously and ask what kind of world would emerge if they got to implement their utopian liberal vision of perfectly functioning markets, personal liberty, private property rights and free trade. Step by step, he explores what would happen in a world constructed in this image. Adam Smith had purported to show that national wealth would grow and that everyone would or could be better off in a world of decentralized and freely functioning markets (though Smith himself did not absolve the state from responsibilities when it came to the distribution of that wealth along more equitable lines). What Marx shows is that a world constructed along pure *laissez-faire* lines would in itself produce an increasing accumulation of wealth at one pole and a burgeoning accumulation of misery at the other. So who would want to construct the world according to the rules of this utopian vision? And the answer is stunningly obvious: the wealthy members of the capitalist class! So who preaches to us the virtues of this utopian free-market vision, and who has put us on our contemporary neoliberal path? Surprise, surprise! It was the wealthy who used their money power to persuade all of us that the market is always right and that Marxian theory is nonsense.

The neoliberal project (as I show in *A Brief History of Neoliberalism*[3]) has been directed toward the increasing accumulation of wealth and the increasing appropriation of surplus-value on the part of the upper echelons of the capitalist class. And in pursuing that objective, the capitalist class has taken the typical path as outlined in the models of capital accumulation set out in Volume I. Bring wages down and create unemployment by technological changes that displace workers, centralize capitalist power, attack workers' organizations as interfering with the market coordination of supply and demand (when, as we have seen, capital works on both sides of the market), outsource and offshore, mobilize latent populations around the world and depress welfare levels as far as possible. This is what neoliberal "globalization" has really been about. The socially necessary conditions have been created, very much in accord with the Volume I analysis, for the immense accumulation of wealth at one pole at the expense of everyone else. The problem, of course, is that this kind of neoliberal capitalism can survive only "by simultaneously undermining the original sources of all wealth—the soil and the worker" (638).

But this is not the only outcome consistent with Marx's analysis. Marx points in this chapter to the inevitability of the increasing concentration and centralization of capital under conditions of free-market utopianism. Interestingly, this has also been a marked feature of the past thirty years of neoliberalization (look at energy, pharmaceuticals, the media and above all at the increasing centralization of financial power). Excessive freedoms of the market always produce a trend toward more oligopoly and even monopoly (a fact that is recognized in antitrust legislation and some state monitoring—these days largely ineffective—of mergers and monopolies). Not only does wealth accumulate, it centralizes in the hands of an increasingly powerful capitalist class! But this also poses a problem. What happens when the conditions for harmony defined in the Volume II analysis turn so contradictory—precisely because of the polarization of wealth—as to generate a shuddering crisis of the sort that broke out in 2008? Perhaps it is no accident that the only period in US history when wealth distribution was as lopsided as it is today was the 1920s and that we are now seeing a rerun of the 1929 collapse in 2008.

It is, I think, immense testimony to the strength of Marx's analysis and the power of his method that he can get us to see clearly aspects of the historical dynamic that so often remain hidden, while he simultaneously confronts the simmering contradictions and powerful ideological constructions that produce and legitimate the kinds of results he predicts. How many Nassau Seniors are there in our economics departments! Thus it is appropriate to defend his conditional statements, recognizing that while they are not the whole story, they are still a vital and all too easily recognizable aspect of what's unfolding within capitalism today. He has indeed spelled out "*the absolute general law of capitalist accumulation*" in no uncertain terms, even as he also recognizes that "like all other laws, it is modified in its working by many circumstances, the analysis of which does not concern us here" (798). The general law is a brilliant exposition of where free-market and liberal utopianism will take us if implemented, and to the degree that the neoliberal ideological turn has taken these shibboleths, dressed them up in new guises and indeed sought to implement them, it has actually taken us in the direction that Marx predicts, replete with contradictions. We can, I think, take insight though absolutely no comfort, and acquire significant diagnostic power, from a careful reading of Marx's text and a deep appreciation of his method.

CHAPTER ELEVEN

The Secret of Primitive Accumulation

There is a marked shift in tone, content and method in part 8 of *Capital*. To begin with, it goes against the central presumption of the rest of the book, established back in chapter 2, where Marx accepts Adam Smith's theoretical world of atomistic market exchange in which freedom, equality, property and Bentham rule in such a way that all commodity exchanges occur in a noncoercive environment of properly functioning liberal institutions. Smith knew perfectly well that this is not how the world actually is, but he accepted it as a convenient and compelling fiction on which to build a normative political economic theory. Marx, as we have seen, takes this all on board in order to deconstruct its utopianism.

By this strategem, Marx was able to show, as we saw in the last chapter, that the closer we get to a regime of liberal market action, the more we will find ourselves confronting two significant consequences. The minor consequence is that the decentralized, fragmented and atomistic structure that would prevent any single power cornering and manipulating the market gives way to increasingly centralized capitalist power. Competition always tends to produce monopoly, and the fiercer the competition, the faster the tendency toward centralization. The major consequence is the production of immense concentrations of wealth at one pole (particularly on the part of the centralizing capitalists) and increasing misery, toil and degradation for the working class at the other pole.

The neoliberal project of the past thirty years, grounded in liberal utopianism, has successfully conformed to both of Marx's predicted trends. Of course, there is a good deal of divergence, geographical as well as sectoral, in the details, but the degree of centralization of capital that has occurred in various spheres has been striking, and there is general acknowledgement that the immense concentrations of wealth occurring at the very top of the wealth and income scale have never been as great as they are now, while conditions among the working classes of the world have either stagnated or deteriorated. In the United States, for example, the proportion of the national income and wealth held by the top 1 percent of the population has doubled over the past twenty years, and for the top 0.1 percent it has tripled. The ratio of income between CEOs and their median salaried workers, which stood at 30:1 back in 1970, has soared to more than 350:1 on average these past few years. Wherever neoliberalization has been rampant (as in Mexico and India since 1990 or so), billionaires have suddenly emerged on the *Forbes* list of the wealthiest individuals in the world. Carlos Slim of Mexico is now ranked as one of the wealthiest people in the world, and he rose to that position on the back of the wave of neoliberalization that occurred in Mexico in the early nineties.

Marx arrived at these counterintuitive conclusions through deconstructing the classical political economists' propositions on their own terms. But he also used their powerful abstractions critically, to probe creatively into the actual dynamics of capitalism and so reveal the origins of struggles over the length of the working day, the struggles surrounding the conditions of life of the industrial reserve army and the like. The analysis of Volume I can be read as a sophisticated and damning account of why "there is nothing more unequal than the equal treatment of unequals." The ideology of freedom of exchange and liberty of contract gulls us all. This grounds the moral superiority and hegemony of bourgeois political theory and underpins its legitimacy and supposed humanism. But when people enter this free and egalitarian world of market exchange with different resource endowments and different assets, then even minor inequalities, let alone the major divide of class position, get magnified and compounded over time into huge inequalities of influence, wealth and power. When coupled with increasing centralization, this makes for Marx's devastating reversal of the Smithian vision of "the benefit of all" that derives from the hidden hand of market exchange. This enlightens us mightily as to the class content of what, for example, the past thirty years of market-based neoliberal globalization have really been about. The upshot for Marx is a fierce critique of the theses of individual liberty and freedom that ground liberal and neoliberal theory. These ideals are, in Marx's view, as misleading, fictional and fraudulent as they are seductive and beguiling. Laborers, he early on observed, are free only in the double sense of being able to sell their labor-power to whomsoever they chose at the same time as they have to sell that labor-power in order to live because they have been freed and liberated from any and all control over the means of production!

What part 8 of *Capital* does is to take up the question of how this second kind of "freedom" was secured. Here we are forced to confront the thievery, predation, violence and abusive use of power that lay at the historical origins of capitalism as it freed up labor-power as a commodity and displaced an earlier mode of production. The assumptions that have dominated the argument in the first seven parts of *Capital* are cast aside with brutal consequences.

Capitalism depends fundamentally, as we have seen, on a commodity capable of producing more value than it itself has, and that commodity is labor-power. "Why this free worker," Marx observed early on in *Capital*,

> confronts him in the sphere of circulation is a question which does not interest the owner of money, for he finds the labour-market in existence as a particular branch of the commodity-market. And for the present it interests us just as little. We confine ourselves to the fact theoretically, as he does practically. One thing, however, is clear: nature does not produce on the one hand owners of money or commodities, and on the other hand men possessing nothing but their own labour-power. This relation has no basis in natural history, nor does it have a social basis common to all periods of human history. It is clearly the result of a past historical

development, the product of many economic revolutions, of the extinction of a whole series of older formations of social production. (273)

Primitive accumulation is about the historical origins of this wage labor, as well as about the accumulation of the necessary assets in the hands of the capitalist class to employ them.

Part 8 therefore addresses the central question of how labor-power became a commodity (or, more generally, how the working class was formed). The standard bourgeois story devised by Locke and Smith was that

long, long ago there were two sorts of people; one, the diligent, intelligent and above all frugal élite; the other, lazy rascals, spending their substance, and more, in riotous living … the former sort accumulated wealth, and the latter sort finally had nothing to sell except their own skins. And from this original sin dates the poverty of the great majority who, despite all their labour, have up to now nothing to sell but themselves, and the wealth of the few that increases constantly, although they have long ceased to work. (873)

This standard story depicts the transition from feudalism to capitalism as gradual and peaceful. But "in actual history," Marx argues, it was anything but:

It is a notorious fact that conquest, enslavement, robbery, murder, in short, force, play the greatest part. In the tender annals of political economy, the idyllic reigns from time immemorial. Right and 'labour' were from the beginning of time the sole means of enrichment, 'this year' of course always excepted. (874)

This is so, because the process

which creates the capital-relation can be nothing other than the process which divorces the worker from the ownership of the conditions of his own labour; it is a process which operates two transformations, whereby the social means of subsistence and production are turned into capital, and the immediate producers are turned into wage-labourers. So-called primitive accumulation, therefore, is nothing else than the historical process of divorcing the producer from the means of production. It appears as 'primitive' because it forms the pre-history of capital, and of the mode of production corresponding to capital. (874–5)

As a matter of historical fact, the history of primitive accumulation "is anything but idyllic" (874). It "is written in the annals of mankind in letters of blood and fire" (875).

Marx's account, radically at odds with that of Smith and Locke, poses some interesting questions. First, are merchant's capital and finance capital and usury simply antediluvian forms, or do they still have a very active role, independent of production capital, industrial capital and the like? Marx had also earlier observed that "we shall find that both merchants' capital and interest-bearing capital are derivative forms," at the same time as "it will become clear why, historically, these two forms appear before the modern primary form of capital" (267). The implication is that the transition from feudalism to capitalism occurred in stages such that merchants' capital and usury pioneered the way for the rise of production/industrial capital. The role these earlier forms of capital played in the dissolution of the feudal order is therefore open to investigation.

Second, does this mean that once capitalism has gone through primitive accumulation, once the prehistory is over and a mature capitalist society has emerged, that the violent processes he here describes become insignificant and no longer necessary to how capitalism works? This is a question to which I will return. But bear it in mind as we go forward.

In Marx's version of primitive accumulation, all the rules of market exchange earlier laid out (in chapter 2) are abandoned. There is no reciprocity, no equality. Yes, the accumulation of money is there, markets of a sort are there, but the real process is something else. It is about the violent dispossession of a whole class of people from control over the means of production, at first through illegal acts, but ultimately, as in the enclosure legislation in Britain, through actions of the state. Adam Smith, of course, did not want the state to be construed as an active agent in the victimization of a population, so he certainly could not tell a story of primitive accumulation in which state violence played a crucial role. If the origins of capital accumulation lie with the state apparatus and state power, then why now advocate *laissez-faire* policies as a primary means to augment national and individual well-being? Consequently, Smith, along with most other classical political economists, preferred to ignore the role of the state in primitive accumulation. There were exceptions. James Steuart, Marx notes, certainly understood that state violence was absolutely central to proletarianization but took the position that it was a necessary evil. Michael Perelman's book *The Invention of Capitalism*[1] provides an excellent account of how original or primitive accumulation was handled within classical political economy.

Marx's primary concern in part 8 is to unravel the history of primitive accumulation from the sixteenth century onward and to investigate how these processes were set in motion. He readily admits, of course, that

> the history of this expropriation assumes different aspects in different countries, and runs through its various phases in different orders of succession, and at different historical epochs. Only in England, which we therefore take as our example, has it the classic form. (876)

Does "classic" mean that it was a template for the transition to capitalism that everybody around the world had to follow? Marx later on denied this interpretation and stated that he viewed Britain as but one, albeit special and pioneering, example. Again, these are controversial issues to which we will have to return. How we think them through has relevance to another important but largely occluded question: is it necessary to go through primitive accumulation and the long history of capitalism in order to arrive at socialism?

CHAPTERS 27–33: PRIMITIVE ACCUMULATION

The chapters of part 8 are relatively short and arranged in a sequence that has clear implications. I shall consider them briefly, pointing out some significant elements. Chapter 27 deals with the expropriation of the agricultural population, as well as the equally important process of the dissolution of the bands of feudal retainers. The appropriation of the land was the primary means to dispossess the peasantry, but release of the retainers owed as much to the way in which money power began to be exercised within and over the feudal order (e.g., by merchant capital and usury). “The new nobility was the child of its time, for which money was the power of all powers” (879). In the *Grundrisse*, Marx is rather more explicit. He there writes of how money dissolves the traditional community, and in dissolving the traditional community, money becomes the community. So we move from a world in which “community” is defined in terms of structures of interpersonal social relations to a world where the community of money prevails. Money used as social power leads to the creation of large landed estates, large sheep-farming enterprises and the like, at the same time as commodity exchange proliferates (an idea made much of in the early chapters on money and exchange in general). The traditional community does not yield without a struggle, and in the initial stages, at least, state power attempts to preserve what E. P. Thompson later called “the moral economy” of the peasantry against raw money power.

But state power gradually yields for two reasons. First, the state depends on and thereby becomes vulnerable to money power. Secondly, money power can be created and mobilized in ways that state legislation has difficulty stopping. Under Henry VII, acts were passed trying to hold back the process of monetization and proletarianization. But the rising power of incipient capitalism demanded “the reverse of this: a degraded and almost servile condition of the mass of the people, their transformation into mercenaries, and the transformation of their means of labour into capital.” The “forcible expropriation of the people received a new and terrible impulse in the sixteenth century,” and after that, the resistance of the traditional social order starts to crumble (883). Instead of the illegalities of money power taking a subversive lead, the state allies with money power and starts to actively support processes of proletarianization. This trend consolidates, Marx suggests, with the Glorious Revolution of 1688, which

> brought into power, along with William of Orange, the landed and capitalist profit-grubbers. They inaugurated the new era by practising on a colossal scale the thefts of state lands which had hitherto been managed more modestly. These estates were given away, sold at ridiculous prices, or even annexed to private estates by direct seizure … The Crown lands thus fraudulently appropriated, together with the stolen Church estates, … form the basis of the present princely domains of the English oligarchy. (884)

On this basis, new and more powerful class alliances form. “The new landed aristocracy was the natural ally of the new bankocracy, of newly hatched high finance, and of the large manufacturers, at that time dependent on protective duties.” In other words, there is a formation of a bourgeoisie made up of landed capitalists, merchant capitalists, finance capitalists and manufacturing capitalists in broad alliance. They bend the state apparatus to their collective will. As a result, “the law itself now becomes the instrument by which the people’s land is stolen, although the big farmers made use of their little independent methods as well.”

So there is a systematic theft of communal property which goes on during this period, spearheaded by a grand movement of enclosure of the commons. The “forcible usurpation, generally accompanied by the turning of arable into pasture land, begins at the end of the fifteenth century and extends into the sixteenth” (885). These circumstances, incidentally, spawned a significant literature of nostalgia for the loss of the old order. This was the world of Oliver Goldsmith and Gray’s elegy, lamenting the destruction of a supposed “Merrie England.” Marx chooses to comment on a later example, the spectacular case of the Highland clearances in Scotland, which dispossessed the crofters of their land in wave after wave until the later nineteenth century. He revels in the hypocrisy of the Duchess of Sutherland, who, while simultaneously expelling people from the land in the Highlands through a quasi-legal process, “entertained Mrs Beecher Stowe, authoress of *Uncle Tom’s Cabin*, with great magnificence in London to show her sympathy for the Negro slaves of the American republic” (892).

Summarizing, Marx writes:

> The spoliation of the Church’s property, the fraudulent alienation of the state domains, the theft of the common lands, the usurpation of feudal and clan property and its transformation into modern private property under circumstances of ruthless terrorism, all these things were just so many idyllic methods of primitive accumulation. They conquered the field for capitalist agriculture, incorporated the soil into capital [a very interesting phrase], and created for the urban industries the necessary supplies of free and rightless proletarians. (895)

The question of what all these people kicked off the land are going to do is taken up in chapter 28. Often there was no employment for them, so they became, in the eyes of the state at least, vagabonds, beggars, thieves and robbers. The state apparatus responded in ways that continue to this day: it criminalized and incarcerated them, depicted them as rogues and visited the utmost violence on them. “Thus were the agricultural folk first forcibly expropriated from the soil, driven from their homes, turned into vagabonds, and then whipped, branded and tortured by grotesquely terroristic laws into accepting the discipline necessary for the system of wage-labour.” The violence of the socialization of workers into the disciplinary apparatus of capital is at first transparent. But with the passing of time, “the silent compulsion of economic relations sets the seal on the domination of the capitalist over the worker.” Once the proletariat is formed, Marx here seems to be saying, then the silent compulsion of economic relations does its job and the overt violence can fade into the background, because people have been socialized into their situation as wage laborers, as bearers of the commodity labor-power. But “the rising bourgeoisie” continues to need “the power of the state” to regulate wages, to prevent any kind of collective organization of the worker (anti-union legislation and what at the time were called the Combination Laws, banning workers’ associations or even assemblies) (899). This was a crucial support, Marx points out, to the consolidation of the liberal regime (founded on private property rights).

During the very first storms of the revolution, the French bourgeoisie dared to take away from the workers the right of association they had just acquired. By a decree of 14 June 1791, they declared that every combination by the workers was 'an assault on liberty and the declaration of the rights of man'. (903)

Bourgeois legality is used in this very specific way to inhibit the potential collective powers of labor.

Chapter 29 examines the genesis of the capitalist farmer. Marx here tells a very simple tale of how bailiffs became sharecroppers became tenant farmers and then came to pay ground (money) rent to landlords. This process of monetization and commodification underpinned an "agricultural revolution" on the land, which permitted capital to command the soil in certain ways. Capital circulated through the soil, through nature, in exactly the same way that it came to circulate through the body of the laborer as variable capital. The impact of this agricultural revolution, he says in chapter 30, was double-edged. Not only did it set free a lot of labor, it also set free means of subsistence formerly consumed on the land directly. It commoditized the food supply. The market for goods and commodities grew, in part because fewer people could subsist on their own. The result was an expansion of market exchange and an increase in the size of the market. Meanwhile, capital was destroying many of the subsidiary artisanal and household trades not only in India but also in Britain. This resulted in the creation of a stronger and larger domestic market. The growth of the internal market in Britain from the sixteenth century onward was, in Marx's view, an important element in the development of capitalism.

This leads us to consider, in chapter 31, the genesis of the industrial capitalist who takes over the leading role from merchant's capital, usurer's capital, the bankocracy (finance capital) and landed capital. This takeover from the very beginning was tightly integrated with colonialism, the slave trade and what happened in Africa and in the United States. Under feudalism, there were many barriers to turning the growing quantity of money capital into industrial capital. "The feudal organization of the countryside and the guild organization of the towns" inhibited industrial development based on wage labor, but "these fetters vanished with the dissolution of the feudal bands of retainers, and the expropriation and partial eviction of the rural population." But, Marx presciently notes,

the new manufactures were established at sea-ports, or at points in the countryside which were beyond the control of the old municipalities and their guilds. Hence, in England, the bitter struggle of the corporate towns against these new seed-beds of industry. (915)

Industrial capitalism developed in Britain on what we would now call greenfield sites. The corporate towns like Norwich and Bristol were highly organized, and it was politically difficult to take them over and break the power of the guilds. On greenfield sites in the countryside, there was no regulatory apparatus to stop you—no town bourgeoisie, no guild organization. So most of the industrialization that occurred in Britain occurred on former village sites like Manchester (all the cotton towns were originally just small villages). Leeds and Birmingham, again, began as small trading villages. This is different from some patterns of industrialization that have occurred elsewhere, although it is still the case that capital likes to move to greenfield sites whenever it can. When the Japanese auto industry moved into Britain in the 1980s, it avoided highly unionized parts of the country and moved to areas open for new development, where the companies could start from scratch and build whatever they wanted (with the assistance of the Thatcher anti-union government, of course). In the United States, the same tendency exists. Finding spaces where regulation and union organization are lacking continues to be a significant aspect of the geographical and locational dynamic of capitalism.

The roles of the colonial system and the slave trade cannot be ignored, either, since it was by these means that the bourgeoisie both circumvented and overturned feudal powers. There is a strong body of opinion that regards the slave plantations of the West Indies in the early eighteenth century as a pioneering stage in the organization of large-scale labor operations of the sort that reappeared later in the factory systems of Britain. "These methods depend in part on brute force, for instance the colonial system" (915). All manner of tactics were used to extract wealth from colonized populations. "Between 1769 and 1770," for example, "the English created a famine by buying up all the rice and refusing to sell it again, except at fabulous prices" (917). But all such methods

> employ the power of the state, the concentrated and organized force of society, to hasten, as in a hothouse, the process of transformation of the feudal mode of production into the capitalist mode, and to shorten the transition. Force is the midwife of every old society which is pregnant with a new one. It is itself an economic power. (915–16)

But we cannot understand this crucial role of the state as an organizing force, and as promoter of the colonial system, without acknowledging the significance of both the national debt and the public credit system as means whereby money power can start to control the power of the state. The merger between money power and state power from the sixteenth century onward is signaled by the rise of a "modern system of taxation" and an international credit system (921). The "bankocrats, financiers, *rentiers*, brokers, stock-jobbers, etc." who populate this system then come to play significant power roles (920). The colonial system allowed "the treasures captured outside Europe by undisguised looting, enslavement and murder" to flow "back to the mother-country" and be "turned into capital there" while "the public debt became one of the most powerful levers of primitive accumulation" (918–19).

> Colonial system, public debts, heavy taxes, protection, commercial wars, etc., these offshoots of the period of manufacture swell to gigantic proportions during the period of infancy of large-scale industry. The birth of the latter is celebrated by a vast, Herod-like slaughter of the innocents. (922)

This "slaughter" arose out of the need to find and mobilize sufficient labor-power in areas remote from the existing towns. Marx quotes John Fielden:

"The small and nimble fingers of little children being by very far the most in request, the custom instantly sprang up of procuring apprentices (!) from the different parish workhouses of London, Birmingham, and elsewhere" and shipping them north to rural Lancashire (923). Marx continues himself: "While the cotton industry introduced child-slavery into England, in the United States it gave the impulse for the transformation of the earlier, more or less patriarchal slavery into a system of commercial exploitation," thereby giving a stimulus to the slave trade, which fell under the increasing dominance of the British (925). "Liverpool grew fat on the basis of the slave trade. This was its method of primitive accumulation" (924).

It took immense effort to

> unleash the 'eternal natural laws' of the capitalist mode of production, to complete the process of separation between the workers and the conditions of their labour, to transform, at one pole, the social means of production and subsistence into capital, and at the opposite pole, the mass of the population into wage-labourers, into the free 'labouring poor', that artificial product of modern history. (925)

If money "comes into the world with a congenital blood-stain on one cheek," Marx concludes, then "capital comes dripping from head to toe, from every pore, with blood and dirt" (926).

The processes of expropriation, Marx argues in chapter 32, are as drawn out as they are brutal and painful. Feudalism did not dissolve without a struggle. "New forces and new passions spring up in the bosom of society, forces and passions which feel themselves to be fettered by that society." Feudalism

> has to be annihilated; it is annihilated. Its annihilation, the transformation of the individualized and scattered means of production into socially concentrated means of production, the transformation, therefore, of the dwarf-like property of the many into the giant property of the few, and the expropriation of the great mass of the people from the soil, from the means of subsistence and from the instruments of labour, this terrible and arduously accomplished expropriation of the mass of the people forms the pre-history of capital.

This prehistory "comprises a whole series of forcible methods" that amount to a system of "merciless barbarism" (928). But once set in motion, the processes of capitalist development assume their own distinctive logic, including that of centralization.

> One capitalist always strikes down many others. Hand in hand with this centralization, or this expropriation of many capitalists by a few, other developments take place on an ever-increasing scale, such as the growth of the co-operative form of the labour process, the conscious technical application of science, the planned exploitation of the soil.

These proceed apace as the world market forms to impart an "international character of the capitalist regime." From this there also grows the revolt of the working class:

> a class constantly increasing in numbers, and trained, united and organized by the very mechanism of the capitalist process of production. The monopoly of capital becomes a fetter upon the mode of production which has flourished alongside and under it. The centralization of the means of production and the socialization of labour reach a point at which they become

incompatible with their capitalist integument. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated. (929)

There is, after all, a huge difference between "the expropriation of the great mass of the people" by a few usurpers and the expropriation of a few usurpers by the great mass of the people.

This call to the barricades of revolution is the rhetoric of the *Communist Manifesto* brought back to bear on the politics of *Capital*. It is a political and polemical statement that should, surely, provide the culminating chapter to an astonishing work of deep analysis that is animated by a revolutionary spirit.

Which brings us to the last chapter, a curious chapter that deflates the messianic rhetoric and tone of the preceding chapter by offering a series of reflections on the theory of colonization. Furthermore, it is not really about the actual colonial experience and the prospects for anticolonial revolutionary struggles (the expropriation of the colonial masters by the mass of the colonized people). It is about the theories of colonization set out by a man called Wakefield, who hardly rates among the greatest political economists of all time and who wrote his book about colonization when in Newgate Prison for attempting to abduct the daughter of a wealthy family. While in Newgate, Wakefield found himself in the company of prisoners about to be transported to Australia, and this evidently set him thinking about the role of Australia in the general scheme of things. He had little idea as to what was really going on in Australia, but he saw something that Marx considered of great import because it amounted to a devastating rebuttal of Adam Smith. Wakefield simply recognized that you can take all the capital in the world to Australia—money, instruments of labor, materials of all kinds—but if you can't find any "free" (in the double sense!) laborers to work for you, you cannot be a capitalist.

Wakefield, in short, "discovered that capital is not a thing, but a social relation between persons which is mediated through things" (932). It would be difficult to find laborers in Australia; at the time they had easy access to the land and so could support themselves as independent producers. The only way to ensure a labor supply, and thereby preserve the prospects for capitalism, was for the state to step in and put a reserve price on the land. That reserve price had to be high enough to make sure that everybody who arrived in Australia had to work as wage laborers until they could save enough capital to gain access to land. Wakefield considered that the land system in the United States (the Homestead Act) was too open and too free, and this set the price of labor too high (which, as we earlier saw, led to the faster adoption of labor-saving innovations). The United States, Wakefield correctly predicted, would have to dive back into the brutal tactics of the prehistory of capitalism if capitalism were to survive there. The struggle between "free labor" on the frontier and the increasing control of land policy by corporate (particularly railroad) interests, as well as the retention of immigrant populations as wage laborers in the city, was a vital aspect of accumulation.

"The only thing that interests us," writes Marx,

> is the secret discovered in the New World by the political economy of the Old World, and loudly proclaimed by it: that the capitalist mode of production and accumulation, and therefore capitalist private property as well, have for their fundamental condition the annihilation of that private property which rests on the labour of the individual himself; in other words, the expropriation of the worker. (940)

> Let the government set an artificial price on the virgin soil, a price independent of the law of supply and demand, a price that compels the immigrant to work a long time for wages before he can earn enough money to buy land and turn himself into an independent farmer. (938)

This, Marx says, is the "great secret" of Wakefield's plans for colonization, but it also reveals the great secret of primitive accumulation. These plans did carry considerable influence in the British Parliament and did affect colonial land policy. "The English government for years practised this method of 'primitive accumulation' prescribed by Mr Wakefield expressly for use in the colonies" (939).

Marx uses this colonial theory to rebut Adam Smith's theory of original or primitive accumulation. But there is something else going on here that may have deep relevance to the whole argument and structure of *Capital* as a book. In the preface to the second edition, Marx takes up his relationship to Hegel, noting, "I criticized the mystificatory side of the Hegelian dialectic nearly thirty years ago" (102). Almost certainly, he is referring to his lengthy *Critique of Hegel's Philosophy of Right*. There, Marx starts his critique at paragraph 250 of Hegel's exposition. But the content of the preceding paragraphs is somewhat surprising. Without any prior warning or theorization, Hegel launches into a discussion of the internal contradictions of capitalism. He notes the "dependence and distress of the class tied" to a certain kind of work, processes that lead to generalized impoverishment and the creation of a rabble of paupers which, at the same time, "brings with it, at the other end of the social scale, conditions which greatly facilitate the concentration of disproportionate wealth in a few hands." The language is very similar to that in chapter 25 of *Capital*, where Marx talks about the accumulation of wealth at one pole and of misery, toil and degradation at the other pole, occupied by the working class. "It hence becomes apparent," Hegel observes, "that despite an excess of wealth civil society is not rich enough … to check excessive poverty and the creation of a penurious rabble" and

> this inner dialectic of civil society thus drives it—or at any rate drives a specific civil society—to push beyond its own limits and seek markets, and so its necessary means of subsistence, in other lands which are either deficient in the goods it has over-produced, or else generally backward in industry.

A "mature civil society" is thus driven to colonizing activity "by which it supplies to a part of its population a return to life on the family basis in a new land and so also supplies itself with a new demand and field for its industry."[2]

Why might be called an "inner dialectic" produces greater and greater levels of social inequality. Furthermore, as Hegel says in one of his paragraph addendums, "against nature man can claim no right, but once society is established, poverty immediately takes the form of a wrong done to one class by another."[3] This inner dialectic founded on class struggle leads civil societies to seek relief in an "outer dialectic" of colonial and imperialist activity. Whether Hegel believes that this will resolve the inner problem is not clear. But Marx is quite clear that it cannot. The penultimate chapter of *Capital*, which contemplates the expropriation of the expropriators as the ultimate outcome of the inner dialectic, cannot be countered by colonial practices that merely re-create the social relations of capitalism on a wider scale. There can be no colonial solution to the internal class contradictions of capitalism, and by the same token no ultimate spatial fix to the internal contradictions. What we now call globalization is simply, as we are again and again reminded, a temporary fix that "solves" problems in the here-and-now by projecting them onto a larger and grander geographical terrain.

COMMENTARY

There are a variety of issues posed by Marx's account of primitive accumulation that call for commentary. To begin with, it is important to recognize and appreciate the innovative and pioneering character of Marx's account. Nobody had really done this before in such a systematic and ordered way. But as so often happens in an innovative account, it's a bit exaggerated, and it glosses over a host of issues. Historians and economic historians have since done a vast amount of research on the transition from feudalism to capitalism. The consensus would probably be that the story Marx tells is partially true in some places. There were indeed plenty of moments and incidents of extreme violence in this historical geography. And the role of the colonial system, including the evolution of colonial land, labor and taxation policies, is undeniable. But there have also been instances of primitive accumulation that were relatively peaceable. Populations were not so much forced off the land as attracted off the land by employment possibilities and the prospects of a better life offered by urbanization and industrialization. The voluntary move to cities from appalling and precarious conditions of rural life, because urban wages were fairly high, has not been uncommon (even without those processes of forcible dispossession from the land that Marx refers to and for which there is plenty of historical evidence). The story of primitive accumulation is, therefore, far more nuanced and complicated in its details than the one that Marx tells. And there were important aspects to the dynamic that Marx ignores. For example, the gender dimension is now recognized as being highly significant, since primitive accumulation frequently entailed a radical disempowerment of women, their reduction to the status of property and chattel and the reenforcement of patriarchal social relations.

But Marx did sketch the broad outlines of the industrial and agricultural revolutions, of the processes of proletarianization, commodification and monetization that were necessary for capitalism to come into being. His account set a baseline for all future discussions and for this reason alone was a creative intervention. It also dramatically reminds us of the originary violence and the fierce struggles that brought capitalism into being, an originary violence that the bourgeoisie subsequently sought to deny and forget, even as we live with its trace to this day.

Throughout *Capital*, but also in many of his other writings, Marx tends to relegate processes of primitive accumulation to the prehistory of capitalism. Once that prehistory is done with, then the "silent compulsion of economic relations" takes over. Marx's political project in *Capital* is to alert us as to how these silent compulsions operate on us, often without our noticing, hidden behind the fetishistic masks that surround us at every turn. It shows us how, as I earlier argued, there is nothing more unequal than the equal treatment of unequals; how the equality presupposed in the market exchange of things deludes us into a belief in the equality of persons; how bourgeois doctrines of rights of private property and the profit rate make it seem as if we are all endowed with human rights; how illusions of personal liberty and freedom (and how and why we act on those illusions and even fight for them politically) arise out of market freedoms and free trade.

But there is, in my view, a real problem with the idea that primitive accumulation occurred once upon a time, and that once over, it ceased to be of real significance. In recent times, several commentators, including myself, have suggested that we need to take the continuity of primitive accumulation throughout the historical geography of capitalism seriously. Rosa Luxemburg put that question firmly on the agenda nearly a century ago. She insisted that we think of capitalism as being based on two different forms of exploitation.

> One concerns the commodity market and the place where surplus value is produced—the factory, the mine, the agricultural estate. Regarded in this light, accumulation is a purely economic process, with its most important phase a transaction between the capitalist and wage labourer … Here, in form at any rate, peace, property and equality prevail, and the keen dialectics of scientific analysis [and this was, she argued, Marx's signal achievement in Capital] were required to reveal how the right of ownership changes in the course of accumulation into appropriation of other people's property, how commodity exchange turns into exploitation and equality becomes class-rule.

This is indeed what Marx so brilliantly reveals in the first seven parts of *Capital*. "The other aspect of the accumulation of capital," she writes,

> concerns the relations between capitalism and the non-capitalist modes of production which start making their appearance on the international stage. Its predominant methods are colonial policy, an international loan system—a policy of spheres of interest—and war. Force, fraud, oppression, looting are openly displayed without any attempt at concealment, and it requires an

effort to discover within this tangle of political violence and contests of power the stern laws of the economic process.[4]

There is, she maintains, an "organic connection" between these two systems of exploitation and accumulation. The long history of capitalism centers on this dynamic relation between continuous primitive accumulation on the one hand and the dynamics of accumulation through the system of expanded reproduction described in *Capital* on the other. Marx was therefore wrong, she argues, to confine primitive accumulation to some antediluvian point, some prehistory of capitalism. Capitalism would long ago have ceased to exist had it not engaged in fresh rounds of primitive accumulation, chiefly through the violence of imperialism.

Intuitively, there is much to suggest that Luxemburg was right in principle, even if one does not have to follow her all the way to her specific conclusions. To begin with the specific processes of primitive accumulation that Marx describes—the dispossession of rural and peasant populations; colonial, neocolonial and imperialist politics of exploitation; the use of state powers to reallocate assets to a capitalist class; the enclosure of the commons; the privatization of state lands and assets; an international system of finance and credit; to say nothing of the burgeoning national debts and even the shadowy continuation of slavery through the trafficking of people (women in particular)—all these features are still with us and in some instances seem not to have faded into the background but, as in the case of the credit system, the enclosure of the commons and privatization, to have become ever more prominent.

The continuity becomes even more emphatic when we shift our gaze from the "classic" case of Britain to the historical geography of capitalism on the world stage. Luxemburg cited the so-called Opium Wars against China as an example of the processes she had in mind. One of the largest foreign markets for British goods was India, and the Indians could partly pay for those goods by supplying raw materials to Britain (as Marx points out in *Capital*). But this was not enough. So Indian opium was increasingly marketed in China in exchange for silver that could then be used to pay for the British goods. When the Chinese sought to control foreign trade in general and the opium trade in particular, the British fleet sailed up the Yangtze and destroyed the whole of the Chinese fleet in a short encounter to force open the Treaty ports. Only by these sorts of imperialist means, Luxemburg suggested, could the long-term accumulation and realization of capital be secured. According to Luxemburg's work, the continuity of primitive accumulation took place mainly on the periphery, in areas outside regions where the capitalist mode of production dominated. Colonial and imperialist practices were crucial in all this. But as we come closer to the present, the role of the periphery changes (particularly with decolonization), and the practices of primitive accumulation not only shift and proliferate in form but also become more prominent in the core regions dominated by capital.

Consider, for example, the case of contemporary China. China had been through its own developmental process under Mao with minimal relations to the outside. But in 1978, Deng Xiaoping started to open China up to the outside and to revolutionize China's economy. Agricultural reforms not only generated the equivalent of an agricultural revolution in production but also released an enormous quantity of labor, as well as surplus product, from off the land. There is no question that something equivalent to what Marx describes as primitive accumulation has been going on in China over the past thirty years. And to the degree that the opening of China has helped stabilize global capitalism in recent times, Luxemburg would probably look at it and say that this fresh round of primitive accumulation there has been fundamental to the survival of capitalism. In this case, however, events were not powered by foreign imperialist practices but set in motion by the Chinese state and its ruling Communist Party taking a quasi-capitalist road to the augmentation of national wealth. This entailed the creation of a vast low-wage urban proletariat out of an agrarian population, the initially controlled movement in of foreign capital to selected regions and cities to employ that proletariat, and the development of a network of global trading relations to market and realize the value of the commodities, even as the internal market started to boom. It is also interesting to note the role of greenfield sites in China. Just as Manchester went from a small town to a massive industrial center in a few decades, so did Shenzhen after 1980. The developmental pattern is not too different from that described by Marx, except that the levels of originary violence were muted (some would say they were effectively disguised) and that the power of the state and party has been critical throughout. In the light of this example, and the crucial role that China has played in the continuous expansion of a capitalist system dedicated to "accumulation for the sake of accumulation, production for the sake of production," it is difficult to avoid the conclusions that (a) something akin to primitive accumulation is alive and well within the dynamics of contemporary capitalism and (b) its continued existence may well be fundamental to the survival of capitalism.

But this proposition holds pretty much everywhere. The violence of extraction of natural resources (throughout Africa in particular) continues, and the expropriation of peasant populations in Latin America and throughout South and East Asia is still with us. None of this has disappeared, and in some instances it has intensified, resulting in fierce conflicts over, for example, the expulsion of peasant populations from the land in India in order to make way for "special economic zones" on greenfield sites where industry can set up activity on a privileged terrain. The killing of peasants resisting expulsions in West Bengal at Nandigram to make way for industrial development is as "classic" an example of primitive accumulation as could ever be found in seventeenth-century Britain. Furthermore, when Marx points to the national debt and the nascent credit system as vital aspects in the history of primitive accumulation, he is talking about something that has grown inordinately since then to act as a kind of central nervous system to regulate the flows of capital. The predatory tactics of Wall Street and of financial institutions (credit-card companies) are indicators of primitive accumulation by other means. So none of the predatory practices that Marx identified have gone away, and in some instances they have even flourished to a degree unimaginable in Marx's own times.

But in our times, the techniques for enriching the ruling classes and diminishing the standard of living of labor through something akin to primitive accumulation have proliferated and multiplied. For instance, United Airlines goes bankrupt, then gets the bankruptcy court to agree that it has to rid itself of all its pension obligations in order to continue as a viable business. All United Airlines employees suddenly find themselves with no pension and dependent on a state insurance fund that pays out at a very much lower rate. Retired airline employees are forced back into the proletariat. There are interviews with former United Airlines employees who said, "Well, you know, I'm sixty-seven and I thought I was going to be living happily on my retirement income of eighty thousand dollars a year, and now I'm only getting thirty-five thousand. So I have to go back and find myself a job to survive." And the big, interesting question is, where did the equivalent of all that money go? It is perhaps no coincidence that at a time when many working people were being dispossessed of their pension, healthcare and other welfare rights across the United States, the rate of remuneration of Wall Street executives and CEOs more generally was soaring into the stratosphere.

Consider, to take another example, the wave of privatization that has swept across the capitalist world since the 1970s or so. The privatization of water, education and healthcare in many of the countries that once provided them as public goods has dramatically changed how capitalism works (creating all manner of new markets, for example). The privatization of state enterprises (almost invariably at a price that allowed the capitalists to gain immense profits in very short order) has also relinquished public control over growth and investment decisions. This is, in effect, a particular form of enclosure of the commons, in many instances orchestrated by the state (as was the earlier round). The result has been a taking away of assets and rights from the common people. And at the same time as there is a taking away, there are these immense concentrations of wealth occurring at the other end of the scale.

In both *The New Imperialism*[5] and *A Brief History of Neoliberalism*, I argued that class power was being increasingly consolidated right now through processes of this sort. Since it seems a bit odd to call them primitive or original, I prefer to call these processes accumulation by dispossession. I argued that while some of this went on in the 1950s and 1960s, particularly through the tactics of the colonialism and imperialism and in the predatory raiding of natural resources, there wasn't that much accumulation by dispossession going on within the core regions of capitalism, particularly those with strong social-democratic state apparatuses. Neoliberalization, after the mid-1970s, has changed all that. Accumulation by dispossession has been more and more internalized within the core regions of capitalism even as it has widened and deepened throughout the global system. We should not regard primitive accumulation (of the sort that might reasonably be considered to be the case in China) or accumulation by dispossession (as it has occurred through the wave of privatization in the core regions) as simply being about the prehistory of capitalism. It is ongoing and in recent times has been revived as an increasingly significant element in the way global capitalism is working to consolidate class power. And it can encompass everything—from the taking away of rights of access to land and livelihoods to the retrenchment of rights (to pensions, education and healthcare, for example) hard-won in the past through fierce class struggles by working-class movements. Chico Mendes, the leader of the rubber tappers in Amazonia, was murdered for defending a way of life against the cattle ranchers, the soybean producers and the loggers who sought to capitalize the land. The peasants of Nandigram were killed for resisting land takeover for capitalist development. The Landless Workers' Movement in Brazil (the MST) and the Zapatistas have both fought to defend their right to autonomy and self-determination in environments rich in resources and either coveted or locked away by capital. But then think of how the newly minted private-equity funds have been taking public companies private in the United States, stripping them of assets and firing as many employees as they could, before taking the restructured companies back on the market and selling them at a vast profit (for which the CEO of the private-equity fund receives an astronomical bonus).

There are innumerable examples of struggles against all these diverse forms of accumulation by dispossession. Struggles against biopiracy and the attempt to patent genetic materials and codes, struggles against the use of eminent domain to make way for capitalist developers, against gentrification and the production of homelessness in New York and London, the predatory way in which the credit system works to force family farmers off their land to make way for agribusiness in the United States … the list is endless. A vast array of practices exists through which accumulation by dispossession is still occurring that, on the surface at least, have nothing directly to do with the exploitation of living labor in the workplace to produce surplus-value in the way Marx describes in *Capital*.

Yet there are commonalities as well as complementarities between the two processes, as Luxemburg correctly, in my view, suggests by pointing to the "organic relation" between them. The extraction of surplus-value is, after all, a specific form of accumulation by dispossession, since it is nothing more or less than the alienation, appropriation and dispossession of the laborer's capacity to produce value in the labor process. Furthermore, in order for this form of accumulation to continue to grow, ways have to be found to mobilize latent populations as laborers and open up more land and resources as means of production for capitalist development. As has happened in the cases of India and China, for example, the creation of "special economic zones" by expelling peasant producers from the land is a necessary precursor to the continuity of capitalist development, just as the clearance of so-called slums of urban dwellers is necessary for developer capital to expand its urban operations. This taking of lands by the state through eminent domain, or some legal equivalent, has been a widespread phenomenon in recent times. Developers and construction interests in Seoul in the 1990s were desperate for access to urban land and set out to dispossess whole populations who had migrated to the city in the 1950s and built their own housing on land to which they had no title. The construction companies hired gangs of big, heavy wrestler thugs to go into the neighborhoods and smash people's houses to smithereens with sledgehammers, including all their possessions. During the 1990s you could walk around totally devastated Seoul neighborhoods, punctuated with islands of intense popular resistance.

While Marx tends to the view that expanded reproduction is *the* mechanism whereby surplus-value is accumulated and produced, it cannot continue without first realizing the necessary conditions of dispossession, which in its own right also redistributes assets directly into the hands of the capitalist class. I hold, along with Luxemburg, that accumulation by dispossession cannot be ignored, that the taking away of pension rights, of rights to the commons, of rights to Social Security (a common property resource for the entire US population), the increasing commodification of education, to say nothing of expulsions from the land and the despoliation of the environment, are all significant to how we understand the aggregate dynamic of capitalism. Furthermore, the conversion of a common property resource like education into a commodity, the conversion of universities into neoliberal corporatist institutions (with massive consequences for what is taught and how), has significant ideological and political consequences at the same time as it is both a sign and a symbol of a capitalist dynamic that leaves no stone unturned in its struggle to expand the sphere of profit making and profit taking.

In the history of primitive accumulation that Marx describes, there were all manner of violent struggles against the forcible evictions and the dispossessions. There were widespread movements in Britain—the Levellers and the Diggers, for example—that violently resisted. In the seventeenth and eighteenth centuries it would not be an exaggeration to say that the primary forms of class struggle were those resisting dispossession rather than those resisting workplace exploitation. In many parts of the world, the same thing could be said today. This raises the question of which form of class struggle constitutes or is going to constitute the core of a revolutionary movement against capitalism in a given place and time. If global capitalism in aggregate since the 1970s has not been very successful at generating growth, then the further consolidation of class power has required a much stronger turn toward accumulation by dispossession. It is probably this that has filled the coffers of the upper classes to the point of overflowing. The resurgence of the mechanisms of accumulation by dispossession has been particularly marked in the expanding role of the credit system and financial appropriations, the latest wave of which has resulted in several million people in the United States losing their homes through foreclosures. Much of this loss of assets is concentrated in poorer neighborhoods, with particularly serious implications for women and for African-American populations in older cities like Cleveland and Baltimore. Meanwhile, the Wall Street investment bankers who grew immensely rich on this business in the halcyon years even get huge bonuses when they lose their jobs because of the financial difficulties. The redistributive impact of loss of housing assets for millions of people and the huge gains on Wall Street appear as a very stark contemporary case of predation and legalized robbery typical of accumulation by dispossession.

Political struggles against accumulation by dispossession, I argue, are just as important as more traditional proletarian movements. But these traditional movements and their associated political parties tend to pay little attention to struggles over dispossession, often regarding them as secondary and not particularly proletarian in content since they focus on consumption, environment, asset values and the like. The participants in the World Social Forum, on the other hand, are far more preoccupied with resisting accumulation by dispossession and quite often take an antagonistic stance toward class-based workers'-movement politics on the grounds that such movements do not take the concerns of World Social Forum participants seriously. In Brazil, for example, the Landless Workers' Movement (the MST), an organization primarily concerned with accumulation by dispossession, has a somewhat tense relationship with the urban-based Workers' Party (the PT), led by Lula and with a more workerist ideology. The question of closer alliances between the two is therefore worthy of consideration both practically and theoretically. If Luxemburg is right, as I believe she is, to say that there is an organic relation between these two forms of accumulation, then we ought to be prepared to envision an organic relation between the two forms of resistance. An opposition force made up of the "dispossessed," no matter whether they are dispossessed in the labor process or dispossessed of their livelihoods, their assets or their rights, would require a reenvisioning of collective politics along rather different lines. I think Marx was in error in confining these forms of struggle to the prehistory of capitalism. Gramsci certainly understood the importance of building class alliances across these two different terrains, as did Mao. The idea that that the politics of primitive accumulation and by extension accumulation by dispossession belong exclusively to the prehistory of capitalism is surely wrong. But that, of course, is something you will have to decide for yourself.

Reflections and Prognoses

Once you get to the end of *Capital*, Volume I, it is a good idea to go back to the beginning and read the first chapter again. You will almost certainly find yourself reading it in a different light. You should, by now, find it a lot easier to follow. When I went back the first time, I also found it much more interesting and even downright fun to read. With the tension out of the way as to whether I would ever manage to get to the end of this huge tome, I relaxed and really began to enjoy what Bertell Ollman calls “the dance of the dialectic” and all the nuances (including the footnotes, the asides and the literary references) that I had missed first time through. Skimming back over the whole text schematically is also useful. It helps consolidate some thematic understandings. When I used to set examination papers, I would sometimes take a basic concept and ask students to comment on how it would weave into and out of the fabric of the book. How many times, I would ask, do you encounter the concept of fetishism? Commodities and money are obvious. But why do capitalists fetishize machinery, and how come all those inherent powers of labor (cooperation, divisions of labor, mental capacities and powers) appear so often as pure powers of capital? (And does the word “appear” always signal a fetishistic moment?) There are all sorts of themes that can be followed throughout, such as alienation (on this one, try beginning at the end with primitive accumulation and working backward through the text!), process-thing relations, logic-history intersections (confusions?) and the like.

Here, however, I want to look forward to some of the arguments that Marx takes up in the other volumes and elsewhere, by extending the logical implications of the framework set up in Volume I. I think it fair to do this because, as I indicated at the outset, Marx plainly intended much of his argument in Volume I to lay a theoretical and conceptual basis that would carry him forward onto a broader terrain. The occasional invocation of the omnipresent contradictions of capitalism and the possibilities they foretell of crises provide signposts as to where he might be headed. From this it is also possible to gain some political sense as to what a capitalist class politics is likely to look like and what some of the key terrains of political struggle are going to be.

Volume I of *Capital* examines a circulation process of capital that looks like this:

$$M\text{—}C \begin{matrix} LP \\ \\ MP \end{matrix} \ldots\ldots\ldots P \ldots\ldots C\text{—}M + \Delta M$$

The starting point is money, armed with which the capitalist goes into the marketplace and buys two kinds of commodities, labor-power (variable capital) and means of production (constant capital). The capitalist simultaneously selects an organizational form and a technology and proceeds to combine the labor-power and the means of production in a labor process that produces a commodity, which is then sold in the market for the original money plus a profit (surplus-value). Impelled onward by the coercive laws of competition, capitalists appear (and I use that word in Marx's sense) to be forced to use part of the surplus-value to create even more surplus-value. Accumulation for accumulation's sake and production for production's sake become the historical mission of the bourgeoisie, producing compound rates of growth forever, unless capital encounters limits or insurmountable barriers. When this happens, capital encounters a crisis of accumulation (simply defined as lack of growth). The historical geography of capitalism is littered with such crises, sometimes local and at other times system-wide (as in 1848, 1929 and 2008). The fact that capitalism has survived to this day suggests that the fluidity and flexibility of capital accumulation—features that Marx emphasizes again and again—have somehow allowed limits to be overcome and barriers to be circumvented.

Close inspection of the flow of capital allows us to identify some potential points of blockage that can be the source of serious disruptions and crises. Let us go over these one by one.

(1) WHERE DOES THE INITIAL MONEY COME FROM?

This is the question that Marx's account of primitive accumulation is primarily concerned to answer. Primitive accumulation is invoked at several points in the text at large as well as in part 8, which deals directly with origins. But as more and more of the surplus-value created yesterday is converted into fresh capital, so more and more of the money invested today comes from yesterday's surplus. This does not rule out, however, the possibility of additional increments of money from the continuation of primitive accumulation, or what I would prefer to call in its modern context "accumulation by dispossession." If it were only the accumulation from yesterday that could be capitalized into expansion today, then over time we would surely see a gradually increasing concentration of money capital in individual hands. But as Marx points out, there are also methods of centralization, mainly achieved with the help of the credit system, that permit large quantities of money power to be brought together very rapidly. In the case of joint-stock companies and other corporate organizational forms, enormous quantities of money power are amassed under the control of a few directors and managers. Acquisitions and mergers have long been big business, and activity of this kind can entail new rounds of accumulation by dispossession (asset stripping of firms laying off workers, as practiced by the private-equity movement). Furthermore, there are all sorts of tricks whereby big capital can drive out the small (state regulation is frequently used as an aid, as Marx presciently notes). The dispossession of the small operators (neighborhood stores or family farms) to make way for large enterprises (supermarket chains and agribusiness), frequently with the aid of credit mechanisms, has been a long-standing practice. So the question of the organization, configuration and mass of the money capital available for investment never goes away. It acquires an added significance because of the “barriers to entry” that exist—the scale of certain activities, like building a steel mill, building a railroad or launching an airline, requires an immense initial outlay of money capital before production can even begin. Only relatively recently, for example, has it become possible for private consortia of associated capitals rather than the state to undertake massive infrastructural projects, like the Channel Tunnel that links Britain to continental Europe. As Marx notes in the chapter on machinery, such infrastructural projects become increasingly necessary as a capitalist mode of production comes into its own. Processes of centralization and decentralization of capital define a terrain of struggle between different factions of capital as well as between capital and the state (over questions of monopoly power, for example). Massive centralization of money power has all manner of implications for the dynamics of class struggle, as well as for the trajectory of capitalist development. If nothing else, it endows many elements in the privileged capitalist class (itself consolidating with centralization) with the capacity to wait, because their sheer money power gives them control over time in ways that small producers and wage laborers are often denied. But the contradictory element lies in the fact that increasing monopoly power diminishes the power of the coercive laws of competition to regulate activity (innovation in particular), and this can lead to stagnation.

(2) WHERE DOES THE LABOR-POWER COME FROM?

Marx pays a lot of attention to this in Volume I. Primitive accumulation releases labor-power as a commodity into the marketplace, but thereafter the extra labor required to expand production with a given technology comes from either mopping up the floating reserve released by previous rounds of labor-saving technological change or by mobilizing latent and *in extremis* elements within the stagnant reserve army. Marx several times mentions the ability to mobilize agricultural laborers or peasants from the countryside, as well as previously excluded women and children, into the labor force as crucial to the perpetuation of capital accumulation. For this to happen, there has to be a continuous process of proletarianization, which means continuous primitive accumulation by one or another means throughout the historical geography of capitalism. But labor reserves can also be produced by technologically-induced unemployment. Perpetual accumulation requires, Marx shows, a perpetual surplus of labor-power. This reserve army of labor is positioned more or less like a bow wave in front of the accumulation process. There must always be sufficient and accessible labor-power available. It not only needs to be accessible, it needs to be disciplined and in possession of the requisite qualities (i.e., skilled and flexible when necessary).

If, for any reason, these conditions are not met, then capital faces a serious barrier to continuous accumulation. Either the price of labor goes up, because this does not interfere with the dynamics of accumulation, or both the appetite and capacity for continuous accumulation slacken. Severe barriers in labor supply, arising either out of conditions of absolute labor scarcity or from the rise of powerful organizations of labor (trade unions and left political parties), can create crises of capital accumulation. One obvious answer to this barrier is for capital in effect to go on strike by refusing to reinvest. This amounts to the deliberate production of a crisis of accumulation so as to produce unemployment sufficient to discipline labor-power. This solution is, however, costly for capital as well as for labor. Capitalists would obviously prefer an alternative path, which brings us to the politics of the problem. If labor is too well organized and too powerful, then the capitalist class will seek to command the state apparatus either by a coup of the sort that killed Allende and the socialist alternative in Chile in 1973 or by political means in the US and Britain, in order to do what Pinochet, Reagan and Thatcher all did, which was to smash labor organization and crush left political parties. That is one way to get around the barrier. Another path is to make capital more mobile, so it can move to where there is an available proletariat or an available population that can be easily proletarianized, as in Mexico or China over the past thirty years. Open immigration policies or even state-organized immigration strategies (as in many European countries toward the end of the 1960s) provide yet another alternative. One consequence of circumventing barriers to labor supply this way is to push organized labor (and segments of the public more generally) into the position of opposing offshoring of jobs and opposing open immigration policies, culminating in domestic anti-immigrant movements among the working classes.

The contradictory aspects of labor-supply politics arise around questions not only of the value of labor-power (set by the conditions of supply of wage goods to satisfy the reproduction of labor-power at a given standard of living, itself vulnerable to definition by the state of class struggle) but also of the health, skills and training of the labor force. Capitalist class interests (as opposed to those of individual capitalists, who typically practice the politics of *Après moi le déluge!*) can rally around both subsidizing the supply of cheaper wage goods to keep the value of labor-power down and investing in improvements of the qualities of labor supply; in this latter regard, the military interests of the state can play an important supportive role. So the politics of labor supply have all manner of ramifications. They have been a central focus of struggle throughout the historical and geographical development of capitalism.

Out of this, some Marxists have distilled a distinctive theory of crisis formation. The so-called profit-squeeze theory of crisis hinges on the perpetually fraught problem of labor relations and class struggle, both in the labor process and in the labor market. When these relations pose a barrier to further capital accumulation then a crisis ensues unless some way (or, more likely, mix of ways) can be found for capital to overcome or circumvent that barrier. Some analysts, such as Andrew Glyn (see his impressive account, written with Bob Sutcliffe, in *British Capitalism, Workers and the Profits Squeeze*[1]), would interpret what happened in the late 1960s and early 1970s (particularly in Europe and North America) as an excellent example of the profit-squeeze theory in action. Certainly, the management of labor resources and the politics of labor organization and supply dominated the politics of the period. It is also true that the survival of capitalism has been contingent on the perpetual overcoming or circumvention of this potential barrier to accumulation. But at this time (2008), there is very little sign of a profit-squeeze situation as massive labor reserves exist everywhere, and as the political attack on working-class movements has reduced serious worker resistance to modest levels almost everywhere. The crisis of 2008 is hard to interpret, except in a roundabout way (and there are some versions of the theory, such as that of Itoh, that do this), in profit-squeeze terms.

(3) ACCESS TO THE MEANS OF PRODUCTION

When capitalists go into the market, they need to find there extra means of production (extra elements of constant capital) to meet their needs for reinvestment of part of the surplus in the expansion of production. The means of production are of two sorts: the intermediate products (already shaped by human labor) that are used up in the production process (through what Marx calls "productive consumption," such as energy and cloth used up in making a coat) and the machinery and fixed capital equipment, including factory buildings and the physical infrastructures such as transport systems, canals, ports, all those sorts of things that are necessary for production to proceed. The category of means of production (constant capital) is evidently very broad and complicated. Just as plainly, the lack of availability of these material inputs and conditions constitutes a potentially serious barrier to sustained capital accumulation. The auto industry cannot expand without more steel inputs. It is for this reason that Marx notes that technological innovations in one part of what we now call a "commodity chain" render innovation elsewhere necessary if it is to facilitate the general expansion of production. Innovations in the cotton industry required innovations in cotton production (the cotton gin), transport and communications, chemical and industrial dyeing techniques and the like.

From this we can derive the possibility of what are called "crises of disproportionality" within the complicated structure of inputs and outputs within the totality of a capitalist mode of production. At the end of Volume II, Marx engaged in a detailed study of how such crises might form in an economy divided into two grand departments, those industries producing means of production and those industries producing the wage goods for the workers (he later complicated the model further by introducing luxury goods). What Marx showed (and subsequent more sophisticated mathematical research by economists like Morishima has confirmed the point) was that equilibrium was far from automatic, given the tendency of capital to flow to wherever the rate of profit was highest, and that spiraling disproportionalities could seriously disrupt the reproduction of capitalism. In our own times, we see also the obvious impact of energy shortages and rising prices on capitalist dynamics. Barriers of this sort are plainly sources of perpetual concern within a capitalist system, and the equally perpetual need to overcome and circumvent barriers of this sort is often in the forefront of political activity (state subsidies and planning—particularly of physical infrastructures—research and development activity, vertical integration through mergers, etc.).

(4) SCARCITIES IN NATURE

But behind all this, there lurks a deeper problematic that Marx also raises several times in Volume I. This concerns our metabolic relation to nature. Capitalism, like any other mode of production, relies on the beneficence of a bountiful nature, and as Marx points out, the depletion and degradation of the land makes no more sense in the long run than does the destruction of the collective powers of labor, since both lie at the root of the production of all wealth. But individual capitalists, working in their own short-term interests and impelled onward by the coercive laws of competition, are perpetually tempted to take the position of *Après moi le déluge!* with respect to both the laborer and the soil. Even without this, the track of perpetual accumulation puts enormous pressures on expanding the supply of so-called natural resources, while the inevitable increase in the quantity of waste is bound to test the capacity of ecological systems to absorb it without turning toxic. Here, too, capitalism is likely to encounter barriers which will become increasingly hard to circumvent. Capitalism, Marx notes, "acquires an elasticity, a capacity for sudden expansion by leaps and bounds, which comes up against no barriers but those presented by the availability of raw materials and the extent of sales outlets" (579).

There are, however, all sorts of ways in which such barriers in nature can be confronted, sometimes overcome and more often than not circumvented. Natural resources are, for example, technological, social and cultural appraisals, and so any shortage in nature can be mitigated by technological, social and cultural changes. The dialectical relation to nature that is set up in the footnote at the beginning of chapter 15, on "Machinery and Large-Scale Industry," indicates a range of possible transformations, including the production of nature itself. The historical geography of capitalism has been marked by an incredible fluidity and flexibility in this regard, so it would be false to argue that there are absolute limits in our metabolic relation to nature that cannot be transcended or bypassed in some way. But this does not mean that the barriers are not sometimes serious and that overcoming them can be achieved without going through some kind of environmental crisis. A lot of capitalist politics, particularly these days, is about ensuring that what Marx calls the free gifts of nature are both available to capital on an easy basis and sustained for future use. The tensions within capitalist politics over these sorts of issues can sometimes be acute. On the one hand, the desire to maintain an expanding flow of cheap oil has been central to the geopolitical stance of the United States over the past fifty or sixty years. Making sure that the world’s oil supplies are open for exploitation has drawn the US into conflict in the Middle East and elsewhere, and energy politics, just to take one example of a crucial relation to nature, often emerges as a dominant issue within the state apparatus. But on the other hand, the politics of cheap oil has created problems of excessive depletion, as well as global warming and a host of other air-quality issues (ground-level ozone, smog, particulate matter in the atmosphere and the like), that pose increasing risks to human populations. Land-use degradation through energy-consuming urban sprawl has been a problem at the other end of the steady depletion of natural resources to support all aspects of growth of the automobile industry.

Some Marxists (led by Jim O’Connor, who founded the journal *Capitalism Nature Socialism*) refer to the barriers in nature as “the second contradiction of capitalism” (the first being, of course, the capital-labor relation). In our own times, it is certainly true that this second contradiction is absorbing as much political attention as the labor question, if not more, and there certainly is a wide-ranging field of concern, of political anxiety and endeavor, that focuses on the idea of a crisis in the relation to nature, as a sustainable source of raw materials and land for further capitalist (urban) development as well as a sink for waste.

In O’Connor’s work, this second contradiction of capitalism comes to displace the first, after the defeats of the labor and socialist movements of the 1970s, as the cutting edge of anticapitalist agitation. I leave you to make up your own mind on how far that sort of politics should be pursued. But what is certain is that the barrier in relation to nature is not to be taken lightly or treated as minor, given the framework that Marx sets out in Volume I of *Capital*. And in our own times, it is clear that the barriers in nature are looming large and that there may be an imminent crisis in our relation to nature that will require widespread adaptations (such as the development of new environmental technologies and the expansion of industries producing these goods) if this barrier is to be successfully circumvented, at least for a time, within the framework of endless capital accumulation.

(5) THE QUESTION OF TECHNOLOGY

The relations between capital and labor, as well as those between capital and nature, are mediated by the choice of organizational forms and of technologies (hardware and software). In Volume I, Marx is, I think, at his very best in theorizing where the impulsions for organizational and technological change come from and why it is that capitalists inevitably fetishize machinery, which cannot produce value, because it is a vital source of surplus-value to them both individually and collectively. The result is perpetual organizational and technological dynamism. “Modern industry,” Marx notes “never views or treats of the existing form of a production process as the definitive one. Its technical basis is therefore revolutionary, whereas all earlier modes of production were essentially conservative” (617). This is a persistent motif in Marx’s works. As noted in the *Communist Manifesto*,

> The bourgeoisie cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them the whole relations of society … Constant revolutionising of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all other ones.

But it is at this point also that the coercive laws of competition step forward, underpinning the search for relative surplus-value. The implication, which Marx for some reason is reluctant to contemplate, is that any weakening in those coercive laws, through monopolization and the increasing centralization of capital described in chapter 25, will have an impact on the pace and form of technological revolutions. The class-struggle dimensions through broad-based oppositions (e.g., the Luddite movement) or sabotage on the shop floor also have to be taken into account. As Marx noted, a stimulus to technological change arises out of the desire on the part of capital to have weapons to deploy against labor. The more laborers become mere appendages of the machine, and the more their monopolizable skills get undermined by machine technologies, the more vulnerable they become to the arbitrary authority of capital. To the degree that the actual history of technological and organizational innovations displays a distinctively wave-like character, it seems that more has to be said about these dynamics than is given to us even in the rich analysis set out in Volume I.

These questions becomes even more important because, in setting up his arguments on the organic and value composition of capital in chapter 25, Marx is clearly anticipating the view laid out in Volume III, that an ineluctable tendency toward a rising value composition of capital presages an equally compelling law or tendency for the profit rate to fall, inevitably producing long-term crisis conditions in the accumulation process. It is most emphatically here, in Marx’s view, that capital has to confront a crucial barrier internal to its own nature.

The resultant crisis of profitability is solely due to the destabilizing effects of technological dynamism arising out of the persistent search for relative surplus-value. A short-cut version of the argument states that the search for relative surplus-value pushes capitalists to labor-saving technologies, and the more labor saved, the less value produced, because labor is the source of value. To be sure, there are compensating possibilities such as raising the rate of exploitation or reabsorbing displaced workers in expanded production. But there are, as I argued in chapter 10, reasons for being skeptical of any necessary and ineluctable tendency for the value composition of capital to rise. In Volume III, Marx actually lists a variety of “counteracting influences” to a falling rate of profit, including rising rates of exploitation of labor, falling costs of constant capital, foreign trade and a massive increase in the industrial reserve army that blunts the stimulus for the employment of new technologies (as noted in Volume I). In the *Grundrisse*, he had gone even further, noting the constant devaluation of capital, the absorption of capital in the production of physical infrastructures, the opening up of new labor-intensive lines of production and monopolization. My own (probably minority) view is that the falling-rate-of-profit argument simply does not work in the way that Marx specifies it, and I have laid out more fully why I think so in *The Limits to Capital*.[2]

But I also think there is no question that organizational and technological changes do have serious destabilizing effects internal to the dynamics of capital accumulation and that Marx's brilliant exposition of the forces at work impelling perpetual revolutions in technologies and organizational forms sets the stage for a better understanding of processes of both class and popular struggle over the deployment of new technologies and crisis formation. The crisis tendencies can be manifest (as "footnote 4" indicates) in labor relations, in the relation to nature as well as in all other coevolving moments in the capitalist developmental process. There are also directly destabilizing effects such as the devaluation of prior investments (machinery, plant and equipment, built environments, communications links) before their value has been recovered (amortized); rapid shifts in labor-quality requirements (e.g., skills such as computer literacy) that outpace existing labor-force capacities and the investments in social infrastructures needed to create them; the production of chronic job insecurity, spiraling crises of disproportionality due to the uneven development of technological capacities across different sectors; dramatic shifts in spatiotemporal relations (innovations in transport and communications) that entail a total revolution in the global landscape of production and consumption; sudden accelerations and speed-up in capital circulation (computer trading on financial markets can create serious problems, as we have seen); and so on. And, yes, there may be occasions in which a rising value composition of capital can be detected with consequent effects on profits.

(6) LOSS OF CAPITALIST CONTROL OVER THE LABOR PROCESS

Marx is at great pains to emphasize that the creation of surplus value rests on the ability of the capitalist to command and control the laborer on the shop floor where value is produced. This command and control over the "form-giving fire" of the labor process is always contested. The "despotism" of labor control depends on some mix of coercion and persuasion as well as upon the successful organization of a hierarchical structure of authority in labor relations. Plainly, any breakdown in this control presages a crisis, and Marx emphasizes the implicit power of workers to disrupt, sabotage, slow down or simply to cease altogether the production of value upon which the capitalist necessarily relies. The refusal to succumb to the disciplinary apparatuses set up by capital, the power of refusal to work, is of supreme importance in the dynamics of class struggle. In itself it can force a crisis (as theorists such as Tronti and Negri emphasize in the “autonomista” Marxist tradition). This power of the worker is, of course, limited in that workers have to live and without the wage they will also suffer unless they have available to them some other means of subsistence (such as cultivation of the land). The potential limit that exists within the circulation of capital at the point of production and within the labor process itself cannot, however, be ignored. Much attention is therefore paid both by individual capitalists as well as by the whole capitalist class to ensuring labor discipline and adequate forms of labor control.

(7) THE PROBLEM OF REALIZATION AND EFFECTIVE DEMAND

The seventh potential barrier comes at the end of the sequence, when the new commodity enters the market to realize its value as money through exchange. The C-M transition is always more problematic than going from the universal of money to the particular of the commodity, for reasons noted back in chapter 2. To begin with, a sufficient number of people must need, want or desire the commodity produced as a use-value. If a thing is useless then it has no value, says Marx. Useless commodities will be devalued, and the circulation process of capital will come to a crashing halt. So the first condition for the realization of value is to pay attention to the wants, needs and desires of a population. In our time, relative to Marx’s, an immense amount of effort, including the formation of a whole advertising industry, is put into manipulating the nature of wants, needs and desires in a population to ensure the market for use-values. But what is involved here is something more than just advertising. What is required is the formation of a whole structure and process of daily living (the reproduction-of-daily-life component of “footnote 4”) that necessitates the absorption of a certain bundle of use-values in order to sustain it. Consider, for example, the development of the wants, needs and desires associated with the rise of a suburban lifestyle in the United States after World War II. We are talking about the need for not only cars, gasoline, highways and suburban tract houses but also lawn mowers, refrigerators, air conditioners, drapes, furniture (interior and exterior), interior entertainment equipment (the TV) and a whole mass of maintenance systems to keep this daily life going. Daily life in the suburb required the consumption of all that. The development of suburbia ensured a rising demand for these use-values. In this way, “to bring forth a new need,” as Marx presciently notes, becomes a crucial precondition for the continuity of capital accumulation (201). The politics of need creation are in themselves intriguing and increasingly important over time, and now it is well understood that “consumer sentiment” is a key element in the stimulus for endless capital accumulation.

But where does the purchasing power to buy all these use-values come from? There must be, at the end of this process, an extra amount of money that somebody holds somewhere to facilitate the purchase. If not, there is a lack of effective demand, and what is called a crisis of “underconsumption” results—there is not enough demand backed by ability to pay to absorb the commodities produced (see chapter 3) The barrier posed by the “extent of sales outlets” has to be overcome. (579). In part, effective demand is expressed through workers spending their wages. But variable capital is always less than the total capital in circulation, so the purchase of wage goods (even with a suburban lifestyle) is never sufficient for the realization of the whole value stream. But, and this is a point that emerges in Volume II of *Capital*, reducing wages in the manner presupposed in the Volume I analysis plainly creates deeper stresses at the point of realization and in itself can be an important component in the creation of crises of underconsumption. It was for this reason that the politics of the New Deal, at the time of a crisis that many came to regard as primarily a crisis of underconsumption, turned to supporting unionization and other strategies (like Social Security payments) to bolster effective demand across the working classes and also why, in 2008, at a point of economic stress, the federal government released a six-hundred-dollar tax rebate to most taxpayers in the US in order to jack up consumer effective demand. Raising the real wages of labor (thus countering the tendency toward increasing immiseration of the proletariat) may be necessary to the stabilization of continuous capital accumulation, but for obvious reasons the capitalist class (let alone the individual capitalist) may not be willing to contemplate any radical implementation of such a solution.

But worker demand, though an important base, can obviously never go as far as to solve the problem of realization. Rosa Luxemburg paid great attention to this. First she took up the possibility that the extra demand could come from increasing the gold supply (or in our day by simply having the central banks print more money). While obviously this can help in the short run (injecting sufficient liquidity into the system, as during the financial crisis of 2008, becomes a crucial tool for stabilizing and sustaining the continued circulation and accumulation of capital), in the long run the effect is to create yet another kind of crisis, that of inflation. Luxemburg’s solution was to presuppose the existence of some latent and mobilizable demand outside the capitalist system. This meant the continuation of primitive accumulation through imperialist impositions and practices on societies not yet absorbed into the capitalist mode of production.

In the transition to capitalism, and in the phase of primitive accumulation, the stores of accumulated wealth within the feudal order could play this role along with the robbery and plundering of wealth from the rest of the world by merchant’s capital. Over time, of course, what might be called the “gold reserves” of the feudal classes were steadily depleted, and the capacity of the peasantry to generate consumer power by way of taxation to support the consumerism of a landed aristocracy was also exhausted. As industrial capitalism consolidated in Europe and North America, so the plundering of wealth from India, China and other already developed noncapitalist social formations became more and more prominent, particularly from the mid-nineteenth century onward. This was the phase of an immense transfer of wealth from East and South Asia in particular, but also to some degree from South America and Africa, toward the industrial-capitalist class located in core capitalist countries. Eventually, as capitalism grew and spread geographically, the ability to stabilize the system by such means became decreasingly plausible, even if such means had ever been entirely sufficient (which is doubtful) during the phase of late-nineteenth-century high imperialism. Certainly, since 1950 or so but even more markedly since the 1970s, the capacity of imperialist practices of this sort to perform the role of grand stabilizer through opening new fields (new markets) for the realization of capital has been seriously impaired.

The most important answer, one that Luxemburg failed to notice but which follows logically from Marx's argument (though he never articulated it directly because he ruled out the problem of potential realization crises by assumption in Volume I), is that the solution lies in capitalist consumption. This, we have seen, is of two sorts: a portion of the surplus-value is consumed as revenues (e.g., luxury goods), but the other portion is put to further expanding production through reinvestment strategies that appear (and I use this word in Marx's sense) to be impelled by the coercive laws of competition. We here encounter the necessity of what Marx calls "productive consumption" as a link in the realization process. This means that surplus-value production has to internalize its own increasing monetary demand. The demand for yesterday's surplus product depends on tomorrow's expansion of surplus-value production! Capitalist consumption today, fueled by the surplus gained yesterday, forms the market for yesterday's surplus product and surplus-value. What this does is to convert what appears as a potential underconsumption crisis because of lack of effective demand into a lack of further profitable investment opportunities. In other words, the solution to the realization problems encountered at the end of the circulation process depends upon going back to the beginning and expanding even more. The logic of perpetual compound growth takes over.

(8) THE CREDIT SYSTEM AND THE CENTRALIZATION OF CAPITAL

For the circulation of capital to complete its course, two fundamental conditions must be realized. First, capitalists must not hold the money they gained yesterday. They must immediately release it back into circulation. But as Marx argues in his critique of Say's law, there is no compelling necessity that says C-M must immediately be followed by M-C, and within that asymmetry there lies the perpetual possibility not so much for monetary and financial crises but for the emergence of a barrier to the realization of surplus-value through failure to spend. In chapter 2, we considered various circumstances in which it would make perfect sense to hold on to money rather than to release it, and it is at this point that an overlap emerges between Marx's and Keynes's thinking on the possibility of crises of underconsumption. Keynes sought to bypass this barrier by resorting to a state-led set of technical strategies of fiscal and monetary management.

The second condition is that the time gap between today and yesterday needs to be bridged for continuous circulation to be assured. This gap can be filled, as Marx also shows in chapter 3, by the rise of credit moneys and the use of money as a means of account. Put bluntly, the credit system as an organized relation between creditors and debtors steps into the circulation process to play a vital function. As other options run out, this becomes the main means to cover the effective-demand problem in a way that is internal to capital circulation. In so doing, however, the credit system claims its part of the surplus in the form of interest.

At several points even in Volume I of *Capital*, Marx tacitly recognizes the crucial role of the credit system, but in order to get to what he considers the heart of the problem of the labor-capital relation in part 7, he finds it necessary to exclude the facts of distribution (rent, interest, taxes, profit on merchant's capital) from the analysis. While this helps reveal and clarify some important aspects of capitalist dynamics, it does so at the cost of pushing to one side a crucial feature in the capital-circulation process. Unfortunately, Marx continues to push this aside throughout much of Volume II (while acknowledging its crucial presence in relation, for example, to the circulation of long-term fixed capital investments), leading Luxemburg quite correctly to state that the accumulation schemata laid out at the end of that volume failed to solve the problem of realization and effective demand. It is only relatively late in Volume III that Marx gets round to examining the role of the credit system, and frankly, these chapters, though full of suggestive insights, are a mess (I tried as hard as I could—and I don't mind confessing it nearly drove me crazy doing so—to clean them up in chapters 9 and 10 of *The Limits to Capital*). He had, however, established in the *Grundrisse* that "the entire *credit system*, and the over-trading, over-speculation etc., connected with it, rests on the necessity of expanding and leaping over the barrier to circulation and the sphere of exchange."[3]

If it is the further expansion of capitalism that creates the demand for yesterday's surplus product, then this means that the realization problem cannot be solved, particularly under today's conditions of globalized capitalist development, without the construction of a vibrant and extensive credit system to bridge the gap between yesterday's surplus product and tomorrow's absorption of that surplus product. This absorption can occur either through the further expansion of surplus-value production (reinvestment) or through the capitalist consumption of revenues. In the long run, it can easily be shown, the capitalist consumption of revenues will lead to stagnation (this is the model of "simple reproduction" Marx considers in chapter 23). Only the further expansion of surplus-value generation will work in the long run, and it is this that underpins the social necessity for compound rates of growth forever as a condition of capitalism's survival.

It is at this point that Marx would surely have said, had he got to this point, that the coercive laws of competition are merely a tool to secure this absolutely necessary condition for capitalism's survival. In other words, the survival of capitalism requires the maintenance of the coercive laws of competition in order to keep the expansion of surplus-value production tomorrow on track as a means to absorb the surpluses produced yesterday. From this it follows that any slackening of those coercive powers, through, for example, excessive monopolization, will in itself produce a crisis in capitalist reproduction. This was exactly Baran and Sweezy's point in *Monopoly Capital*[4] (written during the 1960s, when monopolies like the Big Three auto companies in Detroit were of increasing significance). The tendency toward monopolization and the centralization of capital necessarily produced, as Baran and Sweezy clearly predicted, the crisis of stagflation (rising unemployment coupled with accelerating inflation) that so haunted the 1970s. The answer to this crisis was the neoliberal counterrevolution that not only smashed the power of labor but also effectively liberated and unleashed the coercive laws of competition as "executor" of the laws of capitalist development by all manner of strategems (more open foreign trade, deregulation, privatizations and the like).

But this process is not without its potential complications. To begin with, the presumption is that all the other barriers (e.g., the relation to nature) to the expansion of surplus-value production tomorrow are non-operative and that there is plenty of room for more production to occur. This implies, for example, a different kind of imperialism, which is not about robbing values and stripping assets from the rest of the world, but about using the rest of the world as a site for opening up new forms of capitalist production. The export of capital rather than of commodities becomes critical. Herein lies the big difference between nineteenth-century India and China, whose wealth was plundered by capitalist domination of their markets, and the United States and to some degree Oceania and parts of Latin America, where unrestricted capitalist development producing new wealth developed rapidly and in so doing provided a field for absorbing and realizing surplus product being generated in the older centers of capitalism (for instance, Britain exported capital and machinery to the US and Argentina in the nineteenth century). In recent times, of course, China has absorbed a lot of foreign capital in the development of production and in so doing has generated a huge effective demand not only for raw materials but also for machinery and other material inputs.

There are, however, two problems inherent in this solution, both of which can reconstitute barriers to the continuity of capital accumulation in the very act of seeking to bypass them. The first derives from the simple fact that the circulation process becomes by definition speculative: it rests on the belief that tomorrow's expansion will not encounter any barriers (including that of further realization), so that today's surplus can effectively be realized. The speculative element, which is fundamental rather than exceptional or excessive, means that anticipations and expectations, as Keynes for one well understood, are fundamental to the continuity of capital circulation. Marx tacitly recognizes this in Volume III when he notes that capitalist expansion is, as he puts it, very "Protestant" because it is based on faith and credit rather than on the "Catholicism" of gold, the true monetary base. Any fall-off in speculative expectations will be self-fulfilling, therefore, and generate a crisis. In this regard, it is interesting to reread Keynes's *General Theory* and notice that the technical solutions of monetary and fiscal policy occupy only a minor part of the argument compared with the psychology of expectations and anticipations. Faith in the system is fundamental, and loss of confidence, as happened in 2008, can be fatal.

The second problem arises within the money and credit system itself. The possibility of "independent" financial and monetary crises, which Marx points out but does not develop in chapter 3, is omnipresent. The underlying problem lies in the contradictions of the money-form itself (use-value as the representation of value, the particular [concrete] as representation of the universal [abstract] and the private appropriation of social power—see chapter 2). When Marx disputes Say's law, he points to the fact that there is a permanent temptation to hold on to money, and the more people do this, the greater the check to the continuity of circulation. But why would people hold on to money? One reason is that it is a form of social power. It can buy conscience and honor! In the *Economic and Philosophical Manuscripts*, Marx tells us that if "I am ugly … I can buy for myself the most *beautiful* of women"[5] (or beautiful of men); if I'm stupid, I can buy the presence of intelligent people; if I'm lame, I can have people carry me around. Just think what you can do with all that social power! So there are very good reasons why people want to hang on to money, particularly in the face of uncertainty. Releasing it into circulation in order to get more social power takes an act of faith, or the creation of safe and trustworthy institutions where you can save your personal money while someone else puts it back into circulation to make more money (which is, of course, what banks are supposed to do).

But the ramifications of this problem spread far and wide into the field of representations, where loss of confidence in the symbols of money (the power of the state to guarantee their stability) or in the quality of money (inflation) butt up against more directly quantitative considerations such as "monetary famine" and the freezing up of the means of payment of the sort that occurred in the fall of 2008.

> The bourgeois [read Wall Street], drunk with prosperity and arrogantly certain of himself, has just declared that money is a purely imaginary creation. 'Commodities alone are money,' he said. But now the opposite cry resounds over the markets of the world; only money is a commodity. As the hart pants after fresh water, so pants his soul after money, the only wealth.

In a crisis, the antithesis between commodities and their value-form, money, is raised to the level of an absolute contradiction. (236)

What better description could we have of the crisis that suddenly erupted in 2008!

At the heart of the credit system there exists a range of technical and legal aspects (many of which can fail or badly distort simply by virtue of their rules of operation) coupled with subjective expectations and anticipations. And to the degree that capitalism continues to expand, so the role of the credit system as a kind of central nervous system for directing and controlling the global dynamics of capital accumulation becomes more prominent. The implication is that the control over the means of credit becomes critical for the functioning of capitalism—a positionality that Marx and Engels had recognized in the *Communist Manifesto* by making the centralization of the means of credit in the hands of the state one of their key demands (presuming, of course, control over the state by the working class). When this is added to the key role of the state with respect to the quality of the coinage and, even more important, symbolic moneys (a role which is acknowledged in chapter 3), then some sort of fusion of state and financial powers appears inevitable. This contradictory fusion was established by the formation of state-controlled central banks with unlimited reserve powers over the disbursement of the means of credit to private appropriators.

In the same way that capital can operate on both sides of the demand and supply of labor-power (see chapter 10), so it can operate through the credit system on both sides of the production-realization relation. In recent years in the United States, for example, the increasingly liberal supply of credit to prospective homeowners coupled with an equally liberal supply of credit to property developers to fuel a massive boom in housing and urban development. In this way, it was imagined that the realization problem was done away with. The only difficulty arose because real wages did not rise in parallel (as the Volume I analysis would predict, given the dominance of neoliberal policies after 1980 which meant that gains from rising productivity were not shared, but concentrated entirely in the upper classes), so that the ability of ordinary homeowners to pay off their rising debt (which tripled for US households from 1980 to 2008) was steadily diminishing. The resultant property-market crash was utterly predictable.

But an analysis of the current crash suggests yet another key role of the credit system. In the same way that Marx noted the role of credit (and usury) in extracting wealth from the feudal lords through primitive accumulation, so the credit system is well positioned to target and extract wealth from the assets held by vulnerable populations. Predatory lending practices—a form of accumulation by dispossession—eventually resulted in foreclosures, which allowed assets to be acquired at low cost and transferred wholesale to boost the long-run wealth of capitalist class interests. The foreclosure wave that began in 2006 inflicted a huge loss of asset values on, among others, vulnerable African-American populations. This second moment of "accumulation by dispossession" via the credit system is of great consequence to the dynamics of capitalism. It facilitated an immense transfer of wealth from East and Southeast Asia to Wall Street in the crisis of 1997–8, for example, as a liquidity freeze forced all manner of viable firms into bankruptcy so that they could be bought up cheaply by foreign investors and then sold back at an immense profit when the recovery came. The credit-led attack on family farming that has occurred in waves since the 1930s in the United States has in similar fashion effectively centralized agricultural wealth in the hands of massive agribusinesses at the expense of small owners, who have been forced to give up their assets cheaply, through foreclosures. Class struggle and the accumulation of capitalist class power work their way through every possible channel within the maze of credit instruments that now exist.

Marx did not investigate the credit system in a sufficiently thorough way to confront the realization problem in all its complexity. This is one of the items of unfinished business in Marx that requires a good deal of work to complete, particularly given the complexity of financial and credit markets, which makes so much of what goes on within them opaque even to their managers and users. But what is interesting about the argument of Volume I is that Marx, in making the transition from the circulation of commodities to that of capital, finds himself forced to invoke relations between creditors and debtors and the use of state-regulated money as a means of payment. He also invokes the time structure of production processes and payments as a key problem of monetary circulation that requires credit if it is to achieve the necessary continuity of capital circulation and accumulation. "Credit-money," he pointed out, takes root "spontaneously in the function of money as a means of payment."[6] This is what I mean when I say that a careful study of the Volume I argument tells us a lot about what is to come in the rest of Marx's analysis. It also helps reveal what might be missing and what therefore needs to be more fully investigated.

THE CIRCULATION OF CAPITAL AS A WHOLE

When capital circulation is looked at as a whole, it becomes apparent that the numerous potential barriers to the free and continuing flow of capital through all its moments are neither independent of one another nor systemically integrated. They are best construed as an ensemble of distinctive moments within the totality of the circulation process of capital. There has been a tendency within the history of Marxian theorizing about crises, however, to look for one dominant and exclusive explanation of the origins of the obviously crisis-prone character of a capitalist mode of production. The three big traditional camps of thought are the profit-squeeze, the falling-rate-of-profit and the underconsumptionist traditions, and the separations are often so strongly marked as to put the theories at one another's throats. The very term "underconsumptionist" in some circles amounts to a dirty word (it seems to mean you are a Keynesian and not a “true” Marxist), while fans of Rosa Luxemburg get outraged at the mean-spirited dismissal of her ideas on the part of those who place the falling-rate-of-profit argument at the center of their theorizing. In recent years, for obvious reasons, far more attention has been paid to the environmental and the financial aspects of crisis formation, and in what are called “the noughties” these aspects of crisis formation have top billing.

I find it more compelling, in the spirit of the analysis laid out in Volume I alongside the extremely interesting discussion of the relations between limits and barriers in the *Grundrisse* (“every limit appears as a barrier to be overcome”[7]), to think of all the limits and barriers discussed above as potential points of blockage, each of which can slow down or disrupt the continuity of capital flow and thereby create a crisis of devaluation. I think it also important to understand the potentiality of displacement of one barrier by another. Moves made to alleviate a crisis of labor supply by generating widespread unemployment can obviously create problems of an insufficiency of effective demand, for example. Consequent moves to resolve the effective-demand problem by extensions of the credit system among the working classes can ultimately create crises of confidence in the quality of money (as registered by inflationary crises, sudden constrictions of credit supply and financial crashes). I also think it is more in keeping with Marx’s frequent invocation of the fluid and flexible character of capitalist development to recognize the rapid repositioning of one barrier at the expense of another and so recognize the multiple ways in which crises can be registered in different historical and geographical situations.

Summarizing, the potential barriers are as follows: (1) inability to mass together enough original capital to get production under way (“barriers to entry” problems); (2) scarcities of labor or recalcitrant forms of labor organization that can produce profit squeezes; (3) disproportionalities and uneven development between sectors within the division of labor; (4) environmental crises arising out of resource depletion and land and environmental degradation; (5) imbalances and premature obsolescence due to uneven or excessively rapid technological changes driven by the coercive laws of competition and resisted by labor; (6) worker recalcitrance or resistance within a labor process that operates under the command and control of capital; (7) underconsumption and insufficient effective demand; (8) monetary and financial crises (liquidity traps, inflation or deflation) that arise within a credit system that depends on sophisticated credit instruments and organized state powers alongside a climate of faith and trust. At each one of these points internal to the circulation process of capital, there exists an antinomy, a potential antagonism that can irrupt as an open contradiction (to use the language that Marx frequently deploys in *Capital*).

This is not the end of the analysis of crisis formation and resolution under capitalism, however. To begin with, the dynamics of uneven geographical development together with the whole problem of spatiotemporal unfolding of capitalist development on the world stage are stressful in the extreme, as capital seeks to create a geographical landscape (of physical and social infrastructures) appropriate to its dynamic at one time only to have to destroy it and re-create yet another geographical landscape at a later point. The changing dynamics of urbanization on the world stage dramatically illustrate this process. Geopolitical conflicts (including catastrophic wars) abound and, arising as they do out of the peculiar qualities of territorialized power (requiring an adequate theorization of the state, a set of institutions and practices that is frequently invoked in Volume I but, like the credit system, left undertheorized), have a logic that does not neatly fit into the requirements of continuous capital circulation and accumulation. The recent history of global shifts in production and deindustrialization have entailed an immense amount of creative destruction, largely worked out through sometimes local but in other instances continent-wide crises (such as that which hit East and Southeast Asia in 1997–8). Furthermore, the possibility of external shocks (including hurricanes and earthquakes) triggering crises cannot be excluded. When almost all activity stopped in the United States in general and New York in particular in the wake of 9/11, the stoppage of circulation was so threatening that within a week the powers that be were everywhere urging the population to get out their credit cards and go shopping!

The spirit of Marxian inquiry into the actual history of crises should, I believe, be open to all these possibilities. Keynes was, I suspect, basically correct to interpret the crisis of the 1930s as mainly an insufficiency of effective demand (though probably for class reasons, he did not point out the relation to income inequality—not historically replicated until recently—that exploded in the 1920s owing to wage repression). This was exacerbated by the fact that people got nervous about the capacity for sustained accumulation and so started to hold on to money. And the more people held on to money, the more the system gummed up. This is what Keynes called the liquidity trap. Ways had to be found to entice money out of hiding, and one answer was debt-financed government expenditures to reinvigorate capital circulation (the other answer was to go to war). On the other hand, I think Andew Glyn and others were basically correct to see a strong element of profit squeeze in the difficulties of the late 1960s in the advanced capitalist countries, where labor scarcities and strong labor organization were clearly putting a brake on accumulation. Excessive monopolization simultaneously helped slow productivity, and this, along with a fiscal crisis of the state (associated with the US war in Vietnam), initiated a long phase of stagflation that could only be resolved by disciplining labor and liberating the coercive laws of competition. In this case, the crisis cascaded from one barrier point to another and back again. The relation to nature also affects profitability, particularly if the rent (a category which, like interest, is not handled in Volume I) on natural resources rises dramatically.

My point here is not to attempt some potted history of crises but to suggest that the insights that come from a study of Marx's works need to be used flexibly and contingently rather than formalistically. My own view of the internal dynamics of crisis theory (as opposed to independently occurring but not unrelated geopolitical struggles) rests on an analysis of the various limits and barriers encountered within the circulation process; a study of the various strategies for overcoming or circumventing these limits and barriers politically and economically; and a careful monitoring of the ways in which barriers overcome or circumvented at one point result in new barriers appearing at other points. The continuous unfolding and partial resolution of the crisis tendencies of capitalism becomes the subject of inquiry.

Behind this lies a deeper problem. Accumulation for accumulation's sake and production for production's sake and the perpetual need to achieve a compound rate of growth were all very well when the core of industrial capitalism was constituted, as it was around 1780, by activities in the forty square miles around Manchester and a few other hot spots of capitalist dynamism. But what we are now confronting is the possibility of a compound rate of growth of, say, 3 percent per year, on the basis of everything happening in China and the rest of East and Southeast Asia, an expanding core of activity in India, Russia and Eastern Europe, surging economies in the Middle East and Latin America and intense pockets of capitalist development in Africa, as well as in the traditional heartlands of capitalism in North America, Europe and Oceania. The mass of accumulation and of physical movement required in future years to keep this compound rate of growth going will be nothing short of staggering.

I view crises as surface eruptions of deep tectonic shifts in the spatiotemporal logic of capitalism. The tectonic plates are now accelerating their motion, and the likelihood of more frequent and more violent crises increases. The manner, form, spatiality and time of the consequent eruptions are almost impossible to predict, but that they will occur with greater frequency and power is almost certain, making the events of 2008 appear normal if not trivial in comparison. Since these stresses are internal to the capitalist dynamic (which does not preclude some seemingly external disruptive event like a catastrophic pandemic), then what better argument could there be, as Marx once put it, for capitalism "to be gone and to give room to a higher state of social production"?[8]

But this is easier said than done. It entails, of course, the shaping of a political project. For this we can't wait until we know everything we need to know, or even understand everything Marx has to say. Marx holds up a mirror to our reality in Volume I in such a way as to create an imperative to act, and he makes it clear that class politics, class struggle, has to center what we do. In itself, this doesn't sound particularly revolutionary. But over the past quarter century, many of us have lived in a world where we have been told again and again that class is irrelevant, that the very idea of class struggle is so old-fashioned as to be mere fodder for academic dinosaurs. But any serious reading of *Capital* shows irrefutably that we will get nowhere unless we write “Class Struggle” on our political banners and march to its drum-beat.

We need, however, to better define exactly what this might mean for our place and times. Marx in his own day was often uncertain as to exactly what to do, what kinds of political alliances would make sense, what kinds of objectives and claims should be articulated. But what Marx also shows is that even in the midst of such uncertainties, we cannot fail to act. Cynics and critics typically object that one is trying to reduce questions of, say, nature, gender, sexuality, race, religion or whatever to class terms, and that this is unacceptable. My answer to this is: not at all. These other struggles are clearly important and have to be waged in their own right. But, I would note, it is rare for any of them not to internalize a significant class dimension, the solution to which is a necessary though never sufficient condition for, say, an adequate anti-racist or pro-environmentalist politics.

Just look, for example, at the impact of the so-called subprime-mortgage crisis on conditions in the city of Baltimore. A disproportionate number of black households and households headed by single parents (mainly women) have been dispossessed of their living rights and in some cases their assets in the course of a vicious class war of accumulation by dispossession. In such a situation, we cannot walk away from the category of class and deny its relevance. We have to stop being nervous and fearful of talking class talk and of mobilizing political strategies around notions of class war.

But there is, of course, a reason for the wishful silences. Class is the one category that the powers that be do not want anyone to take seriously. The *Wall Street Journal* scathingly mocks anything smacking of class war as being gratuitously divisive when the nation should be pulling together to confront its difficulties. The ruling elite does not ever want to openly admit, let alone discuss, the one central thing it is engaged on, its class strategy to augment its wealth and power.

The one thing that Marx again and again insists on is that the concept of class, in all its ambiguous glory, is indispensable to both theory and action. But there is much to do to make the category work. For example, one of the questions that comes out of reading *Capital* is what to say about the relations between struggles waged around primitive accumulation and accumulation by dispossession on the one hand, and the class struggles typically waged around the workplace and in the labor market on the other. It is not always easy to put these two forms of struggle together. But I find it hard to ignore the vast array of struggles going on in the world against dispossession, even though some of them are merely a hardened form of retrograde not-in-my-backyard politics. The division between these two grand forms of class struggle hurts politically. But what Marx’s chapter on “The Working Day” teaches is that alliances are important and that it is hard to get anywhere without them, because the capitalist class accumulates capital by whatever means are at hand, and that means at the expense of the rest of us. Capitalists get filthy rich while everyone else stagnates or suffers. This class privilege and power, Marx says, must be battled against and destroyed to make way for another mode of production.

But what Volume I also teaches is that the displacement of one mode of production by another is a drawn-out and complicated process. Capitalism did not supplant feudalism with some neat revolutionary transformation. It had to grow within the interstices of the old society and bit by bit supplant it, sometimes through force, violence, predation and seizures of assets but at other times with guile and cunning. And it often lost battles against the old order even as it eventually won the war. As it achieved a modicum of power, however, it had to build its alternative at first on the basis of the technologies, social relations, mental conceptions, production systems, relations to nature and patterns of daily life as these had long been constituted under the preceding order. It took a coevolution and uneven development of these different moments within the social totality (see chapter 6) before it found not only its own unique technological base but also its belief systems and mental conceptions, its unstable but clearly class-ridden configuration of social relations, its curious spatiotemporal rhythms and its equally strange ways of daily life, to say nothing of its production processes; before it was truly possible to say that this was capitalism, albeit constantly changing in response to its own inevitable contradictions.

I began this book by urging you to try to read Marx on Marx's own terms. Obviously, my own view as to what those terms are has played a crucial role in the mental map I have tried to construct to guide you. My purpose in this was not to persuade you that I have the correct line, the correct reading, but first to open a way for you to construct your own meanings and interpretations. Many people will, I know, dispute my reading, as you should, too, in whole or in part. For me, the second crucial task is to open up a space of dialogue and discussion in such a way as to bring the Marxian vision of the world back onto center stage, both intellectually and politically. Marx's works have far too much to tell us regarding the perils of our times to consign them to the dustbin of history. It should by now, given the events of the last year or so, be evident that we need to think "outside the box" of received wisdoms. "Events," wrote Henri Lefebvre in his little book *The Explosion*, covering the events of 1968, "belie forecasts; to the extent that events are historic, they upset calculations. They may even overturn strategies that provided for their possible occurrence." Events "pull thinkers out of their comfortable seats and plunge them headlong into a wave of contradictions."[9] What better moment to study carefully the inner contradictions of capitalism and the works of that superb dialectician who did so much to make them so luminously transparent!

While mental conceptions cannot on their own change the world, ideas are, as Marx himself observed, a material force in history. Marx wrote *Capital* to better equip us to fight that struggle. But here, too, there is no easy path, any more than there is some “royal road to science.” As Bertolt Brecht once wrote:

It takes a lot of things to change the world:
Anger and tenacity. Science and indignation,
The quick initiative, the long reflection,
The cold patience and the infinite perseverance,
The understanding of the particular case and the understanding of the ensemble:
Only the lessons of reality can teach us to transform reality.

Volume II

A Note on the Texts Used

The texts used are as follows:

- Marx, *Capital, Volume II* (London: Penguin Books in association with *New Left Review*, translated by David Fernbach, 1978), page numbers cited directly.
- Marx, *Capital, Volume I* (London: Penguin Books in association with *New Left Review*, translated by Ben Fowkes, 1976), citations referenced as C1 followed by the page number.
- Marx, *Capital, Volume III* (London: Penguin Books in association with *New Left Review*, translated by David Fernbach, 1981), citations referenced as C3 followed by the page number.
- Marx, *Grundrisse* (London: *New Left Review* and Penguin Books, translated by Martin Nicolaus, 1973), citations referenced as *Grun-drisse*, followed by page number.

Whereas I worked from a transcript of the lectures in compiling the written version of the Volume I *Companion*, I did not follow the same procedure in this case. While I have often mined Volume II for particular insights, I did not have the appreciation that comes from teaching it on a regular basis. So I had to learn quite a bit more about the volume as a whole. Before giving the lectures, I therefore compiled lengthy notes on the materials from Volume II and the relevant chapters of Volume III and subsequently went back over these to correct them after the lectures were given. This formed the basis for the first version of the text. I then reread the original texts one more time and came up with further corrections and comments. As so often happens when reading Marx, consecutive readings revealed new insights and layers of meaning. Thus there are some differences and divergences not only in the manner of presentation but also, occasionally, in substantive interpretation between the lectures and this written version. Interpreting Marx is always an ongoing and incomplete project, and this is what often makes it so interesting to read and then reread him.

I want to thank the students who participated in the preliminary seminar on Volume II and those who patiently listened to the lectures at the Union Theological Seminary. Their pertinent questions were always helpful, while Crystal Hall, Priya Chandresakaran, Nkosi Anderson and Chris Caruso graciously and helpfully agreed to interview me about the text for the video version. I am also deeply indebted to Chris Caruso, who both led the film crew and manages my website, and Chris Nizza who edited the video so expertly. Finally, Maliha Safri, kindly read the first draft of the text and suggested some clarifications and reformulations. She is in no way responsible for my interpretations.

Introduction

My aim, as with the *Companion* to Volume I of *Capital*, is "to get you to read this book." I wish I could add "in Marx's own terms" but, as I shall shortly show, it is particularly difficult in this case to understand what those terms might be. But, first, I need to persuade you of the importance of undertaking a careful study of Volume II and treating it on a par with Volume I. The case for so doing is, in my view, unassailable.

In the *Grundrisse* (e.g. 407), Marx unequivocally asserts that capital can be understood only as a "*unity of production and realization*" of value and surplus-value. By this, he means that if you cannot sell in the market what has been produced in the labor process then the labor embodied through production has no value. Volume I of *Capital* concentrates its attention on the processes and dynamics of the *production* of value and surplus-value, laying to one side any difficulties that might arise out of the conditions of their *realization*. Marx assumes, in effect, that a market always exists and all commodities produced can be sold at their value. Volume II takes exactly the opposite tack: what turn out to be the fraught and often unstable processes of *realization* of surplus-value are put under the microscope while assuming there are no difficulties in the realm of surplus-value production. If, as is unfortunately generally the case, the much-studied Volume I is overemphasized while Volume II is neglected and treated as secondary, then, at best, we can get only half of the story of Marx's understanding of capital's political economy. In fact, the implications of the failure to take Volume II seriously are far worse: we fail to understand fully what is said in the first volume because its findings need to be placed *in a dialectical relation* to those of Volume II if they are to be properly understood.

The unity of production and realization, like that of the commodity, is a *contradictory unity*: it internalizes an opposition between two radically different tendencies. To ignore its contradictory character would be like trying to theorize capital without mentioning labor, or gender by talking about men and forgetting about women. It is out of the contradictory relations between production and realization that crises frequently arise. Ricardo and his school, Marx notes, "never understood the really modern crises, in which this contradiction of capital discharges itself in great thunderstorms which increasingly threaten [the accumulation of capital] as the foundation of society and of production itself" (*Grundrisse*, 411).

Marx clearly warned us of all this in the first chapter of Volume I. In the analysis of commodity production, he initially lays aside questions of use-value as if they do not matter, as if the discovery of "the manifold uses of things is the work of history" and therefore outside of the purview of political economy. But he then goes on to conclude that "nothing can be a value without being an object of utility. If the thing is useless, so is the labour contained in it; the labour does not count as labour, and therefore creates no value” (C1, 131). No realization, then no value—and certainly no surplus-value. Volume II studies those conditions that might lead to the value and surplus-value created potentially in production not being realized in monetary form through exchange in the market.

The idea of a deep contradiction between the conditions for the production and realization of surplus-value is so important that I think it wise to provide an initial indication of how it might work in practice. In Volume I, Marx focuses on the implications for the laborer of the ruthless pursuit of surplus-value by capital. The culmination of this enquiry in chapter 25 on “The General Law of Capitalist Accumulation” concludes that the lot of the laborer is bound to grow worse, that “the accumulation of wealth at one pole” is “at the same time accumulation of misery, the torment of labour, slavery, ignorance, brutalization and moral degradation at the other pole, i.e. on the side of the class that produces its own product as capital” (C1, 799). This idea of the increasing impoverishment and immiseration of the working classes has entered with a vengeance into the folklore of the Marxist interpretation of capital. But it is a contingent proposition. It presumes that there are *absolutely no problems* arising in the realization of value and surplus-value in the market, and that the manner in which surplus-value is distributed between rents, interest, profit on merchants’ capital, taxes, and profits on direct production have *no relevance*.

In Volume II, however, we find the following statement, which is radically at odds with the Volume I formulation:

> Contradiction in the capitalist mode of production. The workers are important for the market as buyers of commodities. But as sellers of their commodity—labour power—capitalist society has the tendency to restrict them to their minimum price. Further contradiction: the periods in which capitalist production exerts all its forces regularly show themselves in periods of over-production; because the limit to the application of the productive powers is not simply the production of value, but also its realization. However, the sale of commodities, the realization of commodity capital, and thus of surplus-value as well, is restricted not by the consumer needs of society in general, but by the consumer needs of a society in which the great majority are always poor and must always remain poor. (391)

Lack of aggregate effective demand in the market, in short, can act as a serious barrier to the continuity of capital accumulation, and working-class consumption is a significant component of that effective demand. By the end of Volume II, therefore, Marx is talking (albeit somewhat reluctantly) about how working-class demand, along with the manipulation of working-class wants, needs and desires, becomes critical for the achievement of that form of “rational consumption” that will support continuous capital accumulation. Capitalism as a social formation is perpetually caught in this contradiction. It can *either* maximize the conditions for the production of surplus-value, and thereby threaten the capacity to realize surplus-value in the market; *or* keep effective demand strong in the market by empowering workers, and thereby threaten the ability to create surplus-value in production. In other words, if the economy does well according to the Volume I prescriptions, it is likely to be in trouble from the standpoint of Volume II, and vice versa. For example, capital in the advanced capitalist countries tended toward a demand management stance consistent with the Volume II propositions (emphasizing the conditions for realization of value) between 1945 and the mid-1970s but, in the process, increasingly ran into problems (particularly those of a well-organized and politically powerful working-class movement) in the production of surplus-value. After the mid-1970s, it therefore shifted (after a fierce battle with labor) toward a supply-side stance more consistent with Volume I. This emphasized cultivating the conditions for surplus-value production (through reducing real wages, crushing working-class organization and generally disempowering workers). The neoliberal counterrevolution, as we now call it, from the mid-1970s onwards resolved the preeminent problems of surplus-value production, but it did so at the expense of creating problems of realization, particularly from the early 1990s onwards. How these problems in aggregate effective demand were papered over by the extension of credit is a complicated history that culminated in the crash of 2008. This general story is, of course, a gross oversimplification, but it provides a neat illustration of how the contradictory unity of production and realization has been manifest historically. It has also been manifest in shifts in bourgeois economic theory. For example, Keynesian demand management dominated economic thinking in the 1960s, whereas monetarist supply-side theories came to dominate after 1980 or so. It is important to situate these histories in terms of the underlying contradictory unity of production and realization as represented by the first two volumes of *Capital*.

There is, however, one way that the contradiction between production and realization might be attenuated or even effectively managed, and that is by resort to credit. This is so because there is nothing in principle that prevents credit being supplied to sustain in equal measure both production and realization of values and surplus-values. The clearest example of this is when financiers lend to developers to build speculative tract housing while lending mortgage finance to consumers to purchase that housing. The problem, of course, is that this practice can all too easily produce speculative bubbles of the sort that led into the spectacular crash of 2007–08, primarily in the housing markets of the United States but also in Spain and Ireland. The long history of booms, bubbles and crashes in construction testifies to the importance of phenomena of this sort in capital’s history. But the interventions of the credit system have plainly also been constructive in certain ways and played a positive role in sustaining capital accumulation through difficult times.

Partly for this reason, I decided to incorporate those parts of Volume III that deal with merchant and finance capital along with the credit system into this Volume II reading. Theoretically, this maneuver makes sense because Volume II opens with a study of three integrated circuits of capital—those of money, production and the commodity. But Marx treats of these circuits and their inner relations in purely technical terms, without considering the class agents that arise specifically charged with managing the disposal of capital in the different forms of money, production and commodity. The producers are very prominent in Volume I, of course, but the distinctive roles of the merchants and the financiers are only taken up in Volume III. What we find there is a history of how credit is the fount of all manner of insanity and speculative craziness, which then raises the obvious question as to why capital tolerates such excrescences, particularly since they underpin massive destructions of value of the sort we have recently witnessed. The answer to this conundrum actually lies in Volume II, though Marx does not specifically mention it. In fact, Marx systematically excludes credit from his analysis throughout the whole of Volume II (an exclusion that many readers, including me, find annoying and frustrating). But what we see from Volume II is that, without a credit system, capitalists would be forced into hoarding more and more capital to cover problems of fixed-capital circulation, differential turnover, working and circulation times, and the like. When capital is hoarded it becomes inactive and dead. If more and more capital ends up in that state, then this will act as a serious drag upon the dynamics of accumulation, to the point where the circulation of capital will likely gum up and ultimately grind to a halt. The credit system is, therefore, vital to release all this hoarded and inactive money capital. It helps return it into active use. But it does so at a cost. The Pandora's box of speculative credit activity has to be opened, and all sorts of unsavory things pop out. Marx does not explicitly point all of this out, but it is a clear implication that flows from the analysis of a creditless economy laid out in Volume II.

The final reason I have for incorporating some of Volume III into the context of Volume II is that it helps highlight the holistic nature of Marx's political-economic enquiry. By situating the Volume II reading in relation to the other two volumes of *Capital*, we better appreciate the contents and meaning of this volume in relation to Marx's overall project. But we also establish a clearer basis for understanding the nature of Marx's general project. It has long been my view, for example, that we should not cite passages from this or that volume as if they are pure and untrammeled truths, but always treat even firmly stated propositions (such as the increasing impoverishment of the workers in Volume I) as contingent statements that exist in relation to the total vision that Marx was seeking to represent. The truths that Volume II has to tell are vital to our overall understanding in themselves, of course. But they are always situated truths in relation to the evolving framework of Marx's ongoing project.

With respect to the actual text of Volume II, I approach the challenge of devising an adequate reading of it with a mix of excitement and trepidation. Excitement because, for me (and I know I am not alone in this), some of Marx's most interesting and innovative ideas and insights are to be derived from a close reading of it. Constructed from the standpoint of circulation of capital in its different forms (the circulations of money, commodities and productive activities) rather than from the standpoint of production, it proposes a radically different model of how capital works to that set out in Volume I. It is, to use my favorite metaphor, capital seen through a different window on the world. From the two windows of the two volumes we see quite different patterns of relations and activities. Yet the view from each window is objectively described and truthfully portrayed. A general theory of what Marx calls "the laws of motion of capital," I have always thought, would have to come from triangulating between the two perspectives—a task that has never been satisfactorily accomplished, in part because Volume II is incomplete and its vision blurred. Volume II is also, for a variety of reasons, the least-read and least-considered of the three volumes of *Capital*.

I am personally indebted to Volume II in many ways. This is because it deals with how capital circulation constructs its own world of space and time. It helps explain why the history of capitalism has been characterized by speed-up and the reduction of cost and time barriers to spatial movement. It sets these trends against the background of the ongoing reproduction and expansion of the class relations that lie at the very heart of what capital is about. It has provided a more secure theoretical foundation for me to understand the political economy of urbanization and the dynamics of uneven geographical development. I have therefore drawn much inspiration from it in my own work. In *The Condition of Postmoder-nity*, for example, I coined and to some extent popularized the phrase "time-space compression" to capture the successive ways in which capital has knitted together a world of circulation of money, commodities, people, information and ideas in ever tighter, more complex and concentrated ways. This idea came from my reading of Volume II.

My trepidation arises because this volume is a rather boring book (and that may be an understatement). It lacks the literary style, the sparkle and the humor, the irony and devastating put-downs that help make Volume I such a readable tome. There are no bloodsucking vampires and table-turnings in Volume II, hardly any references at all to the immense cast of literary characters—Shakespeare, Cervantes, Goethe, Balzac, to say nothing of learned references to the Greeks and Enlightenment philosophers—that strut the stage in Volume I. The translator, David Fernbach, doubtless fearing he might be blamed for the uninspired qualities of the writing, points out the enormous stylistic differences between the first and the later volumes of *Capital*. Volume I "is palpably presented to the public as a work of science that is also a work of world literature," whereas the content of Volume II follows "much more in the wake of the less purple passages of Volume I." Those of you familiar with the first volume will know what he means. For most of Volume II, Marx seems content to assume the persona of the dry and dusty accountant of so many days or hours producing a commodity, and so many more days and hours getting it to market for sale. The subject matter, writes Fernbach, "is to a far greater extent technical, even dry.” The book is above all “renowned for the arid deserts between its oases,” and this “has caused many a non-specialist reader to turn back in defeat” (80). The amazingly important insights of the book are, to put it bluntly, buried in turgid prose and tedious arithmetic calculations.

The problem is not only one of written style. Volume II also lacks the compelling and clear narrative (some would call it dialectical) structure that is so persuasive in Volume I. This is, to some degree, explained by the incomplete and often inconclusive nature of the work. The threads that bind the volume into a whole are there, but it takes a lot of work to excavate them, and in some instances they are plainly frayed, if not broken. The only way the reader can make sense of the whole is to pick up the most prominent threads and try to weave them into some configuration that makes sense. It takes imagination and patience to do that, and even then it is hard to be sure that what one comes up with is what Marx really had in mind. It is therefore sometimes said of commentaries on Volume II that they reveal more about the commentators than about Marx. This is surely to some degree true in my case. The problem is that there is no other way to read this volume productively.

Beneath this general difficulty lies also the question of how Engels created the texts of both Volumes II and III that have come down to us. Recent scholarship on Marx’s original notebooks and drafts seems to indicate that Engels’s interventions were substantial, and sometimes more than a little questionable. Some even go so far as to suggest that we should attribute the authorship of these volumes to Engels rather than to Marx. The raw and unedited notebooks and drafts have already been published in German and, as Marx scholars probe more deeply into them, there may be some very substantial reinterpretations in the offing. I cannot anticipate what these might be, but I think it only right to inform readers of such a possibility. Meanwhile, I can only proceed with the text as we currently have it.

Volume II is written at a high level of abstraction, and thus lacks the grounded qualities of Volume I. When Marx takes up the theory of absolute surplus-value in Volume I, for example, he illustrates it with a long history of struggle over the length of the working day. The relevance of the concept to daily life and politics is clear (remember Mary Ann Walkley, who died of overwork?). He does not usually bother with such examples in Volume II, and when he does—when he consults the railway manuals for ideas on how to handle maintenance, repair and replacement of fixed-capital items such as rail ties and rolling stock—it is only to find more appropriate abstractions on the basis of accountancy information. We are therefore left to imagine what a long illustrative chapter on, say, changing turnover times, equivalent to that on the working day in Volume I, might look like. It is not that Marx lacked for illustrative materials: circulation times (the time from production to market) were changing dramatically with the coming of the railroads and the telegraph. We can easily insert our own examples of such time-space reconfigurations today (such as the impact of the internet and cell phones).

But, with chapter after chapter lacking any attempt to illustrate abstract and technical findings with materials drawn from daily life (let alone from the historical-geographical evolution of capitalism), it is very easy to become turned off.

Even worse is the lack of politics. Engels, as Ernest Mandel points out in his introduction to the Penguin edition, feared that "the second volume will provoke great disappointment, because it is purely scientific and does not contain much material for agitation" (11). This is, again, something of an understatement. The moral outrage that courses through Volume I and animates it at every turn is missing. Class struggle disappears, as do active class relations. The devastating ironic passages of Volume I are not to be found. There is no call for revolution. Marx seems interested only in the nuts and bolts of how capital circulates. He sheaths his acerbic critical sword (except when it comes to Ricardo's and Adam Smith's "errors") and for the most part gives us passive descriptions.

While the potentiality for disruptions and crises is perpetually being probed, the catalysts that turn such potentialities into realities are largely absent. It sometimes seems as if a self-perpetuating capitalist system can accumulate forever, with just a few hiccups and minor disruptions here and there. Rosa Luxemburg bitterly complained that the abstracted reproduction schemas developed at the end of Volume II showed on paper that "accumulation, production, realization and exchange run smoothly with clockwork precision," adding ironically (given the way that Marx calculated, not always correctly, tedious arithmetic examples of expanding accumulation from one year to the next) that "no doubt this particular kind of 'accumulation' can continue ad infinitum, just as long, that is to say, as ink and paper do not run out."

I do not mention all this to put readers off before they start, but to forewarn everyone of some of the difficulties and challenges that lie ahead. There are good reasons why this is by far the least read of the three volumes of *Capital*. The warning that Marx posted in one of his introductions to Volume I needs reiteration, but with redoubled force: "There is no royal road to science, and only those who do not dread the fatiguing climb of its steep paths have a chance of gaining its luminous summits" (C1, 104). Sticking with Volume II, I can assure you, is not only essential but well worth it in the long run. The view from some of the luminous summits is as unexpected as it is problematic and enlightening.

Because of the evident difficulties, I have taken certain liberties in presenting this text to first-time readers. I have added in tangible examples (contemporary if possible) to illustrate the principles that Marx is uncovering. I have added some comments on political implications and possibilities. I have also imported materials from elsewhere, particularly from the *Grundrisse*, to support and elaborate on some of the key ideas that are here incompletely presented. Even more dramatically, I elected, as already noted, to bring all of the materials from Volume III concerning merchants' capital and money, finance and banking capital into contact with the purely technical presentation on the circulation of money and commodity capitals laid out in Volume II. These far more lively (if incomplete and often frustrating) materials from Volume III deal with the roles of merchants and financiers as agents in the rise of a capitalist mode of production. They also help explain why it is so important to disaggregate the circulation of capital, as is done in Volume II, into its components of money, commodity and productive activity. By combining the activities and behaviors of the social agents—the merchants, the financiers and the bankers—with the technical aspects of capital accumulation, we gain a far richer understanding of how capital works.

It is also in Volume III that Marx comes the closest to analyzing actual crises—those of 1848 and 1857. Looking at how Marx did this is helpful in wrestling with what happened in the crisis that unfolded in global capitalism after 2007, and makes this reading far more relevant to contemporary circumstances. I do not claim that Marx provides answers to the conundrum of how to explain our recent difficulties. But there are some instructive parallels between Marx's time and ours. For example, his commentary on how the "mistaken" Bank Act of 1844 in Britain intensified and prolonged the commercial and financial crises of 1848 and 1857 bears an eerie resemblance to the unfortunate role of the European Central Bank in deepening and prolonging the crisis in Europe after 2008.

The necessity to go beyond the text of Volume II in order to understand it is mandated by its incomplete form. It is simply impossible to get much out of the book without speculating on its possibilities. I do not claim that my speculations and interpretations are right, or that I have privileged insights that others lack. But I do hope to demonstrate that the book becomes so much more interesting and exciting when approached in this way. If you remain constrained by the dry and technical manner of its presentation, you will emerge pretty desiccated by the experience. A more expansive and speculative reading allows you to import your own political fire into a text that on the surface seems to provide very little material for political activism.

Volume II is about the motion of capital, the "metamorphoses" that it undergoes as it moves through the different states of money, production, and commodities in a continuous stream. Whereas the labor process and the production of surplus-value dominate the argument in Volume I, these are viewed in Volume II as mere moments en route not only to the realization of surplus-value as capital in the marketplace but also to the perpetual renewal through capital circulation of the powers of domination of capital over social labor. The temporality (and to a lesser degree spatiality) of circulation is brought sharply into focus. The continuity of capital circulation, presupposed in Volume I, becomes a major preoccupation. We deal with questions of turnover time and of speed-up, with the complexities that arise because more and more capital circulates as fixed capital—not only the machines and the factories, but the whole complex of transport networks, built environments and physical infrastructures.

The circulation process of capital is here presented as the lifeblood that courses through the body politic of capitalism in the desperate quest to reproduce the capital-labor class relation. The potential barriers, blockages and imbalances within these processes of circulation form a field of contradictions which cry out for analysis. They also provide potential foci for political agitation. Anticapitalist politics have to grapple with the findings (tentative though they may be) of Volume II if they are to succeed. Though there is plenty of potential red meat for the political agitator buried in these pages, many of the findings do not sit easily with some of the political presuppositions that the Marxist left (heavily influenced by Volume I) has traditionally embraced. Problems are posed—such as the future of money and credit—that are not easy to resolve through classic forms of class struggle that focus on the workplace. Volume II defines what has to be reconstituted or replaced in the sphere of circulation if we are not all to starve when the revolution comes.

Marx opens Volume II by stating that the subject of his enquiry is rooted in the chapter on money in Volume I. This is discouraging, since the money chapter, being long, tedious and challenging, is where many people give up on that volume. I therefore advised first-time readers when reading Volume I to push on through this chapter as best they could to get to the more interesting materials on the other side. But here, in Volume II, we are invited to linger and expand upon this chapter at length. It is easier to do so once you recall the definition of capital, given in chapter 4 of Volume I, as a *process* and not a *thing*. The basic process is a continuous flow of value transiting through different states (entailing changes of form, or "metamorphoses" as Marx calls them):

$$M\text{-}\overset{LP}{\underset{MP}{C}}\ldots P\ldots C'\text{-}M+\Delta M$$

If you are curious to know what kind of process this really is, then Volume II provides insights—such as the drive toward speed-up and the deepening tension between fixed and circulating capital—that are both revealing and surprising.

In pursuing his enquiries, Marx is never shy of making dramatic simplifying assumptions. These allow him, he frequently argues, to explore the dynamics of capital circulation and accumulation in their "pure state." Thus, on the very first page of Volume II, we read:

> In order to grasp these forms in their pure state, we must first of all abstract from all aspects that have nothing to do with the change and constitution of the forms as such. We shall therefore assume here, both that commodities are sold at their values, and that the circumstances in which this takes place do not change. We shall also ignore any changes of value that may occur in the course of the cyclical process.

The assumption that commodities exchange at their values (we abstract from the daily volatility of market prices) is familiar from Volume I, and we can, I think, presume that the "circumstances" to which Marx refers are those of perfectly functioning, legally defined and competitive market exchange set out in chapter 2 of Volume I. The "pure state" also assumes a closed system. There is no trade with some "outside"—unless otherwise specified—while capital is completely dominant within a closed system. The real kicker comes in the last sentence. "Changes of value" arise out of the changing productivity of labor. This is achieved through the technological and organizational changes outlined in the theory of relative surplus-value that dominates much of the text of Volume I. In Volume II, Marx excludes the theory of relative surplus-value from his purview and builds a model of an economy in a static technological and organizational state. At the outset of chapter 20, for example, he forcefully reiterates the assumption: "As far as revolutions in value are concerned, they change nothing …" (469). So the theory we are about to explore is one in which the technological and organizational dynamism that so dominates the argument in Volume I (and which constitutes such a revolutionary force in *The Communist Manifesto*) is held to one side in order to explore some other crucial aspects of the laws of motion of capital.

So what is it, then, that Marx is after in Volume II? Once surplus-value is produced (a process we understand very well from Volume I), then how does it get realized and then continue to circulate as accumulating capital? And, as it circulates, what particular forms of capital does it necessarily engender? Marx was obviously aware that the class configurations of merchants, bankers and financiers, and landlords existed in some relation to the industrial capitalist who, in Volume I, is depicted as the direct and sole appropriator of the surplus-value produced by wage labor. He also knew that these other forms of capital preexisted the rise of capitalist production and the factory system, and that they therefore played critical historical roles in the construction of a capitalist mode of production. Marx refuses, however, to conceptualize them as "mere residuals" of the transition from feudalism to capitalism. What he wants to know is how and why these other forms of capital are socially necessary to the survival of a capitalist mode of production in a "pure state," and in what ways they might become the locus of contradictions and crises.

The idea of "capital in a pure state" is important for Marx. It is always possible, when faced with a crisis, to say that the crisis is due to some impurity or malfunction of a "pure" and therefore perfect capitalist mode of production. We have heard that a lot from neoliberals in the last few years: the problem is not, they say, any deep contradiction within the neoliberal model of market capitalism itself but a failure to follow neoliberal dictates properly. Their solution is to drive capital back even further toward its pure state through a politics of austerity and an increasing emasculation of state powers. What Marx seeks to show is that crises are inherent in, necessary and endemic to the survival of a capitalist mode of production in all its purity. Not only can no amount of regulatory tinkering set that matter aright, but the closer the economy converges on its pure state, the deeper the crisis will likely become (which is where Europe with its austerity politics seemed so clearly to be headed in 2012).

What Volume II also shows, however, is that independent and autonomously forming crisis tendencies always exist within the circulatory system. For conventional Marxists this is not always welcome news. It poses the problem of how to wage class struggle against, say, the merchants, the bankers, currency traders and the like, and to understand the many activities in which they engage (insurance, hedging, betting on derivatives, collateralized debt obligations, credit default swaps, and so on). We need to establish what the contradictions are and figure out what the impacts of independent and autonomously forming commercial and financial crises might be. We also need a better understanding of the role of financial giants, like the infamous "vampire squid" known as Goldman Sachs, along with Citibank, RBS, HSBC, Deutsche Bank, and so on, and likewise to unpack the role of merchant capitalists such as Walmart, Ikea and Carrefour in the political economy of our own times.

Marx imposes draconian restrictions and exclusions on what is or is not admissible in the theoretical world he is constructing throughout all of *Capital*. This is particularly evident in Volume II.[1] Where do these restrictions come from, and how can they be justified? The credit system and the circulation of interest-bearing capital are frequently mentioned, for example, only to be shunted aside, usually with the comment that a consideration of such a form of circulation "does not belong here." But why not? An examination of fixed-capital circulation or of differential turnover times in the absence of a credit system does not seem on the surface to make much sense. So why does Marx systematically exclude credit from consideration throughout Volume II, all the while admitting that everything changes when the credit system intervenes?

It is hard to answer this question without probing into the deeply fraught relationship between Marx's "scientific" political-economic writings (*Capital*, the *Grundrisse* and *Theories of Surplus Value*) on the one hand and his historical writings (such as the *Eighteenth Brumaire of Louis Bonaparte* and *The Civil War in France*) on the other. Marx points to this tension on the very first page of *Capital*. Having defined the commodity as a unity of use- and exchange-values, he shunts the question of use-value aside (only, as we have seen, to resurrect it shortly thereafter) saying that "to study the uses of things is the work of history." From this and many other statements, we can reasonably conclude that Marx clearly understood political economy and history as two distinctive fields of enquiry. This raises the general question of how to understand the significance of the political economy. This is a particularly pertinent question to be asked of Volume II.

Answering it, I believe, helps us to understand the exclusions that characterize Volume II.

The political-economic writings are, of course, by no means devoid of historical content. The capitalist mode of production, which is their theoretical object of enquiry, is presented as an historical construct that arose out of feudalism, and which has the potential if not the necessity to evolve into some other social order, called "socialism" or "communism." The historical writings and the journalistic commentaries, on the other hand, make scant reference to political-economic theory and the laws of motion of capital—though they do, of course, document the turbulence of actual class struggles. The one exception is *The Communist Manifesto*, written in 1848, in which many of the themes later explored in *Capital* are easily discerned. We are, however, left to impute the political-economic content in the early historical works such as the *Eighteenth Brumaire*, which analyzes the aftermath of the economic crisis and revolutionary movements of 1847–48 in France. It takes considerable effort to exhume the economic content of *The Civil War in France*, which centers on the Paris Commune of 1871.[2] The focus is almost exclusively on fluid and often seemingly accidental political dynamics. Key concepts in Marx's political economy—the production of an industrial reserve army, the falling rate of profit, the theory of relative surplus-value, and the like—rate no mention even in historical texts written after the first volume of *Capital* was already published.

The difference between these two literatures would not be so troubling were it not for a seemingly unbridgeable divide between the fluid, accidental and voluntaristic tone of the historical and political writings, on the one hand, and the rigorously scientific and lawlike political economy on the other. There seem to be two Marxisms—the deterministic and the voluntaristic—that are never destined to meet, except through a rather arid debate, fuelled largely by Engels and turned into dogma by Stalin, on whether the transition to communism was a scientific question and whether dialectical materialism constitutes a theory of history.

In the introduction to the English version of the *Grundrisse*, Marx outlines the principles that guide his political-economic enquiries. These help explain the rules of engagement that Marx observed in constructing his theoretical edifice, while shedding light on where the gap between history and theory comes from. I have concluded that he rigorously (and if one wanted to be critical, as to some degree I am, one would say "rigidly") stuck by these principles in writing all of *Capital* (and there is no better place to examine this practice than in Volume II). This framework permitted him to transcend the particularities of his own times (such as the details of the crisis of 1857–58 that inspired his preparatory writings in the *Grundrisse*) and to produce a tentative though incomplete alternative theory of the laws of motion of capital. These laws animate, he held, the dynamics of all historical and geographical situations in which the capitalist mode of production predominates. But the achievement of this general theory came at a cost. The general framework Marx sets out constitutes a straitjacket that limits the applicability of these laws and leaves us a lot of work to do to understand particular historical movements and conjunctures.[3]

Marx sought a political economy that would be truly scientific. This science would, he hoped, have a power analogous to that of the knowledge structures of physics and chemistry. The law of value and surplus-value operates, Marx held, like a law of nature, albeit of capitalism's historical nature. Several times he compares value to the force of gravity. A better analogy would be the laws of fluid dynamics, which underpin all theorizing about the dynamics of atmospheres and oceans, and innumerable other phenomena where fluids of any sort are in motion. These laws cannot be mechanically applied to fields such as weather forecasting or climate change without all manner of modifications, and even then there are plenty of excesses that remain inexplicable. Marx's laws of motion of capital are very much of this sort. They do not and cannot explain all aspects of the prevailing economic climate let alone predict tomorrow's economic weather. This does not mean that Marx's political economy is irrelevant. No one in the physical sciences would dismiss the laws of fluid dynamics just because they do not provide exact predictions of tomorrow's weather.

Marx's general method goes something like this. He assumes that the legions of political economists and commentators who have written on the topic since the seventeenth century have made honest and good-faith attempts to understand the complicated economic world that was emerging around them. There were, of course, "vulgar" economists, who sought to justify the class privileges into which they were often born—but this was not true of William Petty, James Steuart, Adam Smith, David Ricardo, and so on. But even the vulgar economists, by the crassness of their arguments, revealed something very important about the inner nature of capital (as Marx shows in his amusing dissection of "Senior's Last Hour" in Volume I of *Capital*). By exploring critically (with the aid of dialectics) their formulations and the inner contradictions in their arguments, Marx aimed, as he declared in his Preface to *Capital*, to construct an alternative account of the laws of motion of capital.

Marx established his new political-economic science through a critique of classical political economy rather than through direct historical, anthropological and statistical enquiry and induction. This critique, most explicitly attempted in *Theories of Surplus Value* but also permanently present in *Capital* and the *Grundrisse*, accords a good deal of authority (some would argue far too much, and there are quite a few instances where I agree with that criticism) to the collective understandings of bourgeois political economy and bourgeois representations (as with, for example, the reports of the factory inspectors in England, the country where industrial capitalism was, according to Marx, most advanced). So how does he construe the general approach of the bourgeois political economists? And how did classical political economy frame its subject?[4]

“Production,” he says in the *Grundrisse*,

appears as the point of departure, consumption as the conclusion, distribution and exchange as the middle. … Thus production, distribution, exchange and consumption form a regular syllogism; production is the generality, distribution and exchange the particularity, and consumption the singularity in which the whole is joined together. … Production is determined by the general natural laws, distribution by social accident. … exchange stands between the two as formal social movement; and the concluding act, consumption, which is conceived not only as a terminal point but also as an end in itself, actually belongs outside of economics except insofar as it reacts in turn upon the point of departure and initiates the whole process anew. (*Grundrisse*, 108–9)

This statement is foundational for understanding Marx’s approach in *Capital*. Notice, then, the distinctions here invoked between *generalities* (production), which are deterministic and lawlike; *particularities* (exchange and distribution), which are accidental and conjunctural (for example, outcomes of social struggles that depend on the balance of forces deployed); and *singularities* (consumption), which I take to be unpredictable and potentially chaotic. Note also that the singularities of consumption belong largely “outside of economics” (and, presumably, within the realm of history as suggested on the first page of *Capital*). The general framework suggested here is laid out in Figure 1.

Figure 1: The “Weak Syllogistic’” Framework for Analysis that Marx Adopts in *Capital*

Universal Production	Universality	Natural Law	Determinate	Metabolic Relation to Nature	Evolution (Darwin)
Social Production	**Generality (Land, Labor, Capital, Money, Value)**	**Social Laws**	**Determinate**	**Laws of Motion of Capital**	**Political Economy**
Distribution	Particularity (Rent, Wages, Profit, Interest, Commercial Profit, Taxes)	Accidental and Contingent	Indeterminate	Outcomes of Class and Factional Struggles; Uneven Geographical Development	History, Geography, Geopolitics
Exchange	Particularity (Property Rights, Juridical Individuals, Competition, Centralization, Monopoly)	Accidental and Contingent	Indeterminate	Institutions, Competition versus Monopoly; Collective and Associated Forms of Capital and Labor	State Forms, History, Geography, Geopolitics
Consumption	Singularity	Chaotic	Unpredictable	Human Passions, Beliefs, Desires, Motivations, Socialities and Political Subjectivities (Affects)	Cultural and Psychological Analysis; Production of Human Wants, Needs, Desires

While this syllogism “is admittedly a coherence,” it is, says Marx, “a shallow one.” So he rejects it in favor of a dialectical conception of how production, distribution, exchange and consumption might be brought together within the totality of relations comprising a capitalist mode of production. After many pages discussing the inner and dialectical relations between, for example, production and consumption, and then production and distribution, and finally production and exchange, he reaches his conclusion. Production, distribution, exchange and consumption “form the members of a totality, distinctions within a unity. … Mutual interaction takes place between the different moments. This is the case with every organic whole” (*Grundrisse*, 99–100). The organic whole (totality) of a capitalist mode of production that Marx has in mind is not purely Hegelian (though it may well derive from revolutionizing Hegel's conceptions rather than simply turning them right-side-up). Its structure is ecosystemic, comprising relations within what Gramsci and Lefebvre call an "ensemble" or Deleuze an "assemblage" of moments. "Nothing simpler for a Hegelian than to posit production and consumption as identical," complains Marx. "And this has been done not only by socialist belletrists but by prosaic economists themselves, e.g. Say" (*Grundrisse*, 93–4).

One would expect that Marx would choose this dialectical and organic formulation to construct his alternative theory. But, from his practice in *Capital*, it becomes clear that he sticks to the shallow syllogistic framework given by classical political economy even as he uses organic thinking and dialectical-relational analysis to build his critique and explore alternatives. He sticks throughout as closely as he can to the bourgeois conception of a lawlike level of generality—of production—and excludes the "accidental" and social particularities of distribution and exchange (until he gets to discuss them in the latter part of Volume III), and even more so the chaotic singularities of consumption, from his political-economic enquiries. Thus both Volumes I and II presume that it does not matter how the surplus-value might be divided between interest, rent, profit on merchants' capital, profit of production and taxes. He also assumes that all commodities, with the exception of labor, are traded at their value (consumer desires are always manifest in ways that allow value to be realized in a trouble-free manner). There is, therefore, no theory of consumerism in Marx's *Capital* (an unfortunate gap given that consumption now accounts for some 70 percent of economic activity in the United States—compared to some 30 percent in China, which was probably closer to the general level in Marx's time).

Even more interestingly, Volume I is extremely weak in its discussion of the particularity of the distributive share that accrues to labor as wages. The question of what determines the value of labor-power is dealt with in two pages. It comprises a long list of all sorts of factors (everything from climate to the state of class struggle and the degree of civilization in a country) before declaring that labor-power is not a commodity like any other because it incorporates a moral element, but that in a given society at a given time its value is known. The analysis then proceeds on the presumption that the value of labor-power is fixed (which we know it never is). The later chapters on wages are pathetically thin. There is no attempt to come up with a theory of wage determination. All Marx does is to repeat the theory of surplus-value for the umpteenth time and add the insight that the practices of paying wages by the hour or by the piece mask even further what surplus-value might be about. He also records that there is a problem of trade between nations when the cost of reproduction, and therefore the value of labor-power, differs.

In Volume II, Marx likewise analyzes the commodity and money circuits of capital without any mention of distribution—interest on money capital and profit on commercial capital—and excludes any analysis of the credit system even though he freely concedes innumerable times that credit is a necessity and that everything looks different when it is taken into account. Again and again, we find exclusions of this sort from the analysis. The exclusions are almost always justified on the grounds that they do not lie within the field of generality with which Marx is exclusively concerned. This practice is found right throughout *Capital*. "It is outside the scope of our plan," Marx writes in his opening to what would seem a crucial chapter on "Credit and Fictitious Capital" in Volume III, "to give a detailed analysis of the credit system and the instruments it creates (credit money, etc.). Only a few points will be emphasized here, *which are necessary to characterize the capitalist mode of production in general*" (emphasis added).

I should add a caveat here. The exclusions are occasionally transcended (as in the case of the value of labor-power about which Marx has to say something). Marx typically handles such situations by a brief description of the problem (for example, the relation to nature or the consumer desires of workers), and adds a few assertions as to its significance before returning to the generality of production. He rarely devotes more than a few paragraphs (and sometimes only a sentence or two) to such issues.

So why does he stick with the bourgeois structure of knowledge so rigidly when he has already laid out an alternative dialectical, relational and organic way to understand how capital works? I really do not have a good answer to this question. All I know for sure is that this is clearly what he does (the textual evidence is overwhelming). My best hypothesis is that, if Marx's fundamental aim was to subject classical political economy to critique on its own terms, then he had to accept the general nature of those terms in order to identify their inner contradictions and deconstruct their absences. So, if bourgeois theorists presupposed a non-coercive free market, then he had to as well (as he does in the second chapter of Volume I). If the distinctions between generalities, particularities and singularities were foundational to the bourgeois mode of thought, then he had to work on that foundation too. This is the only answer I can give, but it is not fully satisfactory, because he abandons some bourgeois terms but not others. He will have no truck in Volume I with questions of supply and demand or of utility, for example (and we will shortly see why). He never bothers to explain the rationale for his choices. But it is overwhelmingly obvious that these are the choices he makes throughout.

The three levels of generality, particularity and singularity are not the whole story. There is a fourth level—that of universality—which concerns the metabolic relation to nature. Marx objected strongly to the habit of the classical political economists of presenting production "as encased in eternal natural laws independent of history." Marx rejects this "naturalization" of the political economy of capitalism. He takes every opportunity he can to attack this naturalistic view of things (including the Ricardian/Malthusian view that the profit rate was bound to fall because of natural scarcities and rising rents). The generalities of the capitalist mode of production cannot, he insists, be explained by appeal to the universalities of natural law.

While Marx accepts that "capitalist production" is the lawlike generality that he wants to understand, he refuses the idea that it is natural in the sense that the natural sciences would understand that term. Capitalism is lawlike but the laws (including those of private property relations) are a product of human action. These laws should be distinguished from those that derive from our embeddedness in a world governed by natural laws (such as those of physics, chemistry and Darwinian evolution). These latter laws are considered immutable: we cannot live outside of them. In Volume I of *Capital*, Marx writes: "Labour … as the creator of use values, as useful labour, is a condition of human existence which is independent of all forms of society." It is "an eternal and natural necessity which mediates the metabolism between man and nature and therefore human life itself" (C1, 133). The labor process "is the universal condition for the metabolic interaction between man and nature, the everlasting nature-imposed condition of human existence, and therefore it is independent of every form of that existence, or rather it is common to all forms of society in which human beings live" (C1, 290). We can only do as nature does.

The focus of Marx's scientific enquiry is to uncover how the general laws of capitalist political economy came to be, how they actually function, and why and how they might be changed. And he wants to do this without invoking the universality that describes our ever-evolving metabolic relation to nature.

Marx takes these distinctions between universality, generality, particularity and singularity from bourgeois political economy even as he injects into them relational and dialectical meanings and critical strategies drawn from Spinoza and Hegel. He threatens, in the *Grundrisse*, to make them his own by embedding them in the concept of an organic totality. The problem would then be to understand how these different "moments"—the universal metabolic relation to nature, the general production of surplus-value, the particularities of its distribution and exchange relations and the singularities of consumption—interrelate. He then has to show how to isolate the lawlike character of production from everything else, and why it is so important to do so.

Marx's political economy operates primarily at the level of the lawlike generality of production. But why prioritize production? Marx holds that "production predominates not only over itself, in the antithetical definition of production, but over the other moments as well. The process always returns to production to begin anew" (*Grundrisse*, 99). What does this strange wording mean? It would be wrong to interpret the production that "predominates" over itself as the material production of goods and services, as the concrete labor process, or even as the production of commodities. This is, unfortunately, a very common misreading. It leads to that erroneous interpretation of Marx as saying that social relations, ideas, human desires, and so on, are all determined by physical material practices. This is an erroneous productivist and physicalist reading of Marx, and it is not what Marx's historical materialism is about.

The production that "predominates" within a capitalist mode of production is *the production of surplus-value*, and surplus-value is a *social* and not a physical, material relation. It is, after all, the production of surplus-value that is the fundamental focus of Volume I of *Capital*. The mobilization by capital of material labor processes is geared to the production of surplus-value. What Marx means when he says that production predominates over itself in the "antithetical definition of production" is that concrete material labor processes that are surplus-value producing are all that matter. Material production processes that do not produce surplus-value are valueless. In Marx's grander scheme of things, of course, this means that the emancipatory possibilities available to human beings through the sensual physicality of the labor process are perverted and dominated by the social necessity to produce surplus-value for others. The result is universal alienation of human beings from their own potential capacities and creative powers. Some of the most powerful passages in the *Grundrisse* and *Capital* hammer home this point.

The production of surplus-value through the circulation of capital is, in short, the pivot upon which the lawlike character of a capitalist mode of production turns: no surplus-value, no capital. This was the fundamental break that Marx made with classical political economy. Marx continues: "That exchange and consumption cannot be predominant is self-evident. Likewise, distribution as distribution of products; while as distribution of the agents of production it is a moment of production. A definite production thus determines a definite consumption, distribution and exchange as well as *definite relations between these different moments*. Admittedly, however, *in its one-sided form*, production is itself determined by the other moments" (*Grundrisse*, 99). "One-sided" refers to the material labor process rather than to the social production of surplus-value. So what does "determine" mean here?

The "law" of a capitalist mode of production actually takes the following form: all manner of contingent and accidental structures of distribution and exchange and a grand diversity of consumption regimes are possible in principle, *provided that they do not unduly restrict or destroy the capacity to produce surplus-value on an ever-expanding scale*. A relatively egalitarian social-democratic structure of distribution in, say, Scandinavia can coexist with a brutal, unequal and authoritarian neoliberal regime of distribution in, say, Chile in the 1980s, provided that surplus-value is produced in both places. There is no unique pattern of distribution, system of exchange or specific cultural regime of consumption that can be derived from the general laws for the production of surplus-value. But—and this is a big "but"—*the possibilities are not infinite*. If any one of the moments, including the relation to nature, assumes a configuration that unduly restricts or undermines the capacity to produce surplus-value, then either capital ceases to exist or all-round adaptations within the totality of relations must occur. This is what “determines” means.

Such adaptations can occur incrementally, most often either through competition, state interventions or uneven geographical developments, in which configurations achieved in one space of the global economy out-compete others in producing surplus-value (much as the Chinese are now doing and the Japanese and Germans did in the 1980s). Changes can also occur through violent shakeouts: hence the significance of both localized and global crises and even wars (please note: I am not saying all wars and armed struggles occur solely for this reason).

Distribution, exchange and consumption reciprocally affect each other. But they also affect the production of surplus-value. This is so, Marx concedes, for a very simple reason: “Ground rent, wages, interest and profit figure under distribution while land, labour and capital figure under production as agents of production.” Capital itself, Marx points out, “is posited doubly, (1) as agent of production, (2) as source of income, as a determinant of specific forms of distribution. … The category of wages, similarly, is the same as that which is examined under a different heading as wage labour, the characteristic which labour here possesses as an agent of production appears as a characteristic of distribution.” So, while Marx sidelines the distributive aspects (the particularities of actual wage and profit rates, as well as interest rates, rents, taxes, profits on merchant capital) as contingent and accidental, and as therefore not lawlike (though this does not exclude empirical or historical generalizations), he foregrounds the crucial roles of land, wage labor, capital, money and exchange in the lawlike production of surplus-value. As a result, the factors of production loom large while the agents and rewards that attach to them are excluded from the picture (as is the case most obviously in Volume II). This leads many students to ask: Where is the agency in all of this political-economic theory? The answer is that Marx is merely following classical political economy. In his historical writings he does not have to do so.

So, let us look a little more closely at how he handles the particularities and the singularities that are so rigorously (rigidly?) excluded from his general theory.

THE PARTICULARITIES OF EXCHANGE

In the second chapter of the first volume of *Capital*, Marx assumes that “men are henceforth related to each other in their social process of production in a purely atomistic way. Their own relations of production therefore assume a material shape which is independent of their control and their conscious individual action.” Marx here accepts the Smithian vision of a “hidden hand” of a perfectly functioning competitive market. The laws of motion of capital that Marx constructs also rest upon this fiction. The result, as we know, is Marx’s compelling theoretical critique of free-market utopianism. The inevitable outcome, says Marx, is wealthier capitalists at one pole and ever more impoverished workers at the other. Such a system could not possibly produce, therefore, a result that would redound to the benefit of all, as Smith presumed.

This utopian vision of a perfectly functioning market never was and never could be realized. But what happens when exchange does not conform to this utopian vision? There are two areas in particular that call for attention.

Supply and Demand

When first reading Marx, many students ask: What happened to supply and demand? The answer Marx gives is: "If demand and supply balance, the oscillation of prices ceases, all other circumstances remaining the same. But then demand and supply also cease to explain anything." The price of labor, for example, "at the moment when demand and supply are in equilibrium, is its natural price, determined independently of the relation of demand and supply." Marx deals, for the most part, exclusively in the so-called "natural" or equilibrium prices presumed in classical political economy. The reason that shoes cost more on average than shirts has nothing to do with differentials in demand for shoes relative to shirts. It is determined by labor content (both past and present). Supply and demand and price fluctuations are vital for bringing the economy into equilibrium, but they have nothing to say about where that equilibrium might lie.

But we know, both theoretically and in practice, that supply and demand do not always come into equilibrium. There are many systemic reasons, such as asymmetries of information and of power, and politically managed currency exchange rates (such as that practiced by the Chinese), that distort prices and dictate a path of development that is very different from that which Marx, drawing on Smith, theoretically allowed. Marx, for the most part, rules these distortions out by assumption. But there are instances when he has to allow them into the picture because of their systemic relevance. In the case of the price of labor, for example,

> capital acts on both sides at once. If its accumulation on the one hand increases the demand for labour, it increases on the other the supply of workers by "setting them free" [through technologically induced unemployment] while at the same time the pressure of the unemployed compels those who are employed to furnish more labour, and therefore makes the supply of labour to a certain extent independent of the supply of workers. The movement of the law of supply and demand of labour on this basis completes the despotism of capital.

But as soon as workers figure this out, and form institutions and organize through trade unions to protect their interests, then "capital and its sycophant, political economy, cry out at the infringement of the 'eternal' and so to speak 'sacred' law of supply and demand" (C1, 793–4).

But, in both Volume II and Volume III, we encounter an even more damning reason why this equilibrium assumption cannot hold. It is both inevitable and necessary that the relation between supply and demand *not* be in equilibrium if capital is to survive. This is so because the total demand set in motion by capital is c + v (this is what capital lays out on wages and purchase of means of production) and the total supply is c + v + s (this is the total value produced). Capital’s interest is to maximize the surplus-value, which increases the gap between demand and supply. So where does the extra (effective) demand come from to buy the surplus-value? Marx’s very interesting answer is given in chapter 9, below.

The Coercive Laws of Competition

“The coercive laws of competition” play a vital role throughout *Capital*. “Competition,” Marx argues in the *Grundrisse* (730; 752), “is the mode generally in which capital secures the victory of its mode of production.” It “executes the inner laws of capital; makes them into compulsory laws towards the individual capital, *but it does not invent them. It realizes them*” (emphasis added). Like supply and demand, competition is treated as a mere executor and enforcer of inner laws of motion of capital that are established by other forces.

With respect to absolute surplus-value and the extension of the working day, for example, the spread of the appalling practices he describes does not depend in any way on the good or ill will of the individual capitalist. “Under free competition, the immanent laws of capitalist production confront the individual capitalist as a coercive force external to him” (C1, 381). With respect to relative surplus-value, innovations in productivity are similarly impelled forward by competition for market advantage. “While it is not our intention here,” he says,

> to consider the way in which the immanent laws of capitalist production manifest themselves in the external movement of the individual capitals, assert themselves as the coercive laws of competition, and therefore enter into the consciousness of the individual capitalist as the motives which drive him forward, this much is clear: a scientific analysis of competition is possible only if we can grasp the inner nature of capital, just as the apparent motions of the heavenly bodies are intelligible only to someone who is acquainted with their real motions, which are not perceptible to the senses. Nevertheless, for the understanding of the production of relative surplus-value … there is a motive for each individual capitalist to cheapen his commodities by increasing the productivity of labour. (C1, 433)

In considering the impulsions that force individual capitalists to reinvest a part of their surplus-value in expansion, he invokes similar processes:

> The development of capitalist production makes it necessary constantly to increase the amount of capital laid out in a given industrial undertaking, the competition subordinates every capitalist to the immanent laws of capitalist production, as external coercive laws. It compels him to keep extending his capital so as to preserve it, and he can only extend it by means of progressive accumulation. (C1,739)

Pressures to equalize the rate of profit, so essential to the argument that leads into the theory of a falling profit rate, similarly presume the operation of the coercive laws of competition.

But what happens when the enforcing power of competition is, for some systemic reason, ineffective? There is, Marx concedes, always a tendency for monopoly to be the final outcome of competition. But monopoly, oligopoly and the centralization of capital can also arise for other reasons. When barriers to entry into a particular line of production are high because of the massive amounts of capital initially required (as in building railroads), then "the laws of centralization of capital," with the help of the credit system, must take over. In fact, in any line of production where there are pronounced economies of scale, then something like an oligopolistic situation may result. To all this I add my own particular caveat: that, in a world of high transport costs, local industries, even those of small scale, are protected from competition. Falling transport costs from the mid-1960s onwards (with containerization being one of the unsung heroes of the process) changed the geography of competition remarkably.

Two important points then follow. When monopolistic and oligopolistic organization dominates, the laws of motion of capital (and even value itself) look very different. This was reflected in the theories of (state) monopoly capitalism that were articulated during the 1960s by Baran and Sweezy and the French Communist Party. The dynamics outlined by Lenin when he associated imperialism and monopoly capitalism into a specific configuration likewise depart significantly from the laws which Marx lays out in *Capital*.[5] This is an instance where the laws of motion are themselves clearly in motion.

Phases of monopolization are, however, often followed by phases where the restoration of the power of the coercive laws of competition surges to the forefront of political concern. This happened towards the end of the 1970s throughout much of the capitalist world. It was, after all, central to the neoliberal agenda. Competition can be, as capitalists frequently complain, "ruinous," but monopoly can all too easily produce, as Baran and Sweezy argued, "stagflation." Capitalist state policies frequently attempt to regulate the balance between monopoly and competition either one way (through nationalization of the "commanding heights" of the economy) or another (by anti-merger and monopoly legislation or by surrendering, willingly or unwillingly, to privatization and global competition).

In the cases of both supply and demand and competition, then, questions arise as to the power of the enforcers to do their work. Laws mean nothing, after all, without effective enforcement. Whenever this issue comes up in *Capital*, as when the "laws of centralization of capital" are broached in Volume I, Marx characteristically turns away and says, "these laws cannot be developed here," even as he argues that centralization constitutes, with the aid of the credit system and joint stock companies, "new and powerful levers of social accumulation" (C1, 780). This does not diminish the relevance of Marx's focus on the laws as dictated by decentralized competition. But it does play an important role when it comes to figuring out how well those laws are being enforced in actual situations and why those laws may be changing. The ever-unresolved tension between decentralized competition and centralized monopoly power can even, under certain circumstances, become a trigger for crisis formation.

THE PARTICULARITIES OF DISTRIBUTION

Matters get even more interesting when it comes to the relations between the particularities of distribution and the general laws of motion of capital. While Marx concedes that distributions must be integrated into those laws whenever they affect production directly, this occurs only under special circumstances (most particularly, of course, with respect to the relative shares of wages and profits in Volume I). He excludes any consideration of how the surplus-value might be distributed between rent, interest, profit on commercial capital and taxes in Volume I. In Volume II, he avoids credit and interest even though he refers to their importance innumerable times (rent and profit on merchants' capital are likewise excluded). The circulation of commodity capital is also highlighted, but there is barely a mention of profit on commercial capital. This is why I find it so interesting, in teaching Volume II, to import all of the materials about merchants' capital (understood by Marx as both commercial and money-dealing capital) from Volume III into the purely technical presentations of Volume II on the circulation of money and commodity capitals (the circuit of production capital having been covered in Volume I). Not only does it attach a notion of class agency to the technical relations, but it opens up the revolutionary perspective that Engels feared was so lacking.

Volume II demonstrates, for example, the existence of a potential gap between where surplus-value is produced (in the labor process) and where it might be realized in circulation. If commercial (commodity) capital is powerful enough—as in the case of, say, Walmart—then much of the surplus-value produced may be realized by the merchants. The money capitalists can also take a huge cut, as can the landlords and the taxman, leaving the direct producers with the slenderest of profit margins (this is one of the reasons that any attempt to measure falling profit rates by looking only at money profits in the production sector alone is so hazardous). Organized labor can seem to procure a larger share of the value produced through struggles at the point of production, only to have that share recuperated by the capitalist class as a whole by the money-gouging retailers, the debt-peddling bankers and financiers, the landlords and, of course, the taxman, who often seems to specialize in taxing the poor to return surplus-value to the corporations and to the capitalists in the form of lucrative tax breaks and subsidies.

Throughout *Capital* Marx states that both merchants' capital and interest-bearing capital are "antediluvian" forms of capital that preceded the rise of a capitalist mode of production. He takes pretty much the same position with respect to landed property. The problem is then to understand how these prior means of extracting surpluses are rendered subservient to the rules of the capitalist mode of production. Usury, which played such an important role in undermining feudalism, had to be revolutionized so that it became interest-bearing capital operating within freely functioning money markets. Merchants, who once made their money buying cheap (or by robbery and stealing) and selling dear, can appropriate only that share of the surplus-value that accrues to them by virtue of the services they render to surplus-value production and realization. Rents on land and resources are fixed in relation to superior surplus-value production conditions; and rent levels can guide resource and land uses in ways that might optimize surplus-value production. This is broadly how Marx approaches these aspects of distribution. The rules of a capitalist mode of production supposedly discipline the distributional arrangements and the distributional shares (or, as Marx puts it in the *Grundrisse*, production of surplus-value "predominates" over distribution).

Financiers, merchants and landlords may or may not be more powerful than industrial capitalists in particular places and times. However, Marx treats their remunerations in a pure capitalist mode of production as being exclusively made up of deductions out of the surplus-value that comes from the exploitation of living labor in production. Their rate of return is sensitive to how much surplus-value is produced, which depends in part on their own indirect contribution (or lack of it) to surplus-value production. Distributional arrangements thus impinge upon the generalities of production in ways that Marx is reluctant to allow.

THE SINGULARITY OF CONSUMPTION

The production of surplus-value depends on its realization through consumption. Consumption cannot, therefore, be kept entirely outside of political economy as a general category because it reacts "upon the point of departure [of capital accumulation] and initiates the whole process anew." In the *Grundrisse*, Marx spends several pages going over the ways in which consumption and production of surplus-value relate. It is important to distinguish, Marx says, between (a) productive consumption on the part of the capitalist who needs raw materials, intermediate inputs, machinery, energy and the like in order to set a labor process in motion and (b) individual "final" consumption on the part of workers, capitalists and the various "unproductive classes" (military, state officials, and so on) that make up any social order. Consumption is necessary to complete the realization of the surplus-value produced in commodity form. But the demand has to be backed by an ability to pay. The capitalist, in short, recognizes only one kind of demand: *effective* demand.

So what is it, then, that lies outside of economics and political economy? To term consumption a "singularity" is to characterize it as something that is outside of the range of rational calculation, that is potentially uncontrollable, chaotic and unpredictable. The actual state of wants, needs and desires (and thus the qualities and politics of daily life) are therefore sidelined in the general theory. Capital is treated as agnostic as to what use-values to produce to satisfy final consumption, and seems indifferent as to whether people want horses and buggies or BMWs. The capitalist seems to say to the consumer: Whatever you fancy, want, need or desire, we will produce, provided you have enough money to pay for it. The issue of the historical and geographical development of actual consumption patterns and cultural lifestyles is thereby evaded. In Volume I of *Capital* Marx assumes that an effective demand always exists, that commodities (with the exception of labor-power) are traded at their value. This permits Marx to produce a general theory of capital accumulation that has the same relevance over entirely different final consumption regimes. This is the advantage that comes from abstracting from any distinctive regime of use-values. Had he locked himself into the consumption habits of mid-nineteenth-century Britain, we would no longer read him in the way we do.

But there are some general forces at work that call for elaboration. If a commodity is no longer wanted, needed, fancied or desired as a use-value, then it has no value. Both old and new uses and needs must therefore be stimulated to keep accumulation going. The problem is that, while "commodities are in love with money … 'the course of true love never did run smooth'. … Today the product satisfies a social need. Tomorrow it may perhaps be expelled partly or completely from its place by a similar product" (C1, 202–3). A vast industry has grown up since Marx's time to stimulate demand through fashion, advertising, emphasis upon lifestyle choices, and the like. But human curiosity and desire is not a blank slate upon which anything can be written. One need only look at the alacrity with which young children deploy their desires to play when given an iPad to recognize that Steve Jobs's brilliance lay as much in his understanding of human wants, needs, desires and powers as in his technical sophistication.

The manipulation and mobilization of human desires has been central to the history of capitalism, but Marx excludes it from the political economy precisely because it is the work of history to deal with it. But it is not entirely outside of theoretical elaboration.

Laborers, for example, exercise choices in how and on what they spend their money, so the state of their wants, needs and desires can become important. Maintenance of the necessary balances between the different sectors of the economy may require, Marx suggests, bourgeois manipulation of mass consumption to make the workers' consumption "rational" in relation to accumulation. Bourgeois philanthropy is therefore often about channeling laborers' consumption habits in ways favorable to accumulation. This was later most clearly exemplified in Henry Ford's use of social workers to monitor and direct workers' consumer habits when he introduced the $5 eight-hour day into his factories. The distinction between luxury goods and wage goods also becomes important because the dynamics of bourgeois consumption and of workers' consumption are qualitatively different.

Throughout *Capital*, the manifold ways that consumption can affect production are largely depicted in formal and technical terms, rather than as social relations and ways of daily life that have dynamics of their own. Marx avoids any specific characterization of the nature and form of final consumption habits, and he certainly avoids any mention of cultural preferences, fashion and aesthetic values or the compulsions of human desires (the role of sexuality in shaping consumerism, for example). But we can clearly see in Marx's presentation certain imperatives that explain why China is now the biggest market for BMWs when, a few years ago, the streets were full of bicycles.

Part of the work that Marx left us to do, therefore, is to pull together a far better understanding of contemporary consumerism than we typically possess. Traditional methodologies of political-economic enquiry do not work very well in this sphere (which is probably why Marx resisted bringing too many of the facts of consumption within the field of political economy). This applies as much to productive consumption—the application of labor in the labor process to consume materials in commodity production. The difficulty of controlling the singular character of laborers at work has come to be recognized, particularly through the work of Mario Tronti and Antonio Negri, as having great revolutionary potential precisely because of its singular character.[6]

In recent times, studies galore of consumption and consumerism have been produced, mainly in the field of cultural studies; but unfortunately all too many of them fail to situate their topic in relation to the totality of relations that Marx envisaged. Indeed, many such studies are conceived as antagonistic to the lawlike character of capital accumulation. There is, obviously, a sense in which this antagonism is correct, which is precisely why Marx held consumption to be about singularities, not generalities. But insofar as the ultimate aim of historical work (as opposed to lawlike political economy) is to understand a capitalist mode of production as an organic totality in evolution—so any attempt to understand our current conjuncture requires that we bring the world of consumption, of political subjectivities, and of the aesthetic, cultural and political preferences of individuals within the frame of enquiry, not as a substitute for the political economy but as a foundational and complementary field of analysis.

Of course, the world of human desire is not beyond the marked influence of the laws of motion of capital. The way that capital has changed our material world has implications for how our mental conceptions and our psychological make-up, our wants, needs and desires, our self-understanding have also changed. When the laws of motion of capital produced suburbanization as one answer to the persistent problem of overaccumulation, then tastes, preferences, wants, needs, desires and political subjectivities all shifted in tandem. And once all of these become embedded in a culture, then the rigidity of those cultural preferences came to form a serious barrier to revolutionary change. If, for example, it becomes necessary to revolutionize and reject suburban ways of life in order to open new paths either for capital accumulation, or even more compellingly for the transition to socialism through re-urbanization, then the fierce attachments of powerful political constituencies to suburban lifestyles and cultural habits will first have to be confronted, and eventually overcome.

It is undeniable that Marx operates throughout most of the three volumes of *Capital* within the “shallow syllogistic” framework derived from classical political economy, and that he largely confines his theoretical investigations to the level of generality within a purely functioning capitalist mode of production. In the texts that have come down to us, he marginalizes and frequently excludes questions of universality (the relation to nature), particularity (of exchange relations and distributions) and singularity (of consumption and of consumerisms), even as he recognizes in various study plans (such as that in the *Grundrisse*) that he would need further books on, for example, competition (actually there is a not very informative chapter on this topic in Volume III), the state, and the world market, to complete his project. When he does hit a point in *Capital* where the framework does not work, as we will see in the chapters on the circulation of interest-bearing capital, then he finally goes beyond it. But Marx does not attempt to re-specify what the laws of motion might look like under those new conditions where the framework is broken.

Volume II of *Capital* is written almost entirely in the shadow of the “shallow syllogistic” framework that Marx tended to impose upon all his political-economic enquiries. Rarely does he venture beyond that framework. While far-reaching and enlightening in some directions, the theoretical world he depicts is rigorously limited in others. Confining himself so tightly within the level of generality permitted Marx to construct an understanding of capital that transcended the historical particulars of his own time. This is why we can still read him today—even Volume II—and make sense of so much of what he has to say. On the other hand, this framework makes for difficulties of any immediate application to actually existing circumstances. This is the work we are left to do. We can better appreciate the nature of that work, however, when we understand the self-imposed limits of Marx’s general theory and what, within its limitations, that theory can do for us. It is in the spirit of that question that I propose to take on the contents of Volume II. And it is to that exciting but daunting task that I now turn.

CHAPTER ONE

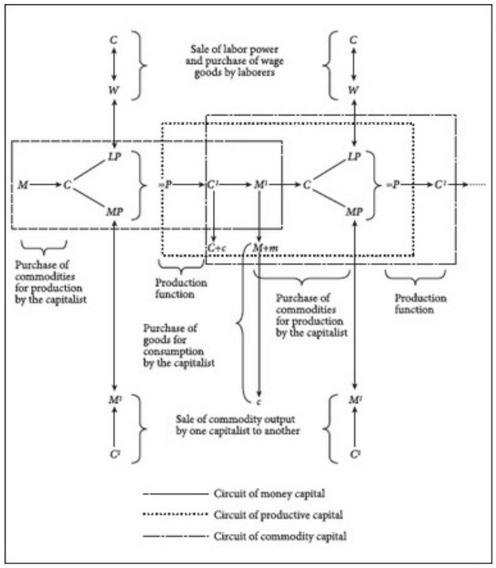
The Circuits of Capital (Chapters 1–3 of Volume II)

Capitalists typically start the day with a given amount of money. They go into the marketplace and buy means of production and labor-power, which they put to work using a particular technology and organizational form to produce a new commodity. This commodity is then taken to market and sold for the initial amount of money plus a profit (or, as Marx prefers to call it, a surplus-value). This is the basic form of the circulation of capital that Marx works with in Volume I of *Capital*. Put schematically, capital is defined as value in motion: *Money—Commodities……Production……Commodity'—Money'* (where M' can also be represented as M + DM, or in these chapters as *m*, the surplus-value). The central thesis Marx works with is that labor has the capacity to create more value (a *surplus*-value) than the value it can command as a commodity on the market. The freshly produced commodity, "impregnated" with surplus-value, is what is sold for a profit on the market. The reproduction of capital then depends on the recycling of all or part of M' back into the purchase, once more, of labor power and means of production to engage in a fresh round of commodity production.

"In Volume I," Marx writes, "the first and third stages [*M-C* and *C'-M'*] were discussed only insofar as this was necessary for the understanding of the second stage, the capitalist production process. Thus the different forms with which capital clothes itself in its different stages, alternately assuming them and casting them aside, remained uninvesti-gated. These will now be the immediate object of our enquiry" (109).

In the first three chapters of Volume II, Marx disaggregates the circulation process into three separate but intertwined circuits of *money* capital, *productive* capital and *commodity* capital. In the fourth chapter, he examines the circuit of what he calls "industrial capital," which is the unity of the three different circulation processes taken as a whole. In effect, Marx looks at the circulation process from the three different perspectives of money, production and the commodity. The general framework is laid out in Figure 2.

Figure 2



On the surface, this whole approach appears rather simplistic, even banal. He takes the continuous flow of circulation and boxes off three different circulation processes within it. It hardly seems worthwhile. But, through this tactic, he reveals and dissects the difficulties and contradictions inherent within the logic of the circulation process. From each window or perspective we get to see a rather different reality, and this allows us to identify points of potential disruption.

Throughout these chapters, Marx is preoccupied with three things, two of which are very explicit, while the third is implicit. The first is the idea of metamorphosis. This language derives from Volume I, chapter 3, where Marx makes much of the “metamorphoses” that occur within what he calls the “social metabolism” of capital. Metamorphoses are about changes in the form that capital assumes—from money to productive activity to commodity. Marx is interested both in the character that capital assumes as it enters and for a while dwells in each of these different states, and in how capital moves from one state to another. The central question that he poses is: What different possibilities and capacities attach to these different forms, and what difficulties arise in the move from one form to another? The analogy that might help here is that of the lifecycle of the butterfly. It lays its eggs; these become caterpillars that crawl around looking for food, before becoming a chrysalis within a protective cocoon. A beautiful butterfly suddenly emerges from the cocoon, and the butterfly flits around at will before laying its eggs to initiate the cycle anew. In each state the organism exhibits different capacities and powers: as an egg or as a chrysalis, it is immobile but growing; as a caterpillar it crawls around in search of food; and as a butterfly it can flit around at will. And so it is with capital. In its money state, capital can flit around butterfly-like pretty much at will. In its commodity form, capital, like the caterpillar, wanders the earth in search of someone who wants, needs or desires it, and has the money to pay for it and ultimately consume it. As a labor process, capital is for the most part rooted in the “hidden abode of production” (as Marx calls it in Volume I), in the place of the material activity of transforming natural elements through the production of commodities. It is usually locked in place at least during the time taken to make the commodity (transport, as we shall see, is an important exception).

For me, these distinctions are immediately meaningful. The differential spatial and geographical mobilities of capital in these different states have enormous implications for understanding the processes we now lump together under the heading of “globalization.” Each “moment” in the circulation process—money, productive activity, commodity—is expressive of different possibilities. Money is the most geographically mobile form of capital, the commodity somewhat less so, while production processes are generally much harder (though by no means impossible) to move around. Within this general characterization there is a lot of variability. Some forms of commodity are easier to move around than others, and ease of movement is also relative to transportation capacities (containerization made shipping bottled water from France or Fiji to the US possible). The differential empowerment of the different factions of capital has huge consequences for how capital operates on the world stage. To empower finance capital relative to other forms of capital (such as production and merchant capital) is to invite the sort of hypermobility and “flitting around” of capital that has characterized capitalism over the last few decades. Marx does not take up such topics, but there is no reason why we cannot. Marx concentrates on other features of the metamorphoses that occur, and the differences and contradictions that can potentially arise.

This leads to the second major question in which Marx is interested. This concerns the potential for disruptions and crises within the circulatory process itself. In Volume I he made clear that the transitions from one moment to another are never free of tensions. It is generally easier to go, for example, from the universal form of value (money) into the particular form of value (the commodity) than it is to go in the other direction (commodities may be “in love with money,” but “the course of true love never did run smooth,” he observes). There is also no immediate necessity that impels anyone who has sold to use the money they receive to buy. Individuals can hold or hoard money. This underpins Marx’s scathing attack upon Say’s law in Volume I. Say held that purchases and sales are always in equilibrium, and therefore that there can never be any general crisis of overproduction (a proposition that Ricardo also accepted). But the holding of money (hoarding), as Keynes was later also to point out, is a permanent temptation, given that money is a universal form of social power appropriable by private persons. Hoarding is also, Marx shows, socially necessary (and throughout Volume II we will find frequent instances where this is so). But if everyone holds money and no one buys, then the circulation process gums up and eventually collapses. “These forms therefore imply," says Marx in Volume I, "the possibility of crises, though no more than the possibility. For the development of this possibility into a reality a whole series of conditions are required, which do not yet even exist from the standpoint of the simple circulation of commodities" (C1, 209). Volume II is in part concerned to show how these possibilities might be realized, though it does so in a frustratingly muted and technical way.

Marx also pointed out in Volume I that autonomously forming monetary crises are a very real possibility. With the quantity and prices of commodities constantly shifting, ways have to be found to adjust the supply of money to accommodate to the volatility in commodity production. Here a hoard of money becomes absolutely necessary. It provides a reserve of money to be drawn upon at times of hyperactivity. When money becomes money of account, then the need for commodity money (gold and silver) can be evaded. Balances can be settled up at, say, the end of the year, thereby reducing the demand for actual money (specie, coins, notes). But using money of account creates a new relationship, that between debtor and creditor. And this produces, Marx argued in Volume I, a contradiction, an antagonism, that

> bursts forth in that aspect of an industrial and commercial crisis which is known as a monetary crisis. Such a crisis occurs only where the ongoing chain of payments has been fully developed, along with an artificial system for settling them. Whenever there is a general disturbance of the mechanism, no matter what its cause, money suddenly and immediately changes over from its merely nominal shape, money of account, into hard cash. Profane commodities can no longer replace it. (C1, 236)

In other words, you cannot settle your bills with more IOUs; you have got to find hard cash, the universal equivalent and representation of value, to pay them off. If hard cash cannot be found, then

> the use-value of commodities becomes valueless, and their value vanishes in the face of their own form of value. The bourgeois, drunk with prosperity and arrogantly certain of himself, has just declared that money is a purely imaginary creation. "Commodities alone are money," he said. But now the opposite cry resounds over the markets of the world: only money is a commodity. As the hart pants after fresh water, so pants his soul after money, the only wealth. In a crisis, the antithesis between commodities and their value-form, money, is raised to the level of an absolute contradiction. (C1, 236–7)

Does the analysis in Volume II shed light on this issue? The answer is both yes and no. In Volume II, Marx lays the basis for understanding the conditions that might convert the possibilities of circulatory crises into realities. But there is no compelling argument proffered as to why such possibilities *must* rather than *might* become realities, and under what conditions. In part, this derives from Marx's reluctance to integrate the particularities of distribution into his arguments. Marx refrains from any analysis of the role of credit in Volume II, because it is a fact of distribution and a particularity. But it becomes plain as a pikestaff, throughout Volume II, that credit has major effects within the generality of production, and therefore on the actual laws of motion of capital. In the absence of any consideration of how the particularities of distribution and exchange work, a general theory of crisis formation seems a non-starter.

The third and more implicit question that arises in these chapters concerns the definition of the "essence" of capital itself. I am not sure that the term "essence" is right here, but I think these chapters do offer the possibility of reflecting on the different forms that capital can assume, and ask if there is any priority to be given to any one of the forms, as opposed to saying that capital is simply "value in motion" or the total circulation laid out in Figure 2, and that is that. Is one of the circuits of capital more important than the others even though none of them can exist without the others? We need to pay attention to these questions here, because they have deep political implications. But Marx himself makes no attempt to tease out these political meanings. That is something we have to do.

Having outlined the general formula for the circulation of capital on the first page of Volume II, Marx states the assumptions upon which his inquiry will be based. He assumes "that commodities are sold at their values and that the circumstances in which this takes place do not change. We shall also ignore any changes of value that may occur in the course of the cyclical process" (109). The absence of any systematic concern for technological and organizational change in Volume II is, as already noted, a huge departure from the focus of Volume I. Holding the productivity of labor constant (in effect abstracting from the creation of relative surplus-value) makes the whole of Volume II unrealistic. But Marx plainly felt that this was the only way he could identify key relationships in the world of capital circulation that could be synthesized into a far more realistic working model of capital circulation and accumulation later on.

The first link (metamorphosis) in the chain of exchanges that make up capital circulation is the use of money to purchase labor-power and means of production. Money capital here "appears as the form in which capital is advanced." The word "appears" suggests, as is often the case, that all is not exactly as it seems. "As money capital, [money] exists in a state in which it can perform monetary functions, in the present case of general means of purchase and payment. … Money capital does not possess this capacity because it is capital, but because it is money." Not all money is capital, and not all buying and selling, even of labor-power (such as in the case of personal services or home help), is caught up in the circulation and accumulation of capital. What converts money functions into money capital "is their specific role in the movement of capital," and this depends on their relationship to "the other stages of the capital circuit." Only when embedded in the total circulation process of capital does money function as capital. Then, and only then, does money become "a form of appearance of capital" (113). So there is money, and then money functioning as capital. The two are not the same.

When money is used to buy labor-power—*M-LP*—then the money actually drops out of the circulation of capital, even as laborers use their money wages to buy commodities that they, under the control of capitalists, have produced. The laborers give up their commodity (labor-power) in order to get the money to buy the commodities they need to live, thus returning money to the circulation of capital. They live in a *C-M-C*–type circuit (or, as Marx prefers to notate it, an *L-M-C* circuit), as opposed to the *M-C-M'* circuit of capital. In this *L-M-C* movement, Marx argues, "the capital character vanishes though its money character remains" (112). He later expands on this theme:

> The wage labourer lives only from the sale of his labour-power. Its maintenance—his own maintenance—requires daily consumption. His payment must therefore be constantly repeated at short intervals … Hence the money capitalist must constantly confront him as money capitalist, and his capital as money capital. On the other hand, however, in order that the mass of direct producers, the wage labourers, may perform the act *L-M-C* [where *L* is the sale of their labor power], they must constantly encounter the necessary means of subsistence in purchasable form, i.e. in the form of commodities. Thus this situation in itself demands a high degree of circulation of products as commodities, i.e. commodity production on a large scale. (119)

The movement *M-LP* is often, and in Marx's view erroneously, viewed as "the characteristic moment of the transformation of capital into productive capital," and therefore "as characteristic of the capitalist mode of production." But "money appears very early on as a buyer of so-called services, without its being transformed into money capital, and without any general revolution in the general character of the economy" (114). For capital circulation truly to begin requires that labor-power first appear upon the market as a commodity. "What is characteristic is not that the commodity labour-power can be bought, but the fact that labour-power appears as a commodity." Money can be spent as capital "only because labour-power is found in a state of separation from its means of production," and because the owner of means of production is in a position to take

> control of the continuous flow of labour-power, a flow which by no means has to stop when the amount of labour necessary to reproduce the price of labour-power has been performed. The capital relation arises only in the production process because it exists implicitly in the act of circulation, in the basically different economic conditions in which buyer and seller confront one another, in their class relation. It is not the nature of money that gives rise to this relation; it is rather the existence of the relation that can transform the mere function of money into a function of capital. (115)

So here, then, is the first major precondition for the circulation of capital to occur: "*The class relation between capitalist and wage-labourer is… already present*" (115; emphasis added). This was a major theme in Volume I, particularly in the sections on primitive accumulation. Marx here reiterates that the existence of labor-power as a commodity "implies the occurrence of historic processes through which the original connection between means of production and labour-power was dissolved" (116).

"The transformation of money capital into productive capital" occurs when "the capitalist effects a connection between the objective and the personal factors of production insofar as these factors consist of commodities." If the laborer is to be put straight to work, the capitalist has to "buy the means of production, i.e. buildings, machines, etc. before he buys labour-power" (114). But this requires that such commodities—the means of production—are also readily available in the market. "For capital to be formed and to take hold of production, trade must have developed to a certain level, hence also commodity circulation and, with that, commodity production" (117). Only in this way can the objective factors (means of production) be brought together with the subjective power of labor in production.

The second major precondition for the circulation of capital to occur is this: *general commodity production for the market must already exist*. Only then will the capitalist find means of production available in the marketplace, and only then will wage laborers find the consumption goods required to reproduce themselves. If these prior conditions do not hold, then money cannot function as capital.

Marx is here disabusing us of the idea that capital is primarily to be understood in money terms, and he goes to considerable lengths to explain why (116). But, once the class of wage laborers exists and is able to reproduce itself, then a transformative dynamic gets set in motion:

> The same circumstance that produces the basic condition for capitalist production, the existence of a class of wage labourers, encourages the transition of all commodity production to capitalist commodity production. To the extent that the latter develops, it has a destroying and dissolving effect on all earlier forms or production, which, being pre-eminently aimed at satisfying the direct needs of the producers, only transform their excess products into commodities. It makes the sale of the product the main interest, at first apparently without attacking the mode of production itself; this was, for example, the first effect of capitalist world trade on such peoples as the Chinese, Indians, Arabs, etc. Once it has taken root, however, it destroys all forms of commodity production that are based either on the producers' own labour, or simply on the sale of the excess product as a commodity. It firstly makes commodity production universal, and then gradually transforms all commodity production into capitalist production. (120)

After these historical transformations have occurred, then capital can freely begin to circulate in a "pure" manner:

> It goes without saying, therefore, that the formula for the circuit of money capital: *M-C…P…C'-M'*, is the self-evident form of the circuit of capital only on the basis of already developed production, because it presupposes the availability of the class of wage-labourers in sufficient numbers throughout society. As we have seen, capitalist production produces not only commodities and surplus-value; it reproduces, and on an ever-extended scale, the class of wage labourers and transforms the vast majority of the direct producers into wage labourers. (118)

I have elsewhere argued, not only in relation to Marx's statements in Volume I but also on my own account, that Marx is predisposed to what I call a "dialectical and co-evolutionary theory of social change."[1] This idea is compatible with the way the argument is set up in Volume II. It seems the only way to get out of an endless “chicken and egg” kind of debate on the origins of capitalism. Both the class relation and generalized commodity production (and by implication the money form) must precede the rise of capital, but the rise of capital generalizes these preconditions.

The second stage in the circulation of capital is that of production capital. Marx does not spend too much time elaborating on this because it is, after all, the foundational form for the analysis of Volume I. This stage entails the productive consumption of both the labor-power and the means of production in a labor process.

> The movement presents itself as *M-C…P*, the dots indicating that the circulation of capital is interrupted; but its circuit continues with its passage from the sphere of commodity circulation into that of production. The first stage, the transformation of money capital into productive capital, thus appears as no more than the prelude and the introduction to the second stage, the function of productive capital.

The particular way that labor-power and means of production are brought together “is what distinguishes the various economic epochs of the social structure.” In the capitalist case,

> the separation of the free worker from his means of production is the given starting point … The actual process which the personal and material elements of commodity formation, brought together in this way, enter into with each other, the process of production, therefore itself becomes a function of capital—the capitalist production process, whose nature we have gone into in detail in the first volume of this work. All pursuit of commodity production becomes at the same time pursuit of the exploitation of labour; but only capitalist commodity production is an epoch-making mode of exploitation which in the course of historical development revolutionizes the entire economic structure of society by its organization of the labour process and by its giant extension of technique, and towers incomparably above all earlier epochs. (120)

Both means of production and labor-power are thereby transformed into “forms of the capital value advanced.” As such, they “are distinguished as constant and variable capital.” The “means of production are no more capital by nature than is human labour-power” (121). Marx then summarizes, for the umpteenth time, the theory of surplus-value: “In the course of its functioning, productive capital consumes its own components, to convert them into a mass of products of a higher value” such that the “product is therefore not only a commodity, but a commodity impregnated with surplus-value.” Productive capital, he insists throughout, is “the only function in which capital value breeds value” (131).

In the third stage of the process, we need to confront capital in the form of commodity capital. In exactly the same way that capital in money form can only perform money functions and that, as productive capital, it can only do as production does, so capital in commodity form “must perform commodity functions” (122). The function of *C′* (the commodity impregnated with surplus-value)

> is now that of every commodity product, to be transformed into money and sold, to pass through the phase of circulation *C-M*. As long as the now valorized capital persists in the form of commodity capital, is tied up on the market, the production process stands still. The capital

operates neither to fashion products nor to form value. According to the varying speed with which the capital sheds its commodity form and assumes its money form, i.e. according to the briskness of the sale, the same capital will serve to a very uneven degree in the formation of products and value, and the scale of the reproduction will expand or contract.

We here introduce a very important new dimension into Marx's theoretical framework. The speed of transition from one state to another is a very important variable. It is affected by "new forces independent of the magnitude of value which affect the degree of effectiveness of capital, its expansion and its contraction" (124). Speed-up, turnover time, and the like, when driven onwards by the coercive laws of competition, alter the temporal frame not only of the circulation of capital but also of daily life. The nature of these "new and independent forces" that underpin speedup calls for investigation. This forms one of the fascinating spheres of enquiry in Volume II.

That act of circulation *C'-M'* takes the "surplus-value that is simultaneously borne along by the commodity capital" and realizes it in money form, thus concluding the third phase of the metamorphoses of capital. But the surplus-value, it is important to remember,

first came into the world within the production process. It is thus now entering the commodity market for the first time, and moreover in the commodity form; this is its first form of circulation and hence the act c-m is its first act of circulation or its first metamorphosis, which thus still has to be supplemented by the opposite circulation act, the converse metamorphosis *m-c* [the lower-case letters indicate that Marx is here talking only of the motion of the surplus-value, not the total capital, *C'* and *M'* respectively].

The production of surplus-value is in fact the production of capital, and the reinvestment of all or part of the surplus-value is foundational to the reproduction of capital.

In all of this, two things stand out. "Firstly, the ultimate transformation of capital value back into its original money form is a function of commodity capital. Secondly, this function includes the first formal transformation of the surplus-value from its original commodity form into the money form" (127). As a result, "capital value and surplus-value now exist as money, i.e. in the form of the universal equivalent." We here get a hint of something that will become increasingly significant as the text unfolds: the distinctive and vital role of commodity capital in the overall circulation process, as the converter of the surplus-value impregnated in the commodity into money form.

At the end of the process, the capital value is thus once again in the same form in which it entered it, and can therefore open the process afresh and pass through it as money capital. And indeed because the initial and concluding form of the process is that of money capital (*M*), we call this form of the circuit the circuit of money capital. It is not the form of the value advanced, but only its magnitude, that is changed at the end. (127)

The circuit of money capital thus reflects "the way in which the initial and concluding form of the process is that of money capital" (124). Once the surplus-value is realized as capital, as "value that has bred value," as the “purpose and result” of the circulation process, then *M* “no longer appears as mere money, but is expressly postulated as money capital, expressed as value that has valorized itself” (“the goose that lays the golden eggs,” as Marx called it in Volume I). As soon as the capitalized surplus-value re-enters the circulation process, however, it does so simply as money, in which the distinction between the initial money capital recuperated and the surplus-value is obliterated. It returns, once more, to performing purely money functions. So, while we may care conceptually to distinguish between “*money* capital” (money that gets used as capital) and “money *capital*” (capital that has gone back to the money form) both “money capital and commodity capital are modes of existence of capital. The specific functions that distinguish them can thus be nothing other than the distinctions between the money function and the commodity function.”

Yet, “the commodity capital, as the direct product of the capitalist production process, recalls its origin and is therefore more rational in its form, less lacking in conceptual differentiation, than the money capital, in which every trace of this process has been effaced, just as all the particular useful forms of commodities are generally effaced in money” (131).

While the difference is effaced, we need to hang on to the “conceptual differentiation,” for it is this that reveals the secret of capital’s laws of motion. The surplus-value that is converted into money, m, can then be spent. But on what? A part goes to bourgeois consumption (spent on both necessities and luxuries, as Marx will later explain). But a part will also be spent as money capital, and hence underpin the expansion of accumulation.

Throughout this presentation, Marx insists upon a whole series of seemingly picayune distinctions. Why does he do this? The answer to this question becomes more apparent in the final section, where he considers the circuit as a whole. “Capital appears,” Marx writes,

> as a value that passes through a sequence of connected and mutually determined transformations, a series of metamorphoses that form so many phases or stages of a total process. Two of these phases belong to the circulation sphere, one to the sphere of production. In each of these phases the capital value is to be found in different form, corresponding to a different and special function. Within this movement the value advanced not only maintains itself, but it grows.

Within this “total process” that forms a “circuit,” definite functions and categories can be defined:

> The two forms that the capital value assumes within its circulation stages are those of *money capital* and *commodity capital*; the form pertaining to the production stage is that of *productive capital*. The capital that assumes these forms in the course of its total circuit, discards them again and fulfils in each of them its appropriate function, is *industrial capital*— industrial in the sense that it encompasses every branch of production that is pursued on a capitalist basis. (132–3)

Industrial capital is an unfortunate term, given current connotations of the word, but what Marx plainly means by it is that circulation of capital which passes through a labor process that creates surplus-value, and which is then realized and reproduced by passing through the other moments in the overall process. “Money capital, commodity capital and productive capital thus do not denote independent varieties of capital, whose functions constitute the content of branches of business that are independent and separate from one another. They are simply functional forms of capital, which takes on all three forms in turn.”

By restricting himself to this purely formal analysis, Marx obviates the need to discuss the distinctive agents who do indeed attach to these functions as distinctive businesses. Finance and money capitalists attach themselves to the money function, producer capitalists to the functions of production, and merchant (commercial) capitalists to commodity capital. Historically, the totality of the circuit of industrial capital in aggregate therefore has to engage not only the intertwining of the different circuits but also all the activities of the different active agents—distinctive factions of capital that extract distributive shares from the total surplus-value. Nowhere in Volume II, however, does Marx examine these factional roles. He prefers everything to be kept on a purely logical, formal plane. I think the reason he takes this tack is that, were he to introduce the historical roles of the different agents and the struggles that have occurred between them, the whole account would become so blurred as to hide what Marx regards as foundational functions. Indeed, at various points in Volume II, he subjects Adam Smith to critique (see 269–71) for believing that these factions of capital were entirely independent and autonomous forms of capital. Marx sees them as differentiated but inexorably intertwined within the single form of industrial capital.

Marx then interjects a very important observation:

> The circuit of capital proceeds normally only as long as its various phases pass into each other without delay. If capital comes to a standstill in the first phase, *M-C*, money capital forms into a hoard; if this happens in the production phase, the means of production cease to function, and labour-power remains unoccupied; if in the last phase, *C’-M’*, unsaleable stocks of commodities obstruct the flow of circulation.

The idea of obstructions and blockages to the circulation process is here broached, but only in a purely formal way:

> It lies in the nature of the case, however, that the circuit itself determines that capital is tied up for certain intervals in the particular sections of the cycle. In each of its phases industrial capital is tied to a specific form, as money capital, productive capital or commodity capital. Only after it has fulfilled the function corresponding to the particular form it is in does it receive the form in which it can enter a new phase of transformation. (133)

The implication is that capital cannot flow smoothly and continuously through the circuits, but that it necessarily experiences pauses in its motion. In what follows, these potential obstructions, pauses and blockages will frequently be examined, though without any reference to the interests and agency of the various factions of capital involved. This permits us to see clearly the obstacles that might hinder the continuous circulation of capital. It also points to measures that might prevent obstacles becoming insuperable blockages. The disadvantage is that it leaves the Volume II analysis in a dry and desiccated state of formal distinctions, leaving it to us, when we read Volume III, to remember the formal basis upon which much of the actual theory of historical crisis might be predicated.

In the course of this chapter Marx also inserts some remarks on the role of the transport and communication industries in the circulation process (135). Since this is taken up again at the end of chapter 5, I shall delay consideration of this issue until then.

So what, then, is the general picture that emerges? We have a circuit of industrial capital of the following sort:

$$M\text{-}C\begin{matrix} LP \\ \\ MP \end{matrix}\ldots P\ldots C + c - M + \Delta m$$

We see immediately (Figure 2) that this can be disaggregated into three distinctive circuits all conditional upon each other—the money capital circuit, the circuit of productive capital, and the commodity capital circuit. The circuit of money capital must successfully negotiate the conditions that pertain to the production and commodity circuits if surplus-value is to be realized. The same conditionality applies to the circuits of production and commodity capital. A disruption in any one circuit will have catastrophic consequences for the others. The possibility therefore exists for distinctive crises in the circulation process as a whole. When we bring forward from Volume III the disaggregation of the capitalist class into various factions of producers, merchants and financiers, with distinctive interests and perspectives embedded in one rather than another of the circulatory processes, then even more persuasive reasons come into view to worry about the stability of the overall circulation process of what Marx calls industrial capital.

It remains to assess the significance of the money capital form to the overall circulation process of industrial capital. Money is not only the starting point but the end point of the process. Yet the money form, recall, is the representation of value, and this is the only way we get some tangible measure of the surplus-value produced: "It is precisely because the money form of value is its independent and palpable form of appearance that the circulation form *M…M'*, which starts and finishes with actual money, expresses money making, the driving motive of capitalist production, most palpably. The production process appears simply as an unavoidable middle term, a necessary evil for the purpose of money making" (137). Money may be the ultimate fetish, but it really is, for the capitalist, the holy grail because "enrichment as such appears as the inherent purpose of production." Without "the glittering money form" there would be no motivation for the capitalist, and without the realization of capital in its money form there would be no tangible measure of reward.

But realization depends on consumption—not only the productive consumption of other capitalists, but also the final consumption of others.

For the first time in Volume II, we hit the idea that the consumption of the working classes may have a role to play (138). But Marx then adds an interesting comment on interstate trade and mercantilism. The mercantilists, he notes, preach

> long sermons to the effect that the individual capitalist should consume only in his capacity as worker, and that a capitalist nation should leave the consumption of its commodities and the consumption process in general to other more stupid nations, while making productive consumption into its own life work. These sermons are often reminiscent in both form and content of analogous ascetic exhortations by the Fathers of the Church. (139)

There are those, like Kevin Phillips, who believe we have been through a phase of mercantilism these last few decades, with the US playing the role of the most stupid nation (engaging in debt-fuelled consumerism) while the Chinese and the Germans save and accumulate huge trade surpluses at the expense of the US consumer. When the Obama administration approached the G20 meeting in Seoul, in the fall of 2010, with a proposal to reduce the trading imbalances within the global system, the Chinese and the Germans took the lead in rebutting the proposal. So it seems some form of mercantilism is indeed alive and well—and the US still seems happy to play the role of the most stupid nation.

The summary remarks with which Marx closes the chapter are important: “The circuit of money capital is thus the most one-sided, hence most striking and characteristic form of appearance of the circuit of industrial capital, in which its aim and driving motive—the valorization of value, money making and accumulation—appears in a form that leaps to the eye (buying in order to sell dearer).” As usual with Marx, we have to recognize that “appears” does not mean “is”: “The circuit of money capital remains the permanent general expression of industrial capital, insofar as it always includes the valorization of the value advanced.” From the standpoint of production, however, “the money expression of the capital emerges only as the price of the elements of production.” While there are compelling reasons to look upon the circuit M-M’ as preeminent, because not only does it appear as a beginning but it facilitates the flow of purchasing power to the laborers in the form of wages and the flow of profits to capitalists to facilitate their consumption, there is “in its form a certain deception,” even an “illusory character” (141). This “illusory character” and “the corresponding illusory significance it is given, is there as soon as this form is regarded as the sole form, not as one that flows and is constantly repeated; i.e. as soon as it is taken not just as one of the forms of the circuit, but rather as its exclusive form.” Marx’s fundamental point is that the money circuit cannot exist “in itself,” but necessarily “refers to other forms” (142). When we look at the perpetual repetition of capital circulation through its different forms (money, production, commodities) we see that money “forms an evanescent prelude to the constantly repeated circuit of productive capital.” From this standpoint, “the capitalist production process is the basic pre-condition, it is prior to all else” (143).

ON CHAPTER 2: THE CIRCUIT OF PRODUCTIVE CAPITAL

The significance of the circuit of productive capital is so obvious that Marx does not bother to state it: it is, after all, in the "hidden abode" of production and only there that surplus-value is produced. From the standpoint of productive capital, the movement through circulation appears as an irritating necessity before getting back to the real game, that of producing surplus-value through the labor process: "the entire circulation process of industrial capital, its whole movement within the circulation phase, merely forms an interruption, and hence a mediation, between the productive capital that opens the circuit … and closes it" (144). But, as we should by now expect, there are plenty of pitfalls and perils encountered in the movement through the commodity and money forms. The formal requirements are that the value and the surplus-value congealed in the commodity must be realized in money form through a sale, and that the recuperated original money and some part of the profit then be used to purchase the means of production and the labor-power required to repeat the production process on an expanding scale. Formally the circulation steps to be navigated look like C'-M' followed by M-C, and an additional circulation of the surplus-value in money form, *m-c*.

Two cases are then considered. The first is that of simple reproduction, in which all of the surplus-value is consumed away and there is no reinvestment of the surplus (as in chapter 23 of Volume I and chapter 20 of Volume II), and the second is that of expanded reproduction (as in chapter 24 of Volume I and chapter 21 of Volume II). While Marx holds that simple reproduction is impossible under capitalism, he spends far more time on it, in part, I suspect, because he found it easier to establish the formal relations and conditions that must be realized if industrial capital is to continue on its merry way. He holds that these condition-alities carry over (though in more convoluted form, depending on the capitalists" choice of relative allocations for reinvestment or consumption) to the far more realistic model of expanded reproduction.

In the case of simple reproduction, the surplus-value *m* must all be spent on personal consumption. If the capitalist class simply holds money and fails to consume, then commodity capital cannot be realized in money form. For the first time, therefore, we see the importance of bourgeois consumption to the stabilization of capitalism: "*m-c* is a series of purchases made with the money that the capitalist spends, whether on commodities as such or on services, for his esteemed self and family. These purchases are fragmented, and take place at different times. The money therefore exists temporarily in the form of a money reserve or a hoard destined for current consumption" (146). This money "is not advanced but spent." So the bourgeois already must have the money in hand.

This is an interesting theme that we will encounter several times in Volume II. Where does the extra money come from to buy the surplus-value? The bourgeoisie buys the surplus-value congealed in commodities with its own money to augment personal consumption. This presupposes, of course, that productive capital is making the commodities that the bourgeoisie wants to consume (though Marx does not make the point here). The circulation *m-c* (the lower cases denote we are dealing not with the whole capital but the surplus part only), "presupposes the existence of the capitalist … and is conditional on his consumption of surplus-value" (149).

In passing, Marx notes that the manner in which the bourgeois pays for commodities depends to some degree on the nature of the commodity produced. Marx makes mention of the interesting case (to me, at least) of the London building trade, "which is conducted for the most part on credit, [and in which] the contractor receives advances in various stages as the building of the house progresses" (148). Furthermore, final commodity consumption can be "completely separated in time and space from the metamorphosis in which this mass of commodities functions as his commodity capital" (150). How commodities and payments move over time and space is here hinted at, but not developed as a field of analysis. This is the sort of thing that I have tried to follow up in some of my own work.

The recuperated original money capital has to circulate back into the field of productive consumption through the purchase of labor-power and means of production. But while the original M was advanced, the recirculated money has to be reconceptualized as money capital that has already been produced and valorized through the movement C'-M'. This change in signification is important. It echoes the view set out in Volume I that, after a while, labor reproduces the equivalent of the whole value of the capital originally advanced. The value circulating should by rights, in Marx's interpretation of Locke's argument that property accrues to those who mix their labor with the land to create value, belong to the laborer and not to the capitalist (who has, in effect, consumed away the original capital). The M that re-enters production is, Marx notes, "an expression of past labor" and not of money capital pure and simple.

But there are inevitably temporal gaps in the circulation process. The "difference in time between the execution of *C-M* and that of *M-C* may be more or less considerable." The temporality of circulation is important. Marx here immediately notes some curiosities. In some instances "*M* can represent for the act *M-C* the transformed form of commodities that are not yet present on the market at all." Pre-payments on commodities not yet made are possible. Even workers can pay in advance for a commodity not yet produced—in effect paying out of the wages of future labor. The possible timing arrangements are endlessly complicated and, as we will see later, the role of the credit system soon becomes crucial.

But there are also structural reasons why the movement from commodity to the purchase of both labor-power and means of production can become difficult. "If the second metamorphosis *M-C* comes up against obstacles (e.g. if the means of production are unattainable on the market), then the circular flow of the reproduction process is interrupted, just as if the capital was tied up in the form of commodity capital. The difference, however, is that it can last out longer in the money form" (154). In Volume I it was generally taken that the passage *C-M* was more difficult than that of *M-C* because money is the universal equivalent and the commodity a particular equivalent. But we here encounter another story, because productive capital requires highly specific means of production in order to be reproduced. If the supply of iron ore dries up, then steel production cannot be reproduced. Heavy reliance on fixed capital in steel production (for example, blast furnaces) makes any disruption of supply of this sort very costly for the steel producer. Reproduction also presumes, though Marx does not make the point, that workers with the requisite skill continue to be readily available. But at least *M* cannot spoil, so for circulation to get stuck at this point is less problematic than it is for much of capital stuck in the commodity form (particularly if the commodities are perishable). The timely conversion of money into the elements for productive consumption is a necessity for the reproduction of productive capital. Marx then takes yet another swipe at the economists who adhered to Say's law: "A replacement of commodity by commodity conditioned by surplus-value production is something quite other than an exchange of products that is simply mediated by money. But this is how the matter is presented by the economists, as proof that no overproduction is possible."

We then need to consider the consumption of the workers. They live through participation in an *L-M-C* circuit, giving up their labor-power in order to get the money to buy commodities to survive at a certain standard of living. This takes money value out of the circulation of capital only then immediately to put it back again, in a "company store" kind of relation made much of in Volume I. "The second act, i.e. *M-C* [the purchases of wage goods by workers] does not fall into the circulation of the individual capital, although it proceeds from it. The constant existence of the working class, however, is necessary for the capitalist class, and so, therefore, is the consumption of the worker mediated by *M-C*"(155). We will later see, in chapters 20 and 21, how all of this looks from the standpoint not of individual capitalists but of the aggregate circulation of capital taken as a whole.

Notice how this is all being conceptualized here. The money, when in the hands of the capitalist and about to be transformed into variable capital through the purchase of labor-power, is functioning as capital. But that same money no longer functions as capital once it is in the hands of the workers. It too undergoes a metamorphosis of form, for it is now simply money in the hands of a buyer in the marketplace and, as such, can be used in any way the worker needs, wants or pleases. Once workers have spent their money on commodities and it is back in the hands of the capitalist, then it can revert to the form of capital provided the capitalist does not use it for consumption. This is Marx's relational way of working in full sight. And it is important to note it, because if the worker gambles away (or even saves) his or her earnings rather than spending them on commodities, then the continuity of the circulation process gets broken. Hence the concern, at the very end of Volume II, for establishing a “rational consumerism” on the part of the working classes as a condition for stable accumulation. The problem would not be identified if it was conceptualized as if the circulation of money capital were in total control at every point in this process. While Marx elsewhere typically depicts the working class as a whole as being locked into a “company store” relation to capital with respect to consumption, he is here opening up a way to problematize that assumption.

None of this, Marx holds, is affected in principle by the interventions of the merchant capitalists who may take over the job of mediating the conversion of C’-M’ because, in the final analysis, “the whole process follows its course, and with it also the individual consumption of the capitalists and the worker that is conditional on it. This point is an important one in considering crises.” If there is a crisis of some sort, we should not, therefore, attribute it fundamentally to the operations of the merchant capitalist (i.e. don’t blame Walmart). We need to look deeper into the roles of bourgeois and working-class consumption as potential sticking points:

> As long as the product is sold, everything follows its regular course. … Then this reproduction of capital can be accompanied by a more expanded individual consumption (and hence demand) on the part of the workers. … The production of surplus-value and with it also the individual consumption of the capitalist can thus grow, and the whole reproduction process finds itself in the most flourishing condition, while in fact a great part of the commodities have only apparently gone into consumption, and are actually lying unsold in the hands of retail traders, thus being still on the market. One stream of commodities now follows another, and it finally emerges that the earlier stream had only seemed to be followed up by consumption. … The earlier streams have not yet been converted into ready money, while payment for them is falling due. Their owners must declare themselves bankrupt, or sell at any price in order to pay. This sale, however, has nothing to do with the real state of demand. It only has to do with *demand for payment*, with the absolute necessity of transforming money into commodities. At this point the crisis breaks out. It first becomes evident not in the direct reduction of consumer demand, the demand for individual consumption, but rather in decline in the number of exchanges of capital for capital, in the reproduction process of capital. (156–7)

Marx distinguishes between final consumer demand on the part of workers and of capitalists, on the one hand, and the intercapitalist trading and demand for commodities involved in maintaining productive consumption. He here advances the very original view that crises can arise out of the capital-capital relation in organizing flows of commodities and monetary payments with respect to productive consumption. What may appear as a problem of lack of effective demand on the part of workers and of capitalists in the field of individual consumption may in fact be due to problems of circulation arising out of the purchase and sale of means of production. Is this a general theory of crisis, or a possibility that arises out of an examination of the circulation of productive capital? My general view is always in the first instance to take such statements as contingent, as possibilities that can be seen from a certain perspective under the given assumptions. This does not mean that such statements may not ultimately prove to have a broader generality, but that we have to *show* how the particular perspective illuminates crisis tendencies within capitalism.

In Volume II, for example, Marx makes seemingly quite contradictory statements with respect to the role of working-class effective demand and consumption:

> Contradiction in the capitalist mode of production. The workers are important for the market as buyers of commodities. But as sellers of their commodity—labour-power—capitalist society has the tendency to restrict them to their minimum price. Further contradiction: the periods in which capitalist production asserts all its forces regularly show themselves to be periods of over-production; because the limit to the application of the productive powers is not simply the production of value, but also its realization. However, the sale of commodities, the realization of commodity capital, and thus of surplus-value as well, is restricted not by the consumer needs of society in general, but by the consumer needs of a society in which the great majority are always poor and must always remain poor. (391)

But elsewhere he says this:

> It is a pure tautology to say that crises are provoked by a lack of effective demand or effective consumption. The capitalist system does not recognize any forms of consumer other than those who can pay. … The fact that commodities are unsaleable means no more than that no effective buyers have been found for them. … If the attempt is made to give this tautology the semblance of greater profundity, by the statement that the working class receives too small a portion of its own product, and that the evil would be remedied if it received a bigger share, i.e., if its wages rose, we need only note that crises are always prepared by a period in which wages generally rise, and the working class actually does receive a greater share in the part of the annual product destined for consumption. From the standpoint of these advocates of sound and "simple" (!) common sense, such periods should rather avert the crisis. It thus appears that capitalist production involves certain conditions independent of people's good or bad intentions, which permit the relative prosperity of the working class only temporarily, and moreover always as a harbinger of crisis. (486–7)

This second statement is more in accord with the spirit of argument in chapter 2, so it is clear that Marx felt the arguments constructed from the standpoint of productive capital had more general salience. This leaves us with the difficulty of deciding which of these formulations to follow. My own view (and you will also have to come to terms with this on your own account) is that circumstances arise, as in the late 1960s and early 1970s, when the rising share of labor in the national product was indeed a harbinger if not a fundamental locus of crisis in global capitalism as it was then constituted. It is impossible to make such an argument about the crash of 2007–09. The distributive share taken by the working class, no matter whether it is too high or too low, important though it may be, cannot explain the crisis tendencies of capital. Other formulations are required. We have to pay careful attention to what is said in Volume II (as well as elsewhere, of course) to figure out what these formulations might be. At this point, from the perspective of productive capital, we have at least part of the theory of crisis formation firmly in place.

When capital circulation encounters obstacles such as to “suspend the function of *M-C*,” then the money transforms into “the involuntary formation of a hoard.” This money “thus has the form of latent money capital, money capital that lies idle” (158). Later Marx will also call it “fallow capital” (164). These are important terms in the following argument.

The section on expanded reproduction contains nothing surprising. We know from Volume I that, for the capitalist, “the constant enlargement of his capital becomes a condition for its preservation.” The only interesting question is what proportion of the surplus-value is capitalized as fresh capital, and for that there is no golden rule. The circuit *P….P*’ “does not express the fact that surplus-value is produced, but rather that the produced surplus-value is capitalized”(160). Again, this changes our conception of what the circulation process is all about. The first step in this capitalization is to put aside a certain amount of money realized from the sale of commodities preparatory to launching into expansion. This hoard of latent or fallow money capital is necessary because, in most lines of business, a certain minimum amount of capital is required in order to launch the expansion (to build a larger factory, invest in machinery, and so on). This may require that “the capital circuit must be repeated several times” before sufficient monetary power is acquired to satisfy the minimum requirements for expanded reproduction to proceed. This makes for the inevitability of hoarding in money form as “a functionally determined preparatory stage that proceeds outside the circuit of capital, and paves the way for the transformation of surplus-value into really functioning capital. … As long as it persists in the state of a hoard, it does not yet function as money capital, it is still money capital lying fallow; not interrupted in its function … but rather as yet incapable of performing this function” (164). Plainly, this is a situation, as Marx immediately concedes, where the credit system has a crucial role to play. Without it, more and more capital would be rendered “fallow” and the hoards would become a serious barrier to fluent accumulation. But that is not to be dealt with here.

ON CHAPTER 3: THE CIRCUIT OF COMMODITY CAPITAL

One of the more surprising aspects of Volume II is the attention Marx pays to the circuit of commodity capital. The reason for this has already been prefigured in the study of the circuit of productive capital. To the obvious difficulty of transforming particular forms of embodied value and surplus-value into the universality of the money equivalent, we must now add a further difficulty of finding the necessary commodities in the marketplace to meet the needs of productive consumption in specific labor processes. Capitalists have to depend on other capitalists to produce their means of production. It is therefore primarily in this circuit that we encounter the problem of specific interrelations and interdependencies between capitalists. And, as Volume II progresses, it becomes more and more evident that these intercapitalist relations are fraught with the possibility of crises of adequate supply, as well as the more obvious problem of possible crises arising out of lack of effective demand.

Marx's analysis at this point is, however, confined largely to formal functions and technicalities. There are a number of peculiarities to this circuit of commodity capital. To begin with, the commodity is impregnated with surplus-value that has yet to be realized. Whereas in the cases of both money and productive capitals, the surplus-value "vanishes" when the circulation process begins anew, such that money can only do as money does, and productive activity proceeds also on its own terms, in the case of commodities we are dealing—both at the beginning and the end of the circulation process—with a commodity impregnated with surplus-value. We are therefore looking at a form of circulation *C….C'*, and in the case of expanded reproduction this would mean *C'….C"*. What this emphasizes is that it is in the commodity circuit that both the realization of the surplus-value in money form and the absorption of surplus product and value—not only in individual consumption but also in productive consumption—become imperative for the continuity of the circulation of industrial capital as a whole.

The second peculiarity is that of the role of productive consumption. "In the circuit of an individual industrial capital, *C'* as *C* appears not as the form of this capital but as the form of another industrial capital, insofar as the means of production are the product of this other capital. The act *M-C* (i.e. *M-mp)* of the first capital is for this second capital *C'-M'*" (168). The problem is that the surplus-value is hidden within the commodity form as a surplus product (a specific use-value) and that it is impossible to separate the value and the surplus-value in the way that becomes possible when the commodity value is realized in the money form. Whereas it is possible to take the realized *M'* and disaggregate it into *M* + *m*, and then decide how much of m to capitalize in expanding production, this cannot be done with a forklift truck. It might be possible with certain products, and Marx uses the example of yarn, in which it is in principle possible to separate the original value of *C* from *C'*. This provokes Marx to launch into one of his complicated and seemingly interminable calculations of how this might be done.

But behind all this there lies a distinction that prevails in this circuit that vanishes in the others: there is both a surplus product (the expanded use values embodied in the commodity) and a surplus-value, and a condition for the realization of the latter is the location of a home for the former. The specificity of use-values cannot be evaded. Conversely, if the decision is made to expand production by capitalizing part of the surplus-value in money form, then there must be surplus use-values on the market available for purchase as additional means of production for particular activities: "Reproduction on an expanded scale, with productivity otherwise remaining the same, can take place only if the material elements of the additional productive capital are already contained in part of the surplus product to be capitalized” (179). This is a very important condition and, plainly, any failure to meet it will seriously impair the smooth functioning of capital accumulation.

Productive consumption is not, of course, the only form of consumption involved in this circuit:

> In the form *C′….C′*, the consumption of the entire commodity product is presupposed as the condition for the normal course of the circuit of capital itself. The individual consumption of the worker and the individual consumption of the non-accumulated part of the surplus product comprise, taken together, the total individual consumption. Thus consumption in its entirety—both individual and productive consumption—enters into the circuit of *C′* as a precondition. (173)

But all of this is presupposed, he goes on to say, as a social rather than as an individual act. From this then follows the most important conclusion:

> Precisely because the circuit *C′…C′* presupposes in its description the existence of another industrial capital in the form *C(=L+mp)* (and *mp* comprises other capitals of various kinds, e.g. in our case machines, coal, oil, etc.), it itself demands to be considered not only as the *general* form of the circuit … hence not only as a form of motion common to all individual industrial capitals, but at the same time as the form of motion of the sum of individual capitals, i.e. of the total social capital of the capitalist class, a movement in which the movement of any individual industrial capital simply appears as a partial one, intertwined with the others and conditioned by them. If we consider, for example, the total annual commodity product of a country, and analyse the movement in which one part of this replaces the productive capital of all individual businesses, and another part goes into the individual consumption of the different classes, then we are considering *C′…C′* as a form of motion of both the social capital and of the surplus-value or the surplus product produced by this. (176–7)

The circuit of commodity capital is special. It allows us to look at the aggregate flow of both surplus-value and surplus product (values and use-values) in the economy as a whole. It does so precisely because it has to focus on relations between individual capitals as they intertwine their activities and calculate their inputs and outputs in the economy as a whole. It introduces us to a very important idea of proportionality in those inputs and outputs from the standpoint not only of the individual capital but also of capital as a whole. The theme of proportionality—how much steel needs to be produced as means of production to support the activities of all manner of other sectors, and how much iron ore is needed to produce the steel—is in fact one of the major themes of Volume II. And this raises the issue of the mechanisms that assure that these proportionalities are roughly achieved. Can the market do it? Does the equalization in the rate of profit guarantee it? If not, will this all result in crises of disproportionality? This mode of thinking was, as Marx points out at the end of this chapter, pioneered by Quesnay. It will form the basis for Marx’s innovative expansion and development of Quesnay’s formulations in chapters 20 and 21.

Notice that, in this chapter, use-values and values, surplus-value and surplus product, frequently appear hand in hand in ways that could not be observed in the study of the other circuits. When steel is sold as a means of production, it introduces the issue not only of physical flows of use-values but also of the balance of value transfers, and the two are not necessarily going to reflect each other neatly. In the case of the other circuits, surplus-value “vanishes” (because money is just money and can only do as money does, and because production contains no sign of the production of previous surplus-value production in its initiating moment, even as it produces it). With respect to the other circuits, we can focus exclusively on the individual industrial capital and pay no mind to aggregate conditions. These aggregate conditions come to the fore only in the case of commodity capital, where the surplus-value is embodied in the commodity at the outset and where the specific use-values required to continue production (of, say, steel) become crucial. It is from this perspective alone that we can study and unravel the aggregate laws of motion and the necessary physical use-value and value proportionalities that facilitate the reproduction of capital.

The way in which all of this integrates into the capital-circulation process as a totality is taken up in the next chapter.

CHAPTER TWO

The Three Figures of the Circuit and the Continuity of Capital Flow (Chapters 4–6 of Volume II)

ON CHAPTER 4 : THE DIFFERENT CIRCUITS OF CAPITAL AS A WHOLE

In my examination of the first three chapters of Volume II, I looked at the circulation process of capital through the three different windows of money, production and commodity. In the fourth chapter Marx puts the circuits back together in order to analyze the unity. The language is a bit convoluted, but I think the point is clear: the different circuits are intertwined, curling around each other and constantly in motion in relation to each other. The movement of each is a condition for the movement of all. "Valorization of value" (by which Marx means the production and realization of surplus-value) is "the determining purpose, the driving motive." When looked at as a whole, "all the premises of the process appear as its result, as premises produced by the process itself. Each moment appears as a point of departure, of transit, and of return. The total process presents itself as the unity of the process of production and the process of circulation; the production process is the mediator of the circulation process, and vice versa." Marx likens this whole to a

> constantly rotating orbit, every point simultaneously a starting point and a point of return … The reproduction of the capital in each of its forms and at each of its stages is just as continuous as is the metamorphosis of these forms and their successive passage through the three stages. Here, therefore the entire circuit is the real unity of its three forms. (180, 181)

The dominant language is one of continuity, succession, coexistence and the fluidity of capital's movement through the three circuits. This language is counterposed to another: that of interruptions and possible disruptions. "The circuit of capital is a constant process of interruption; one stage is left behind, the next stage embarked upon; one form is cast aside, and the capital exists in another; each of these stages not only conditions the other, but at the same time excludes it" (182). The interruptions, like those in the lifecycle of the butterfly, are omnipresent and inevitable. They threaten the continuity of capital's motion, but they do not necessarily engender crises. By studying them we can hope to understand why crises might take particular forms—why, for example, a crisis might *appear* at one moment as a surplus of commodity capital that cannot be disposed of, or at another as an excessive hoard of money capital lacking investment opportunities, or at yet another as a scarcity of means of production or labor-power for the further expansion of accumulation. Capital flow can be blocked at any one of a number of different transitional points.

Marx counterposes these interruptions to the “continuity” that “is the characteristic feature of capitalist production, and is required by its technical basis, even if it is not always completely attainable” (182). The technical and social necessity for continuity of capital flow is far more important here than it was in Volume I. “Each different part of the capital runs in succession through the successive phases of the circuit, can pass over from one phase and one functional form into the other; hence industrial capital, as the whole of these parts, exists simultaneously in its various phases and functions, and thus describes all three circuits at once” (183).

So we have four terms to contend with: money capital, productive capital, commodity capital and “industrial capital”—the last understood as the unity of the three circuits. Any individual industrial capital will typically have different portions of its capital in each of the different circuits at any one moment. Part of it will be absorbed in production, part will be in money form, and part in commodity form. But this “coexistence,” Marx insists, “is itself only the result of the succession.” The necessity for continuous movement through the different circuits trumps all else. The immediate consequence is that, if

> the commodity is unsaleable, then the circuit of this part is interrupted and its replacement by its means of production is not accomplished; the successive parts that emerge from the production process as C’ find their change of function barred by their predecessors. If this continues for some time, production is restricted and the whole process brought to a standstill. … Every delay in the succession brings the coexistence into disarray, every delay in one stage causes a greater or lesser delay in the entire [industrial] circuit, not only that of the portion of the capital that is delayed, but also that of the entire individual capital. (183)

While Marx does not make the point, this situation potentially empowers workers. Work interruptions and strikes affect not only productive capital but all the other moments of circulation, and in the case of commodity capital can disrupt the flow of necessary means of production to other capitals:

> As a whole, then, capital is simultaneously present, and spatially coexistent, in its various phases. But each part is constantly passing from one phase or functional form into another, and thus functions in all of them in turn. The forms are therefore fluid forms, and their simultaneity is mediated by their succession. Each form both follows and precedes the others. … The particular circuits simply constitute simultaneous and successive moments of the overall process. … It is only in the unity of the three circuits that the continuity of the overall process is realized, in place of the interruption we have just delineated. The total social capital always possesses this continuity, and the process always contains the unity of the three circuits. (184)

Then comes a critical commentary of the greatest importance. But it is stated in such a flat way (as is so typical of this volume) as to make it all too easy to miss its significance. The introductory line is in fact quite stunning in its implications: “Capital, as self-valorizing value, *does not just comprise class relations*, a definite social character that depends on the existence of labour as wage labour” (emphasis added). With this statement Marx opens the way to saying that contradictions and crises can arise in the circulation process outside the class struggle between capital and labor that centers Volume I. The capital-labor relation is not the only locus of contradiction within the laws of motion of capital. Contradictions can emerge from within the circulation and valorization process itself. There is something inherently fragile and vulnerable within the circulation of industrial capital. The task is to reveal what it is.

Marx then examines some of the ways in which the contradictions within this circulation process "grasped as a movement" play out in practice. "Those who consider the autonomization … of value as mere abstraction forget that the movement of industrial capital is this abstraction in action." The word "autonomization" signals a particular kind of problem. Value may be an abstraction, but it has real consequences (or, in the language of Volume I, value is "immaterial but objective"). Contradictions within the overall process of circulation play out autonomously, and by this Marx means in ways that are autonomous from the capital-labor contradiction. "Here value passes through different forms, different movements in which it is both preserved and increases and is valorized." The moment of valorization (realization of surplus-value) is just as important as that of production. To illustrate, Marx abandons his assumption of no technological and organizational change to consider "the revolutions that capital value may suffer in its circulatory process; it is clear that despite all revolutions in value, capitalist production can exist and continue to exist only so long as the capital value is valorized, i.e., describes its circuit as value that has become independent, and therefore so long as the revolutions in value are somehow or other mastered and balanced out" (185). From the perspective of individual industrial capital, the hope is that the impacts of the drive for relative surplus-value via technological and organizational change described in Volume I can "somehow" be absorbed, "mastered and balanced out." But notice the language of autonomy and independence.

Let us look at the circulation process from the standpoint of the commodity circuit, which plays such an important role throughout Volume II.

> If the social capital value suffers a revolution in value, it can come about that (the) individual capital succumbs to this and is destroyed, because it cannot meet the conditions of this movement of value. The more acute and frequent these revolutions in value become, the more the movement of the independent value, acting with the force of an elemental natural process [that is, a general law of motion of capital] prevails over the foresight and the calculation of the individual capitalist, the more the course of normal production is subject to abnormal speculation, and the greater becomes the danger to the existence of the individual capitals. These periodic revolutions in value thus confirm what they ostensibly refute: the independence which value acquires as capital, and which is maintained and intensified through its movement. (185)

This is nothing short of a theoretical evocation of the perils of devaluations of capitals through what we now call deindustrialization. From the 1980s onwards, a massive wave of plant closures hit older industrial cities like

Detroit, Pittsburgh, Baltimore, Sheffield, Manchester, Essen, Lille, Turin and the like. Lest it be thought that this phenomenon was confined to the advanced capitalist countries, the losses of the traditional textile industry of Mumbai and the distress of older industrial areas of Northern China were just as violent. Whole communities that had focused on industrial work were destroyed almost overnight. Some 60,000 jobs in steel were lost in Sheffield over a three-year period in the 1980s, for example. The desolation this wrought was everywhere apparent. When people looked for explanations, they were told it was all the result of a mysterious force called "globalization." When trade unions and social movements protested and sought to stem the hemorrhaging of jobs and livelihoods, they were told the mysterious force was both inevitable and unstoppable.

Looking backwards, we can see that this mysterious force had long been at work (though not given the name of "globalization" until the 1980s). From the 1930s there had been a steady drift of jobs in the textile industries in the United States from traditional working-class centers such as New York and Boston and the many other smaller mill towns of New England southwards down the so-called "Fall Line" towns (so-called because of the water power that originally encouraged mill location where the Appalachian rivers crossed onto the Atlantic flood plains) that stretched from Lowell to Baltimore. The jobs were drifting to the US South (the Carolinas in particular), and even spilling over the border into Mexico. In Britain during the 1960s, textile jobs were falling off as competition from the then British colony of Hong Kong became fiercer. Job relocations and community destructions have long been the way of the capitalist world.

Marx here offers us a way to cast all this in a particular theoretical light. When elaborated upon, the theory shows how and why crises of this sort, which are not total systemic crises but widespread localized destructions, are inevitable within a capitalist system. Industrial capitals in competition with each other promote revolutions in technologies and organizational forms that in turn produce value revolutions. This is the supposedly mysterious force (appearing like a force of nature, and therefore supposedly outside of human control) that deindustrializes whole industrial regions.

Stated more formally: individual capitalists organize their production of value in search of relative surplus-value, but in so doing produce new value relations that can return to destroy them. Not only does capital produce the means of its own domination; it also produces the means for its own destruction. Hence the Oedipal rage with which capitalists frequently respond to the crises of capitalism that destroy them. Have they not played the game correctly, calculated and planned the production of surplus-value as they should? Have they not performed according to the rule book of bourgeois virtue? How, then, have they not received their just rewards and, even worse, how have they now been cast into the darkness of bankruptcy? But instead of raging against capitalism—the system—they rage against the foreign producers, the immigrants, the speculators, and the others who are in fact merely the secret and hidden agents of capital’s inner laws of motion.

Many people reading Marx have a problem with the concept of value as an abstraction, a social relation that is immaterial but objective in its consequences. But “value” is no more abstract and mysterious than the popularly accepted force called “globalization.” What is odd is that so many people easily accept the latter (because we became habituated to it?), while often balking at the former as far too abstract. But the virtue of Marx’s superior concept is that we see more clearly how this abstraction is created, and how the forces that it assembles work—how we become, as Marx puts it elsewhere, a victim of capital’s abstractions. From the very beginning of *Capital*, we learned that value is constituted out of the socially necessary labor deployed through “the movement of industrial capital” through production and circulation. The abstraction of value (and its representation in money form) becomes a regulatory force by way of the hidden hand of market competition.

Recall, however, that if labor does not produce a use value that somebody wants, needs or desires, then it is not socially necessary labor: the unity of production and circulation is already presumed in the very first section of Volume I. Value is, therefore, an abstract social relation collectively produced by individual industrial capitals. But individual industrial capitals then have to submit to the laws they themselves have collectively created. And in so doing, many of them end up succumbing to or being destroyed by the very value revolutions they are perpetually creating. We see them in effect digging their own graves. Instead of some mysterious force called “globalization” that seems to descend from the ether with such destructive and irresistible power, we here have a theory which internalizes the self-destructive dynamic through which capitalists produce the very conditions of their own demise. To accept this theory, all we have to do is to recognize “the independence which value acquires as capital, and which is maintained and intensified through its movement.” Why is that harder to accept than some vacuous term like “globalization”?

But the import of these passages is, of course, that not all industrial capitals are destroyed. So the question of which capitals survive, and of what sort and where they are, must obviously be raised even though Marx does not here care to do so (presumably it is too “particular” to be of immediate interest). You must, however, excuse my obvious pleasure, as someone who works on uneven geographical development, regional change and the changing paths of urbanization, to find my interests so neatly tied into the general corpus of Marx’s political economy by way of these short passages.

In order to move in this direction, however, Marx has to abandon his general exclusion in Volume II of changes in productivity, of technological and organization change, from his theorizing. This prompts some reflections on his part as to why that exclusion was so necessary. If value changes are perpetually occurring within the circulation process—and it is the latter which is the focus of his attention in Volume II—then all sorts of consequences follow. When the value of means of production falls, then money capital is "set free" even as the simple reproduction of productive capital is maintained. If the value of means of production rises, then more money capital is needed just to keep the same productive capital functioning. "The process takes place quite normally only if value relations remain constant." The smoothness, continuity and fluidity that are so important to the circulation of industrial capital as a whole can be sustained only under conditions of zero technological change. As soon as new technologies are introduced, this introduces value revolutions and instability into the circulation process. For instance, a new technology comes in and the relative need for material inputs and labor-power changes. This will clearly disrupt preceding flow relations:

> In practice it runs its course as long as disturbances in the repetition of the circuit balance each other out; the greater the disturbances, the greater the money capital that the industrial capitalist must possess in order to ride out the period of readjustment; and since the scale of each individual production process grows with the progress of capitalist production, and with it the minimum size of the capital to be advanced, this circumstance is added to the other circumstances which increasingly turn the function of industrial capitalist into a monopoly of large-scale money capitalists, either individual or associated. (187)

This is an important argument. A reserve of money power is needed to deal with uncertainties in the circulation process stemming from technological changes. Better, therefore, to be a money capitalist rather than a production capitalist at times of rapid technological change. This may have something to do with the increasing ascendancy of finance and money capital relative to industrial capital over the last thirty years or so. By introducing the figure of the money capitalist here, however, Marx departs even further from the assumptions (no specific agents) upon which he has hitherto based his purely formal argument. The production of a tendency towards monopolization, as a way to control the uncertainties, interruptions and disruptions that inevitably arise from value revolutions, is also an important idea. It relates back to Marx's arguments concerning the increasing centralization (as opposed to concentration) of capital as laid out in Volume I. The actual history of capitalism has often been marked by such tendencies towards centralization and monopolization, and again it is easy to see how this helps capitalists deal with the vicissitudes and uncertainties that derive from the fiercely competitive but destabilizing drive to procure relative surplus-value through technological changes. Monopoly power allows capital to control the pace of potentially disruptive technological changes.

Marx then briefly sets aside yet another of his tacit assumptions: that capital is working within a closed economy and that all means of production are produced by other industrial capitalists. What happens when means of production are procured from some other place where capital relations have yet to be established? Once they enter into the orbit of capital they become commodities just like all the others, thanks mainly to the agency of merchant capitalists who procure them from elsewhere. The circuit of industrial capital here

> cuts across the commodity circulation of the most varied modes of social production. … Whether the commodities are the product of production based on slavery, the product of peasants (Chinese, Indian ryots), of a community (Dutch East Indies), of state production (such as existed in earlier epochs of Russian history, based on serfdom), or of half-savage hunting peoples, etc.—as commodities and money they confront the money and commodities in which industrial capital presents itself.

Capital can integrate with noncapitalist modes of production.

> The character of the production process from which (commodities) derive is immaterial; they function on the market as commodities, and as commodities they enter both the circuit of industrial capital and the circulation of the surplus-value borne by it. Thus the circulation process of industrial capital is characterized by the many-sided character of its origins, and the existence of the market as a world market. (189–90)

From the *Communist Manifesto* on, Marx and Engels had been acutely aware that they were living in an era in which the creation of the world market was proceeding at a rapid pace (through the coming of the railroads, the steamships and the soon to be dominant telegraph, which permitted commodity prices to become almost instantaneously known in all the major port cities of the world). They were also very sensitive to the ways in which the circulation of industrial capital was intersecting with this world, both transforming it (as capitalist production became more and more hegemonic) and being transformed by it (as cheap raw materials and other commodities could be procured from noncapitalist social formations). There are two points that Marx here makes about this process. Firstly, the reproduction of productive capital requires the reproduction of the means of production, and this means that “the capitalist mode of production is conditioned by modes of production lying outside its own stage of development.” But its “tendency” is “to transform all possible production into commodity production” and “the main means by which it does this is precisely by drawing this production into its circulation process. … The intervention of industrial capital everywhere promotes this transformation, and with it too the transformation of all immediate producers into wage-labourers.” Whether this occurred peacefully or not, and to what degree it entailed imperialist and colonial practices, is left unsaid.

Secondly, “whatever the origin of the commodities that go into the circulation process of industrial capital … they confront industrial capital straight away in its form of commodity capital,” and they therefore have “the form of commodity-dealing or merchant’s capital; and this by its very nature embraces commodities from all modes of production” (190). This leads to some brief reflections (which we will elaborate upon later) on the role of merchant capital, of wholesale and retail merchants, in the capitalist mode of production. Similarly, the role of money-dealing capital also enters in with, as usual, some invocation of the credit system. We will return later to these questions of the roles of merchants and money capitalists.

There is a third point that Marx later hints at (195). The continuity of flow that is so essential to the circulation process of capital demands that supplies of commodities from noncapitalist social formations and producers be assured on a steady rather than an episodic and insecure basis. Once commodities from the noncapitalist world are drawn into the circulation process of industrial capital, steps have to be taken to ensure that the flow of these commodities continues unhindered. This is most assuredly one of the reasons for the establishment of some power relation, most conspicuously that of colonialism and imperialist domination, along with agreements with foreign potentates (such as the Saudis), through which the cooperation of the noncapitalist suppliers of key commodities involved in the reproduction of capital circulation is assured on a continuous basis.

Matters of this sort are barely hinted at here. But, as I began by arguing at the outset, once we let our imaginations roam on the basis of Marx's arguments, then Volume II appears a more and more fecund source for further theory-construction on all manner of topics, such as uneven geographical development, systems of commodity exchange with noncapitalist social formations, and culminating in the transformation, either through commerce or through colonialism or imperialist domination, of much of the world into one vast market where capital circulation ultimately reigns supreme. The actual materials of the text, however, are rather dry and cryptic. In themselves, these passages appear rather casual and tangential. But when we reflect as to where these ideas might lead, there opens up an amazing theoretical terrain which, when supplemented with the insights from Marx's other works, have all manner of implications for our understanding of how capital becomes grounded in particular situations, including those of a non-capitalist world.

Marx at this point merely adds some historical generalizations. "Natural economy, money economy and credit economy [are] the three characteristic economic forms of motion of social production" (195). The money economy and the credit economy "merely correspond to the different stages of development of capitalist production; they are in no way different independent forms of commerce as opposed to natural economy." Within capitalism, the distinction between money and credit economies basically refers to the "mode of commerce" between producers. In natural economy the mode of commerce is barter.

I have to say I do not find these categories and this periodization particularly illuminating. The distinctions are taken without any critical commentary from Adam Smith, and the periodization has no historical basis whatsoever. This is one of those moments where Marx merely regurgitates bourgeois mythology without question. It is, however, significant that Marx does underline that "the credit economy" requires a distinctive mode of analysis. But he says absolutely nothing here about what that distinctive mode of analysis might be. The historical relation between modes of commerce, along with the historical significance of usury and credit, are much better handled by Marx elsewhere (as we will see below).

The final section of the chapter poses a conundrum of great consequence for the whole of Volume II, and hence for the whole corpus of Marx's political economy. It therefore warrants a very close reading.

Marx is very reluctant, as I noted in the first chapter, to get into questions of supply and demand (since, when in equilibrium, "they cease to explain anything"). But, at this point in Volume II, he encounters a situation where he cannot avoid them. The problem arises out of a consideration of where the final demand comes from to realize the surplus-value:

> The capitalist casts less value into circulation in the form of money than he draws out of it, because he casts in more value in the form of commodities than he has extracted in the form of commodities. In so far as he functions merely as the personification of capital, as industrial capitalist, his supply of commodity value is always greater than his demand for it. If his supply and demand matched one another in this respect, this would be equivalent to the non-valorization of his capital; it would not have functioned as productive capital. … The greater the difference between the capitalist's supply and his demand, i.e. the greater the additional commodity values that he supplies over the commodity value he demands, the greater the rate at which he valorizes his capital. His goal is not simply to cover his demand with his supply, but to have the greatest possible excess of supply over demand. What is true for the individual capitalist, is true for the capitalist class. (196–7)

The capitalist class demands means of production (c), so this is one source of demand. But this is much less than the value of the commodities that will be produced (c + v + s). The capitalist class provides the workers with purchasing power (v). The worker "converts his wages almost wholly into means of subsistence, and by far the greater part into necessities," so that "the capitalist's demand for labour-power is indirectly also a demand for the means of consumption that enter into the consumption of the working class." If we ignore workers' savings and "leave the matter of credit out of consideration[!]" then the "maximum limit of the capitalist's demand is c + v, but his supply is c + v + s." This means that the greater the surplus-value produced (or the higher the rate of profit), "the smaller his demand in relation to his supply" (197–8). Equilibrium between supply and demand therefore not only seems impossible, but is also undesirable from the standpoint of capital.

This points to what I call "the capital surplus disposal or absorption problem." The capitalist begins the day with a certain amount of money equivalent to c + v, and ends the day with a monetary equivalent of c + v + s. So where does the demand to buy the surplus-value at the end of the day come from? If it were just a matter of finding more money, then someone, somewhere (in Marx's day the gold producers, for example—and Marx will later on consider their potential role—and in our day the Federal Reserve) could simply supply it. But we have to solve the problem in value rather than money terms. If the surplus-value is to be realized in exchange, then we have to explain where the value equivalent of the surplus-value comes from in the final instance to accomplish that exchange. Theoretically, we have to answer this question without going outside of capitalism (the noncapitalist sources of both demand and supply that Marx considered earlier in the chapter) or assuming the existence of some class of conspicuous consumers (such as landlords and other feudal remnants, like the Crown and the Church) whose sole role is to produce nothing but to consume to the hilt in order to keep supply and demand in balance. This latter option (along with foreign trade), by the way, was how Malthus dealt with this same problem of insufficient effective demand to absorb the surpluses being produced. He went so far as to justify the existence of parasitic classes engaging in conspicuous consumption, such as the clergy, state functionaries (including the monarchy) and an idle aristocracy—because they played a crucial harmonizing role in an otherwise discordant capitalism. Marx, obviously, would want no truck with such a solution even if it could be sustained in the long run (which it could not).

Having introduced (as usual) some complications, such as those of turnover time and fixed capital investment (both of which will warrant separate chapters later), Marx seeks to solve the problem from the standpoint of reproduction. If the capitalist class itself consumes the whole of the surplus-value and recycles the value of constant and variable capital back into production, then demand and supply are brought back into equilibrium. But this means that the whole of the surplus-value must be purchased and consumed by the capitalist class. The capitalists must, in short, use their own stores of value (how obtained we do not know, though primitive accumulation presumably has something to do with it) to buy (realize) the surplus-value produced at the end of the day.

The logic behind this is impeccable in a way. Imagine a two-class society of capitalists and laborers. Plainly laborers cannot supply the extra demand to absorb the surplus (if anything, they are likely to exercise less demand over time with rising rates of exploitation). So the only class that can possibly supply the extra demand must be the capitalist class. They have to possess monetary (value) reserves at one point in time in order to realize the surplus-value they seek to appropriate at a later point in time. This sounds like a pretty weird system. It assumes, for example, an infinite desire on the part of the capitalists for an ever-expanding volume of consumption goods.

There is, however, one possible explanation for Marx's position. He began the chapter by saying that "all the premises of the process appear as its result, as premises produced by the process itself. Each moment appears as a point of departure, of transit, and of return." Could we say this is true of the capitalist class in general? On the first round of circulation, capital may indeed have to lay out the extra value (money) to purchase the surplus-value produced by the worker. But, once this is done, then the surplus-value produced by the workers belongs to the capitalists, while the capitalists have in effect consumed away their original capital. At the next round in the circulation process, the capitalists spend not their own money, but the money equivalent of the surplus-value they earlier appropriated from the workers. The capitalist class is thereby perpetually reproduced out of the production of surplus-value by the workers. The capitalists in effect supply the extra demand out of the surplus-value already produced by the workers and then appropriated by the capitalists. This was, of course, exactly the argument of chapter 23 of Volume I. The problem of where the extra demand comes from seems to disappear, because the workers have already produced it and all the capitalists have to do is to appropriate it. Or, as Marx began by saying, the premise (the effective demand of the capitalist) now appears as its result (the appropriation of surplus-value). This may work for simple reproduction, but given the general tenor of the argument in these chapters it is unlikely that this process can proceed continuously without interruptions and disruptions.

But, if the capitalist proceeds in this manner, then he is behaving as "a non-capitalist, not in his function as capitalist, but for his private requirements or pleasures." And this, says Marx, "is equivalent to assuming the non-existence of the industrial capitalist himself. For capitalism is already essentially abolished once we assume that it is enjoyment that is the driving motive and not enrichment itself." The distinction between enjoyment and enrichment seems here to be crucial to Marx's reasoning. To say that capitalism is founded on the personal desire for enjoyment would go against the argument Marx made in Volume I, chapter 24. Capitalism, he there argues, is based on "production for production's sake and accumulation for accumulation's sake" independent of the personal desires of the capitalists. While there is always a "Faustian moment" in which the desire for consumption and enjoyment conflicts with the necessity of reinvesting, the coercive laws of competition force capitalists willy-nilly towards the latter option. So it is insufficient to assume a capitalist persona besotted by the desire for consumer goods as the driving force of capital accumulation. It is even insufficient to assume that the driving force is the capitalist lust for more and more of the social power that the private appropriation of money allows (though this, as we shall see, is partially involved). The historical mission of the bourgeoisie is perpetual accumulation.

A system founded on the pursuit of pure pleasure and greed is, says Marx, "technically impossible. The capitalist must not only form a reserve of capital to guard against price fluctuations, and in order to be able to await the most favourable conjunctures for buying and selling; he must accumulate capital, in order to extend production and incorporate technical advances into his productive organism." Hoarding money to invest in large-scale and lumpy fixed capital, for example, withdraws money from circulation and thus diminishes the available demand: "the money is immobilized and does not withdraw from the commodity market an equivalent in commodities for the money equivalent that it has withdrawn for commodities supplied.” This aggravates the gap between the value the capitalist is supplying to the market and the available demand.

When part of the surplus-value is reinvested in expanding production, the solution proposed above for the effective demand problem looks even fishier. Not only will the capitalist have to provide the wherewithal to purchase and realize the initial round of surplus-value production, but he or she will also have to find even more resources to realize the surplus-value produced from reinvestment. And that obligation will continue in perpetuity. So the central problem is still left dangling: if, as seems to be the case, the demand cannot come from capitalist consumption, then from where on earth does it come? Marx provides hints but no definitive answer here. But it is, I think, significant that the chapter closes with this comment: “We have ignored credit here, and it pertains to credit if the capitalist deposits the money that he accumulates in a bank, for example, on current account bearing interest” (199). The hoarding necessary for fixed-capital formation could be organized through the credit system. This would certainly permit all of the hoarded value to be spent. This is, therefore, another of those points where the credit system seems set to play a crucial role of releasing more money power. But we have no idea here what that role might be, and how it might relate to the clear imbalance in demand and supply that arises from within the dynamics of the accumulation process.

The solution to the dilemma comes much later in Volume II, in several successive stages, culminating in the reproduction schemas at the end of the book. Rather than perpetuate the mystery (as Marx is prone to do), let me sketch in the broad outlines of how I interpret Marx’s argument. Capitalist consumption is of two sorts: personal consumption (necessities and luxuries) and productive consumption. The latter entails recycling the original capital to produce yet another round of surplus-value production and reinvestment in expansion, which means an increased demand for more means of production and more wage goods for the extra laborers hired (presuming no labor-saving technological changes). The coercive laws of competition drive expansion (hence the emphasis on enrichment rather than enjoyment). The demand derived from expansion tomorrow (plus bourgeois consumption) provides the market for the surplus commodities produced yesterday.

The timing of all this is crucial. When disaggregated, we see that at any one moment some capitalists are spending on reinvestment while others are hoarding money in anticipation of future investments or reinvestments (in fixed capital, for example). Those reinvesting are furnishing extra demand, while those hoarding are withdrawing demand but still furnishing a supply. Is there a possibility of balancing aggregate supply and demand in this way? Only, it seems, if the credit system intervenes so that hoarded money becomes freely available for use by others (thanks to the operations of the banks) for even more reinvestment. The money derived from the sale of tomorrow’s product is, in effect, needed to pay for the surplus-value produced today. This temporal gap between the capitalist's supply and the capitalist's demand can be bridged only with the aid of credit moneys (with which Marx studiously avoids engaging in Volume II). Capitalists do not actually have to borrow from anyone to do this. They can simply issue IOUs and engage in the long-standing practice of buying now and paying later. Hence arises an intimate association between the accumulation of capital and the accumulation of debt. Each is impossible without the other. Fighting to curb further debt creation (as the Republican Party seemed to be doing in 2011) is, in effect, a fight to end capitalism. This is why a politics of austerity, if endlessly pursued, will not only stymie growth, but in the end lead to a capitalist collapse.

There is no more than a brief hint of this solution and its attached problems in this chapter. I am here getting way ahead of myself. Indeed, Marx's reluctance to deal with the categories of credit and interest along with the personas of bankers and financiers leads him to evade a full statement in Volume II of how capitalists can balance supply and demand under a pure capitalist mode of production.

Reflections on the Definition of Capital

Marx does not make political arguments in Volume II. So what kinds of political insights can we infer from the text so far? One issue that jumps out in these chapters is the definition being given to capital. At a time when there is renewed talk of anticapitalist struggle, it is useful to define exactly what the struggle might be against.

In Volume I, capital is defined as value in motion. "Capital is money, capital is commodities," Marx says.

> In truth, however, value is here the subject of a process in which while constantly assuming the form in turn of money and commodities, it changes its own magnitude, throws off surplus-value from itself … Money therefore forms the starting point and the conclusion of every valorization process. … Value therefore now becomes value in process, money in process, and, as such, capital.

But, *nota bene*, Marx is here invoking how capital *appears* and not what it really is. In these passages, for example, he notes how capital "has acquired the occult ability to add value to itself. It brings forth living offspring, or at least lays golden eggs." In Volume I Marx shows how those golden eggs are laid by labor working under the direction and control of capital in the hidden abode of production.

But, in Volume II, "value in motion" is disaggregated into the circuits of money, commodity and productive capital. Is one of these circuits more defining of capital than the others? And, if so, are there critical transformative points within or between the different circuits that provide clear foci for political struggle? What are we to make of the contradictions within the circulation process that are not directly attributable to the tension within the capital-labor relation? What are we to make of the bald fact that if value is not realized in circulation then that value (along with any surplus-value) is lost?

Marx is very emphatic in these chapters that money is not capital. Money, he argues, can only perform money functions: the buying and selling of commodities. Besides, money forms arose well before capital arose as a dominant force over human affairs. But while capital cannot be reduced to money, there are some good reasons why capital can not only *appear* to be, but can also actually *become* money capital. Money is a form of social power appropriable by private persons. Desire for more money power animates many a capitalist, and this can certainly become one of the driving forces behind the desire for private accumulation. Furthermore, it is only in the money form that surplus-value becomes calculable. The capitalist knows how much money he laid out at the beginning of the circuit, and can easily figure the extra money he gets back. So it is hardly surprising that, when we think of capital, we think of it primarily in its money form. From this we can see how the fetish belief that money is capital can take root. It is important to recognize the power of this fetish belief. It really is the case that money power is both vitally important and an object of desire. But the fetishism of money, like that of the commodity so brilliantly laid out in Volume I, conceals an underlying social reality. Money cannot in itself create anything: it can only perform money functions. It is therefore delusional to think, Marx shows, that the money circuit is the pre-eminent circuit of capital. Yet, at a certain point in its circulation, industrial capital takes on the money form and, as it does so, it produces money capital.

Commodities can likewise perform only commodity functions. Commodities can exist without being products of capital. In fact, Marx argues, a whole world of commodity production and exchange, along with monetary and market forms, had to exist before capital itself could come into being. If there were no commodities already on the market, where would capitalists buy their means of production and workers the wage goods they need to survive? So commodification in general, and even direct commodity production, does not define capital. What *is* specific is that commodities under capitalism are impregnated with surplus-value, and commodities cannot impregnate themselves. But commodities cannot define capital, either. Important though it is throughout Volume II, the commodity circuit is not defining for capital.

Even more surprising is Marx's assertion that the buying and selling of labor-power, often taken as basic to the definition of capital, can exist without capital. Labor services could be paid for outside of the purview of any circulation of capital. There was plenty of that going on under feudalism. Read a Dickens novel and you will see it going on all over the place in London even when capitalism was well-established. This distinction is still important: if I pay a kid in my building to walk my dog in the afternoon, or if I give a case of beer to a neighbor who spends hours helping me fix up my porch, then none of this presupposes the existence or circulation of capital. Exchanges of labor services for money or other commodities, Marx notes, had to exist before capital could buy labor-power as a commodity. So while extensive proletarianization was a necessary precondition for the rise of capital, it does not define what the essence of capital is all about.

Marx also points out (161) that capitalist commodity production can only be carried out in the same way as "production in general," and so cannot in itself be differentiated from "the non-capitalist production process" by any particular physical attributes. Growing corn is, in the end, growing corn regardless of the mode of production. So physical practices of use-value production do not define capital. The same physical production process can in principle take place under feudal, capitalistic or socialist social relations.

The essence of capital, we are forced to conclude, is the class relation between capital and labor in production that facilitates the systematic production and appropriation of value and surplus-value. This definition of capital is consistent with Marx's argument in the introduction to the *Grundrisse* that it is production, understood as production of surplus-value (not physical production), that predominates over all the other moments of distribution, exchange, consumption and, most of all, over the physical process of production itself. The reproduction of capital is always to be understood as the reproduction of the class relation between capital and labor (as chapter 23 of Volume I makes very clear).

The narrative that emerges from Marx's account is this: all of these elements of money, commodities, the buying and selling of labor services, and a given physical and technical capacity for production had to preexist the rise of capital. Together they constituted the necessary preconditions for the emergence of that class relation between capital and labor that facilitates the systematic production and appropriation of surplus-value. It is this last central feature, however, that is the defining specificity of capital. If, therefore, we want to talk about "the communist hypothesis" or an anticapitalist politics, then the core goal must be the abolition of this class relation in production.

It is tempting then to conclude that it should in principle be possible to construct socialism, and even communism, in a world of monetiza-tion, commodification, and even the trading of labor services, provided that the class relation between capital and labor is erased from the world of production (replaced, for example, by the "associated laborer" to whom Marx usually appeals whenever he gives consideration to alternatives). After all, if all of these features preexisted the rise of capital, why could they not continue to play a crucial role under socialism or even communism?

But there is a more complicated narrative that emerges out of these chapters. Once the class relation between capital and labor becomes dominant in production, then it entails a transformation of the preconditions that gave rise to it. The circulation of money and commodities and the functioning of labor markets are transformed so as to support and even mandate and discipline the reproduction of class relations in production. In these chapters, we see that the three circuits of money, commodity, and productive capital are so intertwined with each other that one cannot be changed without changing all the others. This does not mean that change is impossible. Indeed, it is precisely because a disruption at one point of a circuit has immediate impacts on all the others that change *becomes* possible. And what Marx shows us is that disruptions are inevitably occurring anyway, thereby offering abundant opportunities for political interventions. The whole system, once we understand it well, appears as both fragile and vulnerable.

While it is true that money, commodities, and the exchange of labor services logically and historically preceded the rise of capital as a class relation, these exchanges at that time functioned under radically different social conditions. When most individuals either exercised some control over their own means of production or were (as under slavery and serfdom) assured of a permanent (albeit tightly circumscribed) position in the social order, the direct producers were always in a position to reproduce themselves wholly or partly outside of market exchange. Some may have been forced by extreme hunger or crop failures into involuntary exchange of either commodities or labor services, but much of the exchange was of surpluses over and above those needed for social reproduction. The exchanges occurred outside of the discipline exercised by exchange-value. It is still the case, under those conditions called “partial proletarianization,” that some large segments of the global labor force that have access to land and other family or kinship resources can return to such conditions when unemployed, sick, or disabled. This is the case in contemporary China, for example, where many of the costs of social reproduction are borne in the rural areas. Even more callously, this is how US agribusiness unloads the costs of social reproduction on Mexico by employing illegal immigrants to work with carcinogenic pesticides, until they become too sick and have to return to the Mexican villages from whence they came to be cared for or to die.

In these opening chapters of Volume II, Marx directs our attention to a general point: that, as the class relation between capital and labor came to dominate in production (spreading far afield even in Marx’s day), so this had a transforming impact upon the form and functioning of money, commodities, and labor markets. Once money becomes money *capital*, Marx notes, it becomes not only the aim and object of the capitalist’s fetish desire. It also assumes very different functions and, particularly in the form of the credit system, is organized solely to support the reproduction of the class relation. The different circuits of capital are enmeshed and intertwined in such a way that each supports and on occasion contradicts the others, even as the class relation and the production of surplus-value remain at the center of the capitalist mode of production. Capital “is a movement, a circulatory process through different stages, which itself in turn includes three different forms of the circulatory process. Hence it can only be grasped as a movement, and not as a static thing.” This is consistent with Marx's dialectical conception of "totality," as also laid out in the introduction to the *Grundrisse*. While the specificity of capital lies in the class relation in production that facilitates the creation of surplus-value, its generality lies in the circulation process of industrial capital that is constituted as a unity of the circuits of money, production, and commodity capitals.

It would be delusional to believe, therefore, that changes in production could be far-reaching without the mandating of radical changes in the functioning of the other circuits. The transition to socialism or communism entails not only a fierce combat to eradicate the class relation between capital and labor in production. It also requires the rolling back, or perhaps the reconstruction, of these other circuits in order to show how monetization, commodification and the trading of labor services might be transformed to support associated laborers in production. If, for example, something akin to money is needed to facilitate exchange, then how can we prevent money from becoming money capital, and the social power that inheres in money from being appropriated by that class that will then use it to produce and appropriate surplus-value for itself? Exchange of commodities is one thing, but exchange-value as the regulator of all human transactions is quite another. Without such ancillary transformations, the abolition of class relations in production appears impossible.

This conclusion finds support in the long and often vainglorious history of attempts to reorganize capitalist production on noncapitalist lines, particularly under the rubric of associated labor. Attempts at workers' control, self-management, *autogestión*, and factory cooperatives (of the sort that sprung up in Europe in the 1970s or in Argentina after the crisis of 2001) have invariably suffered, and in some instances been destroyed, from having to deal with the controlling powers of hostile merchants' and finance capital. The dream of *autogestión* and workers' control has often crashed on the rocks of the powers of money and commodity capital and the laws of exchange-value to discipline them. The driving force to valorize value and thereby extract surplus-value is hard to ward off. And it is perhaps significant that the longest-lasting workers' cooperative that has survived—Mondragon, which was founded in Spain's fascist period, in the Basque country, in 1956—did so in part because it set up its own credit institutions and marketing functions, thus casting its political strategy across all three circuits. It continues to survive and flourish, and in most of the 200 enterprises it now controls the differentials in rewards to participants are still held for the most part at 3-to-1 (compared to 400-to-1 or more in US corporations).

The difficulties confronted by forms of associated labor largely derive from the perpetuation of the capitalist laws of value which, as we earlier saw, dominate and often destroy individual capitals. Once any enterprise enters into a world where these laws of value hold sway, it is subject to the disciplinary power of those laws. Staying out of range of that disciplinary power is difficult, if not impossible. In order to survive, Mondragon and the recuperated factories in Argentina had to find a way to compromise with the law of value. This leads us to a general and, on the surface at least, dispiriting conclusion, for which Marx has already prepared us in his analysis of the devaluation and deindustrialization of capital: the class relation between capital and labor in production cannot be abolished without the abolition of the laws of motion of capital and the abolition of that immaterial and objective force of the law of value that anchors those laws of motion. But Marx is often drawn to a co-evolutionary theory of historical transformation. If we apply the lineaments of such a theory to this case, then a strategy for anticapitalist struggle begins to emerge. While the class relation between capital and labor lies at the center of the definition of capital, it is so deeply embedded in other facets of the circulation process as to make it hard to dislodge without demolishing or replacing the supports that surround it. While we can remain faithful to the principle of associated workers, of worker autonomy and self-management, and honor the long history of attempts to implement such ways of producing and living, we also have to confront all the other facets of social change required to emancipate the social world from the domination of capital.

While communism has at the end of the day to abolish the class relation between capital and labor, it does not necessarily have to abolish money (or its equivalent), or the exchange of goods and of labor services. It would, as did capital before it, have to find ways to restructure all of these other circulatory processes in ways supportive of associated labor, instead of supportive of the class relations of capital. This poses some very general and seemingly quite difficult questions on the future role and very nature of money, commodification, and markets. How, for example, might labor services be traded, and how could labor move fluidly from one line or place of production to another? And how would divisions of labor be coordinated to a social purpose? Would there be labor and commodity exchanges? The transition to communism would entail the transformation of all these other circulatory processes so that they no longer operate in support of capital. But the experience of trying to create communism through the total abolition of all these supplementary forms, as occurred in North Korea, would suggest that this is not possible either.

Marx, while not a utopian, seems to favor the idea of associated laborers autonomously controlling and deciding what use-values they produce, and by what means, as the basis of a revolutionary alternative to a ruthless capitalism based on exchange-values and surplus-value appropriation. But this, as we will see when we examine the aggregate conditions of reproduction in the last two chapters of Volume II, cannot happen without some kind of directing and coordinating mechanism or authority of governance, and without conscious planning of how use-values are to be produced in a coordinated way. All of this is, of course, a very long way away from Marx’s actual text. But I think Volume II does invite reflection on such processes and problems. This is what turns a rather dull book into a much more interesting exercise in creative political thinking.

But there is one other crucial political point to be made here. In many parts of the world—the United States in particular—the idea of socialism or communism is associated primarily with dictatorial forms of centralized state power. A perfectly valid distrust of the state and of the exercise of state power is everywhere observable. But here is Marx suggesting that the core imaginary of an alternative communist society is that of freely associating laborers controlling their own production process and exercising autonomy in the workplace within a decentralized economy. There is, it turns out, immense public sympathy with that idea. I recall seeing a public opinion poll some years back that indicated that most Americans thought worker control a good idea. And when the workers at Republic Windows and Doors in Chicago sat in and occupied their factory in the crisis of 2008, they were treated by the mainstream press even in the United States more as local heroes than as commie-pinko villains. If you ask the most vociferous opponents of socialism, including those in the Tea Party, whether they agree or not with worker rather than state or government control, they will almost certainly reply affirmatively. Many people are, it turns out, in favor of at least this version of the communist hypothesis. What emerges from these chapters, therefore, is not only a clearer definition of capital, but a conception of a communist alternative that even many Americans might willingly endorse.

CHAPTERS 5–6 OF VOLUME II IN GENERAL

The next two chapters deal with the time and costs that attach to the circulation processes described in the preceding chapters. Marx here embarks upon an investigation into the temporality of continuous capital accumulation. Even though he focuses exclusively on the laws of motion of capital, it is not hard to recognize how these processes necessarily impinge upon and shape the temporalities of daily life for everyone living under a capitalist mode of production. Buried in the details of these chapters is, in fact, a profound enquiry into the ruling but ever-changing temporality and perpetually emergent spatiality of a capitalist mode of production. What, then, does the time-space evolution of capital look like? What forces lie behind it, and why does it take the particular trajectory it does? These questions should be borne constantly in mind while working through the details.

There is one basic idea that is fundamental for understanding Marx's argument in these chapters. It derives from his long-standing insistence that value and surplus-value cannot be produced through acts of exchange. Value is created in production, and that is that. From this it follows that the time and labor expended on circulation in the market is unproductive of value. A lot of time and labor effort is taken up by circulation in the market. Marx considers this lost time and lost expenditure of labor time in relation to the production of value. There are many incentives, therefore, to find ways to reduce it. One consequence is capital's historical and continuing fascination with speed-up. The expenditure of labor on transforming a commodity into money or vice versa is unproductive labor (unproductive not in the sense that the labor is useless or unnecessary, or performed by idle, lazy and unproductive workers, but unproductive because it does not produce value). A lot of labor is, of course, employed in circulating commodities, and capitalists such as merchants, wholesalers, and retailers organize that labor and take profit from it in part by exploiting the workers they employ in the same way that production capitalists do. But as far as Marx is concerned this is still to be categorized as unproductive labor. This is a controversial issue, and it has been the subject of substantial and interminable debate, some of which is well described in Ernest Mandel's "Introduction" to this Volume II (though there are plenty of scholars who dispute Mandel's interpretation[1]).

I am not inclined to go into this controversy in detail. But there are some general points that need to be made even if they cannot be resolved here. For example, there is a potential difficulty that arises in relation to Marx's formulation in Volume I. In chapter 16, he shifts his focus from the individual to the "collective laborer." He plainly has in mind a factory in which the direct producers on the line are mixed together with cleaners, maintenance workers, and other support staff, and Marx is happy to include all of them as part of the collective production process, even though some of them individually do not apply their labor-power to the commodity being produced. As I noted in the *Companion* to Volume I, there is a problem of defining exactly where the collective labor begins and ends. Does it include designers, managers, engineers, maintenance workers, cleaners and traders operating from within the factory? If it is the productivity of the collective rather than the individual laborer that really matters, as Marx insists here, then we need to know over what group of workers the productivity is to be calculated, and who the "associated laborers" are who produce the value. What happens when various functions that were once a part of collective laboring within the factory (such as cleaning and graphic advertising design) are subcontracted out? Do they suddenly shift from being a part of the collective productive labor to the category of unproductive labor? There has been a marked systematic trend, particularly over the last forty years or so, for capitalist firms to rely increasingly on subcontracting, presumably to come to a far more "lean and mean" definition of the collective laborer they employ, and so bolster their individual profit rate (though the aggregate effects upon surplus-value production are murky at best). Cleaning, maintenance, design, marketing, and so on are increasingly organized as "business services," and it is very hard to tell (as Marx himself concedes, as we shall see) when these activities need to be classified as productive of value or unproductive, though necessary. These problems exist within putative socialist forms (one of the criticisms of Mondragon is that it increasingly relies on subcontracting, and therefore survives at the expense of exploitation elsewhere).

I cannot address this question here, except to signal that we are here in the midst of an accounting nightmare (which, in my view, is insoluble) and a resultant mass of controversies (at which Marxists have long excelled). I leave you to study these problems at your leisure. In so doing, you will find that the distinction between productive and unproductive labor is very important in Adam Smith's writings, and that Marx devotes much of the first volume of *Theories of Surplus Value* to examining Adam Smith's views and subjecting them to critique, in order to better define his own. But I am personally not persuaded that Marx found a reasonable answer to the problem. I do not think anyone else has either, which is why there is such a legacy of controversy.

In the absence of a clear accounting solution to the division between productive and unproductive labor, we are left with the problem of how to proceed in a way that preserves Marx's intuitive insights while recognizing the difficulty (impossibility?) of operationalizing the distinctions. The intuitive insight derives from the analysis of the three circuits of capital. There is the moment of production (the labor process) which founds the productive circuit. But that circuit cannot be completed without negotiating the conditions of circulation defined by money and by commodities. Labor is plainly involved in all three circuits, and the continuity of the circuit of industrial capital (the whole process) depends upon the conditions of continuity defined in all three circuits. The notion that trumps all others is the necessity of continuity and speed (acceleration) of flow, and what has to be done to ensure this continuous movement.

If this were the only consideration then we might argue for including all labor involved in production, circulation, and realization as part of the collective labor of maintaining and reproducing capital (this could also be extended to include household labor devoted to the reproduction of labor-power). In other words, we could say that all laborers involved in the circuit of industrial capital ought to be considered productive workers. But this would, in Marx's view, gloss over and mask something very important. If value and surplus-value are produced only at the point of production in the productive circuit, then the expenses involved and labor expended within the circulation of industrial capital have to be paid for by deductions from the value and surplus-value produced in production. Plainly, the extent of these deductions is a matter of deep concern, both individually and socially, to the reproduction of capital. If all the value and surplus-value produced were absorbed in costs of circulation, then who would bother to produce? Strategies to reduce these deductions, as well as to minimize the lost time in circulation, have therefore played an important role in capital's history, and we experience the results of these strategies in our daily lives.

This is where the impulse perpetually to revolutionize the time-space configurations of capitalism through speed-up (even of our consumption, for example) and the “annihilation of space though time” (as Marx puts it in the *Grundrisse)* comes from. Conversely, it also follows that excessive power to impose these deductions (or fail to facilitate the speedy motion of capital through the circuits) can be the generator of crises. If all power lies with the money capitalists (the financiers) and the commodity capitalists (the merchants), then what impacts does this have on the production of value upon which these factions of capital ultimately depend? It could be, for example, that the global economic distress that set in after 2007 was due either to the excessive (and, as we shall see, largely fictitious) profits extracted from the unproductive money and commodity circuits (for example, by Goldman Sachs and Walmart) that sucked energy out of the pursuit of productive activities or, conversely, to such degraded conditions in the productive circuit as to provoke capital flight into the unproductive money and commodity circuits, where accumulation could proceed through dispossession rather than through production. How we might establish the truth of either of these propositions is an intriguing question. But the question readily presents itself: If value can be produced in circulation, then why bother to produce? Marx does not pose this question in that form here, but it is implicit in the analysis. I would far rather take up this question than get lost in some accounting quagmire. And this is the question that seems to correspond most closely to Marx’s intuitive understanding. It also happens to be of great contemporary relevance. Bearing all this in mind, let us see how Marx handles the details.

CHAPTER 5 OF VOLUME II

Chapter 5 begins with the seemingly simple distinction between circulation time (how long capital spends in the sphere of circulation in the transition from commodity to money) and production time (how long capital spends in the sphere of active production). The sum of circulation and production times is later defined as the turnover time of capital (204). But there are complications. Fixed capitals (machines, and so on) can spend a long time in the sphere of production whether they are being used or not. There is a key difference, to be taken up in a later chapter, between the total capital *applied* in production (this includes all of the fixed capital, such as machinery and buildings) and the capital actually consumed or *used up* (which only includes that part of the fixed capital used up in the active production process). This distinction only makes sense, however, over a given period of time. Marx often assumes that period to be one year, unless otherwise stated. Furthermore, “the periodic interruption of the labour process, at night for example, may interrupt the function of these means of labour, but it does not affect their stay in the place of production” (200). Production also requires a certain reserve (an inventory) of means of production on hand in the event of sudden shortages in the market for inputs or other unforeseen fluctuations.

This leads Marx to distinguish between functioning time, or what he later calls “working time” (the time when surplus-value is actively being produced through productive consumption), and production time (which includes the time capital is held in reserve, or is not being actively used in the production process). Just to add another wrinkle to the problem, situations often arise in which the production process continues even though no labor is being expended—as, for example, "when wheat grows in the earth or wine ferments in the cellar" (201). For all of these reasons, the production time is nearly always much greater than the working time.

When capital is not actively being used, it reverts to being what Marx calls *latent capital* that functions "in the production process without being involved in the labour process. … Its idleness forms a condition for the uninterrupted flow of the production process. The buildings, apparatus, etc. that are necessary for storing the productive reserve (the latent capital) are conditions of the production process and hence form components of the productive capital advanced." But idle capital does not produce value and surplus-value, even though it is a necessary "part of the life" of productive capital:

> It is clear that the nearer the production time and working time approach to equality, the greater the productivity and valorization of a given productive capital in a given space of time. The tendency of capitalist production is therefore to shorten as much as possible the excess of production time over working time. But although the production time of capital may diverge from its working time, it always includes the latter, and the excess itself is a condition of the production process. (202)

Circulation time is the time taken to sell the commodity and then reconvert the money capital into means of production and labor-power. "Circulation time and production time are," Marx writes, "mutually exclusive. During its circulation time, capital does not function as productive capital, and therefore produces neither commodities nor surplus-value" (203). This means that

> the expansion and contraction of the circulation time hence acts as a negative limit on the contraction or expansion of the production time … The more that the circulation metamorphoses of capital are only ideal, i.e. the closer the circulation time comes to zero, the more the capital functions, and the greater is its productivity and self-valorization. If a capitalist works to order, receives payment on the delivery of his product, and is paid in his own means of production, then his time of circulation approaches zero. (203)

Classical political economy, Marx observes, missed the importance of analyzing production and circulation times. There consequently arose the fetish illusion among many of them, as well as among the capitalists themselves, that surplus-value could derive "from the sphere of circulation," because "longer circulation time is the basis for a higher price." This produces the illusion that "capital possesses a mystical source of self-valorization that is independent of its production process and hence of the exploitation of labour." Beguiled by the fetish belief (which still persists) that value can originate in circulation, it is impossible to understand why capital internalizes a drive towards speed-up and increasing efficiency in circulation. After all, if value can be produced through circulation, then why struggle to reduce circulation times? Slower times would yield more value.

It is unfortunate that Marx merely lays all this out in a purely formal way, without any attempt to indicate its historical relevance. But it is not hard to connect the dots and expand upon the history. Marx, for example, refers back to the Volume I description (C1, 367–9) of how capital internalizes “the drive towards night work” as a way “to shorten the excess of production time over working time” (201). He could, however, have gone much further. Had he here introduced “the coercive laws of competition,” as he did when developing the theory of relative surplus-value in Volume I, then he would have derived a powerful logical argument for capitalists’ perpetually seeking out competitive advantage by finding means to shorten the gap (and the cost) between production and working times. He would likewise have pointed to the imperative for capital to shorten circulation times and seek out greater efficiencies in distribution (the Walmart syndrome, if you will). I often think how much richer and more appealing Volume II would have appeared if Marx had inserted even a brief chapter, like that on the working day in Volume I, which described the history of technological and organizational shifts designed to reduce the gap between production time and working time as well as circulation times. We would then have understood why it is that capital has so fiercely pursued the speeding up of the temporality of everything. The less the time spent in any of these phases, the faster capital recuperates surplus-value.

The initial “natural” reproductive cycle of hogs, for example, has been accelerated from one to three litters a year; the efficient slaughter and dismembering of the hogs is performed on an assembly line and the packing and shipping is orchestrated as a just-in-time delivery system to supermarkets that exercise tight computerized inventory controls. The only wayward moment in the whole process lies with the singularity of consumer choices. How many pork chops will consumers in New York City buy today? This is the world that capital has produced. What we encounter in this chapter is an explanation of the imperatives within capital that necessarily make it so.

The basic form of commodity circulation is defined in Volume I as C-M-C. The circulation time is broken down “into two opposing phases”—the time needed for its transformation from money into commodity inputs into production, “and the time it needs for its transformation from commodity into money.” In Volume I, Marx had argued that there is an asymmetry, because it is easiest to move from the universal representation of value—money—to the particularity of value as embodied in the commodity. But here Marx presents these relations in a rather different light. For the capitalist seeking to buy means of production, the conversion from money into commodities involves a transformation “into those commodities which form the specific elements of productive capital in a given sphere of investment.” This is very different from the situation of final consumers with money to spend, who can just as easily purchase shirts if they cannot find shoes. The capitalist producer, by contrast, faces specific purchasing requirements:

> The means of production may not be present on the market, needing first to be produced, or they may have to be drawn from distant markets, or there may be dislocations in their normal supply, changes of price, etc. in short, a mass of circumstances that are not recognizable in the simple change of form M-C, but require for this part of the circulation phase either less time or more. Just as C-M and M-C are separated in time, so they may also be separated in space, the selling and the buying markets being in different places. (205)

The geographical and spatial conditions of supply of means of production therefore impose constraints on capitalist production because of the time taken to bring these means of production to the point of production where laboring takes place.

But it is not only time taken that is important: “In factories, for example, buyers and sellers are frequently even different persons” and since these agents of circulation (such as the merchants) are “just as necessary for commodity production … as agents of production,” so both require payment (205). In short, capitalists face all sorts of potential supply constraints and costs when it comes to procuring the use-values required as a precondition of production. They also have to face constraints created by other factions of capital, or by different state powers with geopolitical ambitions. I need rare earth metals to produce wind turbines. But 95 percent of the production and world trade of rare earth metals is controlled by China. When Japan was involved in a conflict with China over jurisdiction in territorial waters, Chinese customs officials held up the shipment of rare earth metals to Japan, leaving Japanese producers high and dry. Innumerable barriers of this sort can affect the transformation of money into commodities as means of production.

Marx’s general point is well-taken: the metamorphosis from money into means of production is potentially problematic. The longer it takes to secure those means of production, the more capital is locked up in an unproductive state. Conversely, improvements of access to supplies increase the overall productivity of capital deployed, and hence expands the basis for surplus-value production. But this does not gainsay the greater significance of the sale that realizes the surplus-value: “M-C is in normal conditions a necessary act for the valorization of the value expressed in M, but it is not a realization of surplus-value; it is a prelude to its production, not an appendix to it” (205). The realization of the surplus-value has enormous significance.

The specifics of commodity use-values come to play a much more significant role in Volume II than they did in Volume I. And this is true both for the transition M-C and for the movement to final consumption, C’–M’. “The very form of the existence of commodities, their existence as use values, sets certain limits to the circulation of the commodity capital C’-M’.” If “they are not sold within a definite time, then they get spoiled and lose, together with their use-value, their property as bearers of exchange-value. Both the capital value contained in them and the surplus-value added to it are lost." The problem is that

> the use-values of different commodities may decay at different speeds. … The limitation of the circulation time of commodity capital imposed by the spoiling of the commodity body itself is the absolute limit of this part of the circulation time. … The more perishable a commodity, the more directly after its production it must be consumed, and therefore sold, the smaller the distance it can move from its place of production, the narrower therefore is its sphere of spatial circulation, and the more local the character of its market. Hence the more perishable a commodity … the less appropriate it is as an object of capitalist production. Capitalism can only deal in commodities of this kind in populous places, or to the extent that distances are reduced by the development of means of transport. The concentration of the production of an article in a few hands, however, and in a populous place, can create a relatively large market even for an article of this kind, as is the case with the big breweries, dairies, etc. (206)

Here, too, technological innovations in the sphere of circulation, the most important of which have undoubtedly been canning and refrigeration (along with keg beers!), have played a critical role in capitalist history for obvious reasons. These brief passages also provide, of course, much grist for the economic geographer's mill of knowledge of how capital accumulation might work through and across space to produce distinctive locational structures and geographical linkages. Supply chains of means of production, along with commodity chains destined for final consumption in spatially distinct and often distant markets, are constantly being reshaped and re-formed into more efficient configurations by the coercive pressures of competition. We will take up Marx's views on transport and communications in general, along with an understanding of locational requirements, at the end of this chapter.

One final point needs to be made. Marx came to these questions on working, production, circulation, and turnover times rather late in the day. He did not, for example, include any analysis of turnover time in Volume III (most of which was written earlier). Engels recognized that changing turnover times had an impact upon the rate of profit. He therefore inserted a tentative chapter on this topic in Volume III. He was, I think, right to do so. I therefore think it very important to bear all of these issues, including those of costs taken up in the next chapter, very much in mind in any reading of Volume III.

CHAPTER 6 OF VOLUME II

Labor-power is required to circulate commodities, and the activity of circulation imposes costs. The sphere of circulation thus arises as a distinctive field of capitalist endeavor that is the special province of a distinctive class faction—merchants. The transition M-C-M takes up time and energy, absorbs labor, and offers the opportunity for financial gain to merchant capitalists. Those who work in this circulation sphere may use it as "an opportunity to appropriate an excess quantity of value," but this labor, Marx insists, "increased by evil intent on either side, no more creates value than the labour that takes place in legal proceedings increases the value of the object in dispute." This labor "does not create value, but only mediates a change in the form of value" (208). This is true of all those who work on the buying and selling of commodities, no matter whether it is the capitalist himself or laborers employed by the capitalist. Here "we have a function which, although in and for itself unproductive, is nevertheless a necessary moment of reproduction. … One merchant … may, by way of his operations, shorten the buying and selling time for many producers. He should then be considered as a machine that reduces the expenditure of useless energy, or helps set free production time" (209). This merchant is useful "because a smaller part of society's labour-power and labour time is now tied up in these unproductive functions"(210). The remaining necessary costs (*faux frais)* have to be deducted from the value and surplus-value created in production.

We immediately encounter an oddity that is analogous, as Marx points out, to the application of machinery. While machines cannot produce value, as he argues in Volume I, they can be a source of relative surplus-value both individually (capitalists with superior machinery earn excess profits) and socially (the reduction in the cost of wage goods because of rising productivity reduces the value of labor-power). So something that is not a source of value can be a source of surplus-value. This proposition seems to carry over to the activities occurring within the sphere of circulation. While value is not created in this sphere, surplus-value can be realized within it. It is realized individually when a capitalist (for example, a merchant) employs labor-power at its value but overworks it to gain surplus-value for himself. The social form is realized when merchant capitalists reduce the average necessary costs of circulation by excessively exploiting the labor-power they employ (which accounts for the often dismal and highly exploitative conditions of labor encountered in this sector). Less then has to be deducted from value production to cover the *faux frais* of circulation. In the same way that the gains to be had from rising productivity are open to being divided between workers and capitalists, so the gains from rising productivity and increasing rates of exploitation in circulation can be divided between merchant and production capitalists. But, in this instance, we are looking at relations between capitalists, rather than between capitalists and workers. In fact, there is far more in Volume II about relations between capitalists than there is about the class relation between capitalists and workers. "It is businessmen who face businessmen here, and 'when Greek meets Greek then comes the tug of war'" (207). Watch out for this "tug of war" as we go forward.

Marx then takes up the costs of bookkeeping. While clearly a cost of circulation, it is quite different from normal buying and selling costs. "As the supervision and ideal recapitulation of the process, [bookkeeping] becomes ever more necessary the more the process takes place on a social scale, and loses its purely individual character; it is thus more necessary in capitalist production than in the fragmented production of handicraftsmen and peasants, more necessary in communal production than in capitalist” (212). (Does this last remark imply a key role for bookkeepers under socialism?) Necessary costs likewise attach to the provision and renewal of the money supply:

> The commodities that function as money go neither into individual nor into productive consumption. They represent social labour fixed in a form [money] in which it serves merely as a machine for circulation. Apart from the fact that a part of the social wealth is confined to this unproductive form, the wear and tear of money requires its steady replacement, or the transformation of more social labour—in the product form—into more gold and silver. These replacement costs are significant in nations where there is a developed capitalism. (213)

The necessary costs associated with money supply tend to grow over time (Marx does not contemplate electronic moneys): “This is a part of the social wealth that has to be sacrificed to the circulation process” (214).

“The costs of storage” are, however, treated as a major issue. For the individual capitalist, these costs have a “value forming effect” and “form an addition to the selling price” of commodities. “While costs that make commodities dearer without increasing the use-value are *faux frais* of production from the social point of view, for the individual capitalist they can constitute sources of enrichment” (214). This is so because these costs are actually continuations of the costs of production even though they are incurred within the circulation process itself. The sort of issue that Marx has in mind here would be something like the cost of refrigeration, which does not add anything useful to the product but does prevent the decay of use-value and hence preserve value that would otherwise be lost. Again, I think the details are historically important, and we need to treat these as crucial in the struggle for competitive advantage, such as Walmart’s use of optimal scheduling, just-in-time delivery systems, and the like. What is being managed here is the inventory, and there are two crucial questions: How much will be held, and who will hold it? The inventory in my refrigerator is close to zero because I can walk out onto the streets of New York City any time of the day or night and pick up something to eat. The retailers carry the bulk of the inventory (though when a hurricane threatened, there was a massive wave of panic buying, so the supermarkets had empty shelves). People who live in remoter areas keep much more inventory at home. This is all idle capital in Marx’s view, and reducing it releases this idle capital for productive use. There is, therefore, a whole history of inventory management that attaches to the history of capitalism (and a terrific book or PhD thesis to be written on the topic).

Marx then examines the costs that arise in relation to stock formation, but I am not inclined to follow this in any detail. The important point has already been made: stocks and inventories are necessary to capital accumulation for a variety of reasons, but they take capital away from active production and maintain it in a latent or idle state. “The flow of the production and reproduction process … requires that a mass of commodities (means of production) is constantly present on the market, i.e. forms a stock" (215). In that state, the capital is clearly unproductive. Improvements in stock or inventory management will release capital from this nonproductive activity. For this reason, stock and inventory management has had a hugely important role in the history of capital. Firms like Walmart and Ikea are super-efficient at this, and therefore gain relative to their competitors. The Japanese auto companies out-competed Detroit in the 1980s through the introduction of a just-in-time scheduling system that dramatically reduced the need for inventories at different points within the flow of production.

All of this confirms Marx's insistence on the necessity to maintain the continuous flow of capitalist production. But this requires that a mass of commodities constantly be available on the market. This "commodity stock … appears for M-C as the condition for the flow of the reproduction process and for the investment of new or additional capital" (215). But the

> persistence of commodity capital as commodity stock requires buildings, stores, containers, warehouses, i.e. an outlay of constant capital; it equally requires that payment be made for the labour-power employed in placing the commodities in their containers. Furthermore, commodities decay and are subject to the damaging influence of the elements. Additional capital must thus be expended to protect them from this, partly in objective form as means of labour, and partly in labour-power.

These circulation costs "are distinguished from those mentioned [earlier] in as much as they do enter into the value of commodities to a certain extent and thus make commodities dearer" (216). They are, in short, expenses attributable to production, because the commodity is not truly finished until it is on the market in saleable form. Some value can therefore be created in what appears to be circulation. This porosity makes the accounting nightmare even worse: placing a commodity in a container adds to its value while time taken sitting in the warehouse entails deductions from value (for example, the rent of the warehouse).

It is impossible to imagine a purely functioning capital-circulation process without adequate stocks and inventories in place. These stocks can take three forms—stocks of inputs into productive capital, stocks in the houses and larders of final consumers, and stocks of commodity capital on the market (in wholesale and retail stores) awaiting purchasers. To some degree, these forms are mutually interchangeable. A large and easily accessible stock of commodity capital on the market would render a small stock of productive capital inputs more feasible for producers. Stores stocked with goods reduce the need for stocks in the household.

There is a general tendency for the mass of this stock of capital to grow, however, the more that capital develops. This growth "is both premise and effect of the development of the productive power of labour" (218). But the quantity of stock that a capitalist must have on hand "depends on various conditions which essentially all derive from the greater speed, regularity and certainty with which the necessary mass of raw material can be constantly supplied in such a way that no interruption arises. The less these conditions are fulfilled … the greater must be the latent part of the productive capital" (219). So "it makes a great difference, for example, whether the mill-owner has to have sufficient cotton or coal on hand for three months, or only for one." The development of the means of transport here has a crucial role to play. "The speed with which the product of one process can be transferred to another process as a means of production depends on the development of the means of transport and communication. The cheapness of transport here plays a great role in this connection. The constantly repeated transportation of coal, for example, from the mine to the spinning mill will be cheaper [the text says "dearer" which must be wrong!] than the storage of a larger amount of coal for a longer period, if transport is relatively cheap" (219–20). But there are other means to smooth the flows: "The less dependent the mill-owner is for the renewal of his stocks of cotton, coal, etc., on the direct sale of his yarn – and the more developed the credit system … the smaller the relative sizes of these stocks need to be, in order to secure a continuous production of yarn independent of the accidents of sale." I here note a tacit association in Marx's thinking between transport and credit conditions in assuring the continuity and flow of continuous capital accumulation. These two elements have in fact jointly played a crucial role in reshaping the time-space relations of capitalism.

But, again, we confront the problem that "many raw materials, semifinished goods, etc. require lengthy periods of time for their production." If, therefore,

> there is to be no interruption of the production process, then a definite stock of these must be present for the whole period of time in which new products cannot replace old. If this stock in the hands of the industrial capitalist declines, this only means that it increases in the form of a commodity stock in the hands of the merchant. The development of the means of transport, for example, permits cotton lying in the import dock to be quickly delivered from Liverpool to Manchester, so that the manufacturer can renew his stock of cotton in relatively small portions according to his needs. But then the same cotton exists in even greater amounts as a commodity stock in the hands of the Liverpool merchants" (220).

This leads to a general conclusion. First, the quantity of stocks producers need to keep on hand depends on the ease and cost of transportation. Secondly, "the development of the world market and the consequent multiplication of sources of supply for the same article has the same effect. The article is supplied bit by bit from different countries and at different points in time" (220).

It is, for example, very helpful if the cotton harvest in Egypt or India occurs at a different time of year from that of the United States.

Marx closes with further consideration of "the extent to which these expenses enter into the value of commodities." Costs of storage are a positive loss for the individual capitalist. The purchaser will not pay for them since they are not part of the socially necessary labor time. Even when the capitalist speculates and holds back in anticipation of rising prices, then the speculative gamble is the capitalist's alone. But there is a distinction here between voluntary and involuntary stock formation. The latter arises simply from the fact that a certain stock is socially necessary, and so, Marx argues, it can be considered as constituting part of the value of commodities, as part of the socially necessary expenses involved in all forms of capitalist production. “However rapidly the particular elements of this stock may flow, a part of them must always stand still in order for the stock to remain in motion” (221). Here Marx explicitly enunciates another vital general topic: the relation between fixity and motion in the whole dynamics of capitalism.

The distinction between productive and unproductive activity, and hence between productive and unproductive labor, is thus even harder to distinguish in practice. As I have noted several times, this makes for an accounting nightmare in which a night watchman in a warehouse is unproductive while a worker packing a container is judged productive. Anyone looking for a simple accounting solution should at this point freak out. My own conclusion is to give up on the accountancy and concentrate on the material consequences of the effects of speed-up, inventory cost management, and the like, that Marx has identified as crucially necessary to capitalism’s development. These questions become even more prominent as we turn to integrate the question of transport and communications, and by implication the production of space, into Marx’s theoretical presentation.

The Question of Transportation and Communications

Circulation costs, the locking up of capital in stocks and inventories, are crucially affected by transport relations. This is a topic taken up several times in these first chapters. Transportation, Marx argues, is an unusual branch of industry. It does not produce an objective thing like corn or iron bars, and it is consumed as it is produced (it has zero circulation time). But it is productive of value. Change in spatial location is its product: for example, “the yarn finds itself in India instead of England.” So “what the transport industry sells is the actual change of place itself.” The “exchange value of this useful effect is still determined, like that of any other commodity, by the value of the elements of production used up in it (labour-power and means of production), plus the surplus-value created by the surplus labour of the workers occupied in the transport industry” (135).

These remarks occur early on in the first chapter, but at the end of chapter 6 Marx elaborates further:

> The ‘circulating’ of commodities, i.e. their actual course in space, can be resolved into the transport of commodities. The transport industry forms on the one hand an independent branch of production, and hence a particular sphere for the investment of productive capital. On the other hand, it is distinguished by its appearance as the continuation of a production process *within* the circulation process and *for* the circulation process. (229)

This is so because “the use-value of things is realized only in their consumption, and their consumption may make a change of location necessary, and thus also the additional production process of the transport industry. The productive capital invested in this industry thus adds value to the products transported, partly through the value carried over from the means of transport, partly through the value added by the work of transport. The latter addition of value can be divided, as with all capitalist production, into replacement of wages and surplus-value" (226–7). Changes in location can be small-scale, like the movement "from the carding shop into the spinning shed" or over longer distances to faraway final markets. In all these cases, "the absolute magnitude of value added by the transport of commodities stands in inverse proportion to the productive power of the transport industry and in direct proportion to the distance covered." This rule is modified by the character and nature of the commodities transported —size and weight, but also "fragility, perishability and explosiveness of the article." Rate schedules can be very complicated: "The railway magnates have shown greater genius in inventing fantastic species than have botanists and zoologists" when it comes to deciding how much to charge per mile on this or that commodity.

The importance of the dynamics involved here are only weakly hinted at, so let me elaborate. Systematic improvements in transport and communications since Marx's time have reduced both the cost and the time of movement of commodities over space, and radically transformed locational possibilities and requirements. This has been so because time and space relations are jointly implicated in determining the turnover time of capital in general, as well as in particular industries. Marx does not make the point here, but in the *Grundrisse* he makes a great deal out of the need to diminish the friction of distance in order to shorten aggregate turnover time. It is, I think, testimony to the incompleteness of Volume II that he does not take up here concepts such as the perpetual tendency toward "the annihilation of space through time" that can be found in the *Grundrisse*. The general case for the role of innovations in transport and communications in the formation of the world market is also made much more strongly in the *Communist Manifesto*.

How many innovations over the last 200 years have been about speeding up and accelerating turnover time? How many have been about reducing the friction of distance as a drag upon the spatial movement of commodities and information? How many have been about jointly producing both effects? Instead of seeing all this history as an accident, or as being due to some human longing to transcend both time and space, we have in Volume II the lineaments of an explanation of how capital internalizes a necessity for perpetual time-space transformations within its own laws of motion. Unfortunately, Marx did not attempt to connect his brilliant intuitions in the *Communist Manifesto* and the *Grundrisse* with the technicalities of production, circulation, and turnover times highlighted in Volume II.

But there is one point made here that is of great significance:

> The circulation of commodities can also take place without their real physical movement. … A house that is sold by A to B circulates as a commodity, but it does not get up and walk. Movable commodity values, such as cotton or pig-iron, can remain in the same warehouse while they

undergo dozens of circulation processes, and are bought and resold by speculators. What actually moves here is the property title to the thing and not the thing itself. (226)

Had Marx cared to elaborate further, he might have observed that the conditions and possibilities of spatial mobility look very different within the money, commodity and productive circuits of capital, and that the circulation of both present and future property titles (and claims to future labor) on the world market was destined to become an ever more prominent feature affecting the laws of motion of capitalist development.

As in any other industry, competition within the transport and communications industry can be intense and lead to a rapid proliferation of innovations that affect the productivity, efficiency, and spatial range of the industry. This is a story complicated somewhat by the fact that competition in the industry is often restricted to what is called “monopolistic competition”—because once a rail line is set up between, say, Washington and New York, it is difficult to envisage several other rail lines being built to compete. But there are all sorts of innovations that permit spatial competition to modify the geographical conditions under which capital operates (including of course so-called “modal switches” in which, say, trucking proves more flexible, efficient, and cheap than, say, rail transport).

CHAPTER THREE

The Question of Fixed Capital (Chapters 7–11 of Volume II)

GENERAL INTRODUCTORY REMARKS

For Marx, fixed capital is a vital if problematic category. Some commentators have gone so far as to suggest it punches a fatal hole in Marx's labor theory of value. I will explain why I do not agree later. Since fixed capital has cropped up several times in preceding chapters, it is not surprising that it receives special attention here. But the Volume II presentation is rather less stimulating than it is elsewhere. When I sought to reconstruct Marx's views on fixed-capital formation and circulation in *The Limits to Capital* (see pages 685–743), for example, I found myself referring far more to the *Grundrisse* than to Volume II. There the presentation is far more flamboyant:

> Nature builds no machines, no locomotives, railways, electric telegraphs, self-acting mules etc. These are products of human industry; natural material transformed into organs of the human will over nature or of human participation in nature. They are *organs of the human brain, created by the human hand;* the power of knowledge objectified. The development of fixed capital indicates to what degree general social knowledge has become a *direct force of production*, and to what degree, hence, the conditions of the process of social life have come under the control of the general intellect and been transformed in accordance with it. To what degree the powers of social production have been produced, not only in the form of knowledge, but also as immediate organs of social practice, of the real life process. (*Grundrisse*, 706)

I think of this quote whenever I look at the skyline of New York City or fly into London, São Paulo, Buenos Aires, or wherever, and I find myself thinking of these places, for both good and ill, as "organs of the human brain, created by the human hand; the power of knowledge objectified." I see the offices, factories, workshops, houses and hovels, schools and hospitals, pleasure palaces of all kinds, streets and back alleys, highways, railroads, airports and ports, parks and iconic memorials not only as mere physical objects but as a humanly constructed material world, a constitutive site of daily life for millions of human beings, produced through human labor, endowed with social meaning, and a world through which vast amounts of capital circulate on a daily basis, amortizing loans and creating vast flows of rent and interest payments, all the while indulging the speculative fantasies, dreams, and coldly calculated expectations of property owners both great and small. The capitalist city is, surely, the most stunning example of the power of a certain kind of desire, knowledge, and practice objectified.

But, in the *Grundrisse*, Marx also identifies, at the heart of this undoubtedly magnificent achievement, a profound contradiction that finds an echo in Volume II.

“The development of the means of labour into machinery is not an accidental moment of capital, but is rather the historical reshaping of the traditional, inherited means of labour into a form adequate to capital.” (This idea is powerfully echoed in chapter 15 of Volume I on machinery and large-scale industry, which Marx applauds as the unique and only appropriate technological basis for a capitalist mode of production.)

> The accumulation of knowledge and of skill, of the general productive forces of the social brain, is thus absorbed into capital, as opposed to labour, and hence appears as an attribute of capital, and more specifically as *fixed capital*, in so far as it enters into the production process as a means of production proper. *Machinery* appears, then, as the most adequate form of *fixed capital*, and fixed capital, in so far as capital’s relations with itself are concerned, appears as the most adequate form of capital as such. In another respect, however, in so far as fixed capital is condemned to an existence within the confines of a specific use-value, it does not correspond to the concept of capital, which, as value, is indifferent to every specific form, and can shed or adopt any one of them as equivalent incarnations. In this respect, as regards capital’s external relations, it is *circulating capital* which appears as the adequate form of capital, and not fixed capital. (*Grundrisse*, 694)

We have seen repeatedly how continuity, fluidity and speed-up are essential qualities of capital flow, but now we encounter a category designed to facilitate that fluidity but which itself is not fluid, but fixed. A part of the capital has to be fixed in order for the rest of capital to keep in motion. When we go beyond the image of fixed capital as mere machine, we find ourselves conjuring up a picture of capital building whole landscapes of cleared fields and factories; of highways and railways; of ports, harbors and airports; of dams, power stations and electric grids; of gleaming cities and massive industrial capacity. This landscape that capital builds to facilitate its operations imprisons capital accumulation in a world of fixity that becomes increasingly sclerotic in relation to the fluidity of circulating capital. This world, and the capital embodied in it, is always vulnerable to the “butterfly qualities” of money capital, and even to the more pedestrian but also unpredictable shifts and flows of capital in commodity and productive form. This presages crisis formation of a distinctive sort. Money capital flits away, leaving fixed capital high and dry and subject to savage devaluation. I put the contradiction this way: capital builds a whole landscape adequate to its needs at one point in time, only to have to revolutionize that landscape, to destroy it and build another one at a later point in time in order to accommodate the perpetually expansive forces of further capital accumulation. What gets left behind are desolate, devalued landscapes of deindustrialization and abandonment, while capital builds another landscape of fixed capital either elsewhere or on the ruins of the old. This is what Schumpeter called “creative destruction.” This process has periodically devalued and revolutionized the geographical landscapes of capital circulation and accumulation in literally earth-moving, if not earth-shaking ways.

The deep, crisis-prone contradiction between fixity and motion is palpable: and fixed capital is at the center of it all. The trouble with fixed capital is precisely, in short, that it is fixed, when capital is all about value in motion. This opposition constitutes a fascinating problem. And it has been and still is a frequent source of crises that are independent in principle (though not always in practice) from the crises that arise out of the perpetually contested capital-labor relation. Such crises occur when the fixity can no longer accommodate the expansionary motion. The latter has to break with the constraints imposed by that part of capital that is fixed. The result is the devaluation of large swathes of fixed capital, as circulating and highly mobile money capital moves elsewhere (deindus-trialization from the mid-1970s onwards left behind abandoned factories and warehouses, decaying physical infrastructures—even shrinking cities, like Detroit).

While these contradictions do find their way into Volume II, they are far more forcibly portrayed in the *Grundrisse*. It is therefore helpful to read the Volume II presentation with these passages from the *Grun-drisse* in mind. For one thing, it makes for a more thrilling ride. But it also highlights vital understandings that might otherwise remain submerged. Why Marx did not incorporate brilliant if somewhat purple passages of this kind into Volume II, written nearly twenty years later, is a mystery. It may be due to his desire to be seen as rigorously scientific and factual. He certainly seems far more concerned here to plunge into the minutiae of, for example, the distinctions between repair and replacement of fixed capital as revealed in the railway engineering manuals of the time. But I suspect that Marx sets aside broader questions because he has a very specific and limited objective in Volume II. As indicated in the brief introductory materials of chapter 7, the real object of his inquiry is the turnover time of capital. He knows that he cannot investigate that fully without dealing with the complications that attach to the turnover time of long-term fixed capital investments. This concern narrows his focus and leads him, I suspect, to lay to one side the more general significance of fixed capital in the historical geography of a capitalist mode of production. Nevertheless, the presentation does help illuminate how the world we live in became the way it is, and how the processes of accumulation through fixed-capital formation actually work. But Volume II also disappoints on the technical terrain: several vital systemic issues raised in the *Grundrisse* and elsewhere in *Capital* are missing. This is almost certainly due to the incompleteness of Volume II. So, in what follows, I shall indicate where some of the more gaping holes lie in the analysis, and how they might be plugged with materials from the ancillary works.

The overall framework for Marx's thinking on fixed capital emerges only in bits and pieces in these five chapters. Whether this has to do with the manner of Engels's reconstruction of the materials, I cannot say, but the result is that I find it necessary to jump around in the text—and I apologize in advance for so doing—rather than try to follow the presentation as if it were a clearly unfolding argument.

Marx's foundational position on fixed capital is best articulated, for example, in the later chapters that subject Adam Smith's and Ricardo's views to critique in excruciating detail (chapters which for the most part warrant only cursory study, unless you are interested in the history of political economy and Marx's opinions on the Physiocratic school of thought). "Bourgeois political economy," writes Marx,

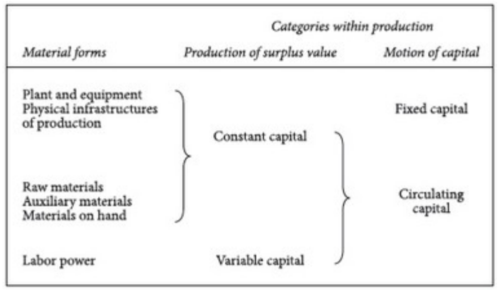
> held instinctively to Adam Smith's confusion of the categories "fixed and circulating capital" with the categories "constant and variable capital" and uncritically echoed it from one generation down to the next for a whole century. It no longer distinguished at all between the portion of capital laid out on wages and the portion of capital laid out on raw material, and only formally distinguished the former from constant capital in terms of whether it was circulated bit by bit or all at once through the product. The basis for understanding the real movement of capitalist production, and thus capitalist exploitation, was thus submerged at one blow. All that was involved, on this view, was the reappearance of value advanced. (297)

Even Ricardo, who did have some primitive conception of the theory of surplus-value, "commits very great errors as a result of confusing fixed and circulating capital with constant and variable capital." He never managed to overcome the fact that "he starts his investigation on a completely false basis"(301).

While Marx does invoke this "basic error" in his opening argument on fixed capital (241), he does not elaborate on its significance. So what is at stake here? In Volume I, Marx clearly distinguishes between variable capital—the purchase of the labor-power that has the capacity to create value and surplus-value—and the constant capital (means of production) whose value does not quantitatively change even as it undergoes a change of material form. From this it becomes very clear that surplus-value arises from the exploitation of living labor in production.

But the study of fixed capital requires that we categorize the elements entering into production in a different way. These are all those elements that transfer their value fully into the finished commodity in a given turnover time. These elements include labor inputs (the subject of labor), raw materials (the objects of labor), and ancillary materials like energy (the means of labor). All of these elements are lumped together as "circulating capital." Their values enter into and exit the production process completely in a given turnover period. Then there are the machines, buildings, and other elements that remain behind after the turnover is complete, and which can be used again and again over several turnover periods. In a given turnover time, only a portion of the value of these means of labor is transferred to the final product. These elements are called "fixed capital." Figure 3 below depicts how these categories relate to those of variable and constant capital.

Figure 3



No theory of surplus-value can be derived from the categories of fixed and circulating capital. The fixation of the bourgeois economists upon these categories therefore had the effect (either conscious or not) of disguising the role of labor in producing surplus-value (profit). But this does not mean that the distinction between fixed and circulating capital is unimportant for Marx. It affects the aggregate turnover time of capital in general, and thereby the overall dynamics of accumulation. But, in Marx's book, it can never do so at the expense of "submerging" the theory of surplus-value production.

There is another potential source of linguistic confusion which Marx attributes to Adam Smith, but which he himself to some degree repeats. "Circulating capital" in these chapters means all the capital that is used up in a given turnover time relative to the fixed capital left over to be used again later. "Circulating capital," in the earlier chapters on the circuits of capital, refers to that capital that is out there circulating in the marketplace before returning to production. These are two completely different definitions of the term. Marx highlights this potential confusion relatively late in the game, and again only in the context of the critique of Adam Smith (271). He therefore proposes at one point to distinguish between "capital of circulation" on the market and "circulating and fixed capital in production." In practice, Marx often substitutes the term "fluid capital" for "circulating capital" in chapter 8, and uses the contrast between "fixed" and "fluid" capital to develop his analysis. These terms do indeed appear far more appropriate, but he does not stick with them throughout. I will continue to use the term "circulating capital" in the sense that Marx means it in this chapter (with an occasional concession to fluidity). But please remember that circulating capital means something different here than it did in the earlier chapters on the production, circulation, and realization of capital. The categories of circulating and fixed capital arise solely in relation to production, and do not carry over into the money and commodity circuits of capital (as Adam Smith erroneously supposed).

To restate the definitions: circulating capital is here all that capital—both constant and variable capital—used up in a single turnover period; fixed capital is that part of constant capital that carries over from one turnover period to another. Bearing all these issues and definitions in mind, let us turn to a closer reading of the textual materials.

THE "PECULIARITY" OF FIXED CAPITAL

"One part of the constant capital," Marx observes at the opening of chapter 8, "maintains the specific use form in which it enters the production process, over and against the products it helps to fashion. It continues to perform the same functions over a shorter or longer period in a series of repeated labour processes. Examples of this are factory buildings, machines, etc." (237). The word Marx repeatedly uses to describe the circulation of fixed capital is *peculiar*. "The peculiarity of this part of constant capital, the means of labour in the strict sense, is this …" he states at the outset of the second paragraph. Again, in the middle of the next page, we read "the circulation of the part of capital considered here is a peculiar one" (238). So what, exactly, is peculiar about it, and why does this peculiarity matter?

"In the first place it does not circulate in its use form. It is rather its value that circulates, and this does so gradually, bit by bit, in the degree to which it is transferred to [the commodity]." A part of the value always remains fixed in the machine or the factory as long as it continues to function, and the fixed capital always remains distinct and apart from the commodities that it helps to produce. "This peculiarity is what gives this part of the constant capital the form of *fixed capital*. All other material components of the capital advanced in the production process, on the other hand, form, by contrast to it, circulating or *fluid capital*" (238).

The materiality of fixed capital does not get incorporated into the commodity, but its value does. So fixed capital does not circulate in its material but in its ideal (socially determined) value form. Fixed capital (machinery, for example) materially functions as a *means of labor* as opposed to the *objects of labor* (the raw materials and other means of production) that are transformed into commodities to be sold on the market. Fixed capital shares this character of being a *means of labor* with certain other constant capital ancillary inputs into production. Energy—coal for the steam engine or gas for lighting—does not enter into the material use-value of the commodity produced either. Its value is added to the commodity as its physical being is used up in production. In the case of fixed capital, this using up lasts, however, over many turnover cycles while, in the case of energy inputs, they are "completely consumed in every labour process they enter into" (238). It is for this reason that the preceding chapter on the turnover time of capital is so crucial. Fixed capital is "fixed" in relation to turnover time, and turnover time varies a great deal from one industrial sector to another.

THE PHYSICAL LIFETIME OF FIXED CAPITAL

"This part of the constant capital gives up value to the product in proportion to the exchange-value that it loses together with its use-value." This implies some relation—which turns out to be rather problematic—between the value transferred to the product and the changing usefulness of, say, a machine. How and why might the usefulness of the machine change? It turns out that there are both physical and social reasons why such changes might occur.

The extent to which the value of such a means of production is given up or transformed to the product that it helps to fashion is determined by an average calculation; it is measured by the average duration of its function, from the time it enters the production process as means of production to the time it is completely used up, is dead, and has to be replaced by a new item of the same kind. (237)

What Marx appears to have in mind here is a machine with an average useful lifetime of, say, ten years. Some capitalists may be lucky and be able to use their machine for eleven years, while others will need to replace it earlier. What matters in the value transfer into the commodity is the social average life of the machine rather than the individual lifetime. No customer will be willing to pay me more for the commodity I produce simply because the lifetime of my machine turns out to be shorter than the social average.

Over the course of its useful lifetime, the value of the fixed capital steadily declines, until the means of labour are worn out and therefore distributed in value, in a longer or shorter period, over the volume of products that has emerged from a series of continually repeated labour processes. As long as a means of labour *still remains effective*, and does not yet have to be replaced by a new item of the same kind, some constant capital value remains fixed in it, while another part of the value originally fixed in it passes over to the product and thus circulates as a component of the commodity stock. The longer the means of labour lasts and the more slowly it wears out, the longer the constant capital value remains fixed in this use-form. But whatever its degree of durability, the proportion in which it gives up value is always in inverse ratio to the overall duration of its function. If two machines are of equal value, but one of them wears out in five years and the other in ten, then the first gives up twice as much value in the same space of time as the second does. (238; emphasis added)

But Marx does not immediately explain what is meant by “still remains effective,” or what happens when machines cease, for some reason or other, to be effective even before their value is fully used up. At the outset of this chapter it seems that “effective” is understood in purely physical terms—that it is the rate of physical decay and wearing-out that matters—but later on it is understood in more social terms. Curiously, Marx does not immediately mention the problem of so-called “moral depreciation” that he identified in Volume I. This occurs when employers of an older machine have to compete with others possessed of newer and more “effective” and cheaper machines. Only on page 250, and then in the subsequent chapter, on page 264, does the term “moral depreciation” enter into the discussion, and then without too much comment. This is a crucial question, and we will return to it later.

Behind it, however, lies the thorny question: When and why does a machine have to be replaced? When the machine is physically worn out? Or do situations arise in which the machine has to be replaced earlier because more effective and cheaper machines are available on the market? This is something we encounter all the time. How often do we have to change our computers? Every two years? Do we change them because they are physically used up or because they have become outmoded? Most of the examples Marx gives in this chapter are of physical depreciation even as other social questions arise. I suspect that Marx's anxiety to go no further than the formal relations he can establish is playing an important role here. Certainly, much of the social and historical content is missing.

As he delves deeper into the formal aspects of the use and circulation of fixed capital, so he encounters both exceptional circumstances and a blurring of distinctions between fixed and fluid capital. The means of labor that are the material bearers of fixed capital, for example,

> are consumed only productively and cannot enter individual consumption … but rather maintain their independent shape vis-à-vis it until they are completely worn out. An exception to this is provided by the means of transport. The useful effect that these produce in their productive function, i.e. during their stay in the sphere of production—the change of location—simultaneously enters individual consumption, e.g. that of the traveler. The latter then pays for their use just as he pays for the use of other means of consumption. (239)

This exception is of particular interest to me, since it implies that the useful effect of "change of location" (and, hence, the production of spatial relations) applies not only to production (the movement of raw materials) but also to consumption (the movement of people). In other words, the production of "change of location" is itself a commodity, no matter who uses it and for what purpose (further production or final consumption). And of course, transportation is a sector that absorbs a vast amount of fixed capital, much of which (like railway and subway tunnels) lasts for a very long time (provided, of course, that it is maintained and repaired). Since, as we have seen, transport and communication are consumed as they are produced, much of their value exists ideally in the form of fixed-capital circulation. Both the locomotive and the rails on which it runs are forms of fixed capital (though with different qualities, as we shall see).

The distinction between fixed capital and the use of ancillary materials (like energy) also becomes "blurred" when the ancillary materials are used up bit by bit rather than all at once. This occurs "in the manufacture of chemicals, for example. The same is true with the distinction between means of labour on the one hand, and ancillaries and raw materials on the other. In agriculture, for instance, the materials added to improve the soil partly enter the plant product as formative elements. Their effect, however, is spread over a fairly long period." While, for example, irrigation ditches are clearly a form of fixed capital in agriculture, a dose of guano fertilizer can have an effect on yields over several production cycles, even though it looks like the application of fluid capital.

DUAL USAGES AND RELATIONS BETWEEN FIXED CAPITAL AND THE CONSUMPTION FUND

Then there is the difficult but intriguing problem of dual usage (represented as "joint products" in the language of contemporary economics). "An ox, as a draught animal, is fixed capital. If it is eaten, however, it no longer functions either as a means of labour, or as fixed capital" (239). In raising oxen, both commodity forms are being produced at the same time. It is the social decision on how to use the oxen that defines whether or not they are fixed capital:

> Here the distinction between means of labour and object of labour which is based in the nature of the labour process itself is reflected in the new form of the distinction between fixed capital and circulating capital. It is only in this way that a thing that functions as means of labour becomes fixed capital. If its material properties also allow it to serve for other functions than that of means of labour, then whether it is fixed capital or not depends on these various functions. Cattle as draught animals are fixed capital; when being fattened for slaughter they are raw material that eventually passes into circulation as a product, and so not fixed but circulating capital. (241)

Marx returns to this theme much later and sets it in an even broader context:

> The same thing, moreover, can function at one time as a component of productive capital, and at another time form part of the direct consumption fund. A house, for example, when it functions as a place of work, is a fixed component of productive capital; when it functions as a dwelling, it is in no way a form of capital in this capacity. The same means of labour can in many cases function at one time as means of production, at another time as means of consumption. (282)

This becomes particularly tricky when we think of a street, which can be used for production or just for walking.

Marx here raises the idea of a consumption fund. He does so, however, without any further elaboration. Plainly, consumption requires long-term aids just as does production—houses, crockery, knives and forks, and all the items that typically fill a house and permit people to consume, along with cars and trains and airplanes, which likewise facilitate our consumption. The use-value of the items in the consumption fund is, like fixed capital in production, consumed bit by bit, sometimes over many years. The residual value of these assets in the consumption fund is huge in contemporary societies, and many of these items (like cars, houses, and knives and forks) can be bought and sold on secondhand markets long after they have originally been produced.

Such items have, as Marx here indicates, a complicated relation to fixed capital, in that any one of them at any time can in principle be diverted or converted from consumption to production. Thus Marx complains that "Ricardo forgets … the house in which the worker lives, his furniture, his tools of consumption such as knives, forks, dishes, etc., all of which possess the same character of durability as do the means of labour. The same things and the same classes of things thus appear now as means of consumption, now as means of labour" (300).

Marx sees fixed capital as a highly flexible category that depends upon how things are used rather than upon their inherent physical characteristics. He complains vigorously of "the fetishism peculiar to bourgeois economics, which transforms the social, economic character that things are stamped with in the process of social production into a natural character arising from the material nature of these things" (303).

FIXED CAPITAL IN THE LAND

This unjustified “physicalism” or “naturalism” has yet another important dimension that needs to be considered, and which also contributes to the “peculiarity” of fixed capital as a category. An important distinction exists within the category of fixed capital itself. “Certain properties that characterize the means of labour materially are made into direct properties of fixed capital, e.g., physical immobility, such as that of a house. But it is always easy to show that other means of labour, which are also as such fixed capital, ships, for example, have the opposite property, i.e., physical mobility” (241). This distinction between mobile and immobile forms of fixed capital is not absolute. While sewing machines can be shifted with ease, blast furnaces are rarely moved, and then only because of vast expenditure of money (the dismantling and subsequent shipping of a whole iron-and-steel works from Germany to China is a recent example of such an effort).

> Some of the means of labour … are held fast in their place once they enter the production process as means of labour[:] machines for example. Other means of labour, however, are produced at the start in static form, tied to the spot, such as improvement to the soil, factory buildings, blast furnaces, canals, railways, etc. … On the other hand, a means of labour may constantly change its physical space, i.e. move, and yet be engaged throughout in the production process, as with a locomotive, a ship, draught cattle, etc. Immobility does not give it the character of fixed capital in the one case, nor does mobility remove this character in the other. But the circumstance that some means of labour are fixed in location, with their roots in the soil, gives this part of the fixed capital a particular role in a nation’s economy. They cannot be sent abroad or circulate as commodities on the world market. It is quite possible for the property titles to this fixed capital to change: they can be bought and sold, and in this respect circulate ideally. These property titles can even circulate in foreign markets, in the form of shares, for example. But a change in the persons who are the owners of this kind of fixed capital does not change the relationship between the static and materially fixed part of the wealth of a country and the movable part of it. (242)

Later on, in chapter 10, this theme is elaborated even further. An element of future fixed capital, such as a spinning machine, “can be exported from the country where it is produced and be sold, directly or indirectly, to a foreign country, whether in exchange for raw materials, etc. or for champagne. In the country where it was produced it then functions only as commodity capital, but never, not after its sale, as fixed capital.” The same can be said of machine tools, steel girders and prefabricated building materials. They are commodity capital until they actually become fixed in some production process. “However, products that have been localized by being incorporated into the earth, and hence can only be used locally, e.g. factory buildings, railways, bridges, tunnels, docks, etc., soil improvements, and so on, cannot be exported body and soul. They are immobile. If they are not to be useless, they must function after their sale as fixed capital in the country in which they were produced. For the capitalist producer who builds factories speculatively or improves estates in order to sell them, these things are the form of his commodity capital. … But from the society’s standpoint, they must ultimately function as fixed capital, if they are not to be useless, in the country in question, in a production process fixed by their own location” (288)

This locational fixity has implications for the geographical patterning of capitalist activity. If these commodities cannot be useful in the place where they are located, then they are useless and therefore have no value. Notice how the criteria of utility (usefulness) is here creeping into the discussion. It is one of those important categories of conventional economics which, like demand and supply, Marx tends to hold very much at arm’s length. The application of the utility principle is not confined to the world of production. “It in no way follows … that immobile objects as such are automatically fixed capital; they may be dwelling houses, etc. that belong to the consumption fund and thus do not form part of the social capital at all, even though they form an element of the social wealth, of which capital is only one part” (288). Houses are for the most part fixed in space and place but, as we have seen in recent years, securitization of mortgages and their packaging in collateralized debt obligations allows some version of title to them (and we are now finding that the actual meaning and legal status of this title is more than a little obscure) to circulate internationally, with all sorts of devastating consequences. In the case of transportation, also, the locomotive may be mobile, but the track upon which it moves is not. “Property titles to a railway,” however, “can change hands daily, and their owners can even make a profit by selling them abroad. The property titles are thus exportable, but the railway itself is not.”

Throughout these passages we encounter again and again the tension between fixity and motion in the geographical landscape of capitalist activity. Planes, ships and locomotives which move across space depend crucially upon airports, harbors and train stations that do not. The value of fixed immobile capital depends crucially upon its use: an airport to which no planes fly has no value. But then planes that have no airports to which to fly have no value either. Notice that, in this instance, it is very clear that the geographical pattern of movement of the mobile forms of fixed capital (as well as the commodities they carry as commodity capital out there circulating on the market) is constrained by the need to valorize the often huge amounts of fixed immobile capital value embedded in place. The recuperation of the value of immobile fixed capital depends upon corralling the capital in motion to use the immobile capital in its particular location. This generates phenomena such as inter-urban competition, for example, over attracting or keeping highly mobile capital in town (often ending up with massive public subsidies to private corporations).

Place-specific rises in the valuation of immobile forms of fixed capital are not infrequent, and can become particularly violent when radical shifts occur in the geographical movement of commodities and people more generally. While Marx only hints here at the nature of this problem, the general question of regional and localized crises of dein-dustrialization and devaluation particularly of immobile forms of fixed capital can be derived from these passages. There is also a relation, which Marx fails to mention here, with land rent and property prices, which vary greatly from one place to another depending very much upon the qualities of the fixed capital assets embedded in place. This brings the whole history of capitalist urbanization into the orbit of some level of conformity to the laws of motion of capital. Conversely, it opens up the very real way in which urbanization in turn comes to play a crucial role in how those laws of motion might work. This has been one of my own major interests over the years, and it is through passages of this sort on the role of immobile fixed capital that I have found it possible to extend Marx's general theory into the arena of city building and the urban process. But Marx barely hints at the existence of such relations.

THE PRODUCTION OF SPACE

There is a particular wrinkle in Marx's account to which I attach great (though perhaps unwarranted) significance because of my personal research interests in urbanization. When Marx is considering how replacement of fixed capital embedded in the land might morph into expansion, he makes the following remark. It all depends, he writes,

> on the space available. In some buildings extra floors can be added, while others require horizontal extension and thus more land. While capitalist production is marked by the waste of much material, there is also much inappropriate horizontal extension of this kind (partly involving a loss of labour-power) in the course of the gradual extension of a business, since nothing is done according to a social plan, but rather depends on the infinitely varied circumstances, means, etc. with which the individual capitalist acts. This gives rise to a major wastage of productive forces. … The progressive reinvestment of the money reserve fund (i.e. of the part of the fixed capital that is transformed back into money) is most easily effected in agriculture. Here a spatially given field of production is capable of the greatest gradual absorption of capital. The same is true when natural reproduction takes place, as in the case of cattle breeding. (252)

In my work, I often appeal to the necessity for capital absorption through the production of space (with considerable emphasis upon the way in which it can be both speculative and wasteful as, for example, in the case of capitalist suburbanization). And here is Marx also talking about the spatial aspects of capital absorption—which are often wasteful because of capitalist competition and the failure of social planning. I do not point to this passage in order to suggest that Marx was a brilliant precursor of everything that has been written ever since on spatial questions, nor to suggest that the Marxist tradition of theorizing the production of space in the works of Henri Lefebvre and by the radical geographers in more recent times is legitimized by such a passage.[1] Rather, the implication is that if, as I think we should be, we are interested in integrating theories of the production of space into Marx's general theory of capital accumulation, then it must primarily be through systematic extension of the materials assembled both here and in the *Grundrisse* on the formation and the circulation of fixed capital, particularly of that part of fixed capital embedded in the land. The processes Marx here describes, for example, are not confined to agriculture. They are just as relevant to theorizing the growing of condominiums to absorb surplus capital as they are to the growing of cabbages. Crises in the production of space, the consequences of which we see all around us, derive ultimately from the contradictions between fixity and motion that Marx so clearly identifies.

CAPITAL CONSUMED V. CAPITAL EMPLOYED

The ideas broached in these chapters have other potentially fecund implications. There is, for example, the distinction between the "capital employed" in production and the "capital consumed" (240). Marx does not do much with this distinction beyond noting its existence, and that the former often outgrows the latter as capital develops. In particular, he does not explore the implications of this distinction for measuring the value composition of capital, which plays such a crucial role in his theory of the tendency for the rate of profit to fall. Obviously, the value composition of capital is much higher (and, all other things remaining equal, the rate of profit much lower) if the capital employed is considered the relevant magnitude. Most analysts would prefer capital used up, but the vast and increasing amount of capital employed gives intuitive heft to the falling-rate-of-profit theory ("just look at the enormous amount of physical fixed capital around in our society compared to simpler times," the argument goes, and "it is obvious that the value composition of capital is rapidly increasing"). A heavy wave of fixed-capital investment may increase the capital employed but have no impact on the capital consumed in a given turnover time. Indeed, if that investment helps to economize on the use of fluid constant capital, then it could be associated with a falling value composition of the capital consumed and a rising rate of profit. But the distinction between capital employed and capital consumed is also sensitive to changes in turnover times. Engels recognized the significance of all this to measures of the profit rate, and hence inserted a tentative chapter on the effect of changing turnover times on the rate of profit into the Volume III analysis.

The category of fixed capital depends, as we have seen, upon use by the user: "A machine that is the product and thus the commodity of the machine-builder is part of his commodity capital. It only becomes fixed capital in the hands of his buyer, the capitalist who employs it productively" (240). Once a new commodity is produced, furthermore, the distinction between the value of the fixed and circulating components that go into its production disappears. If uses change, then the fixed capital is either dissolved or instantaneously created. For example, as already noted, a house that is lived in is not fixed capital, but a factory is. But if I start making things in my house—set up sewing machines and hire some immigrants to make shirts—then the house suddenly becomes fixed capital. When a loft that once housed the production of garments gets converted into a living space, then it moves from the category of fixed capital into that of the consumption fund. Furthermore, capital is fixed only in relation to the turnover time of that part of capital that is defined as fluid. A machine making ice cream on a daily basis is fixed capital, but a similar kind of machine used in the production of an oceangoing tanker that takes two years to build will not be fixed capital if it is used up entirely in the production period.

THE HISTORICAL RELEVANCE OF MARX'S RELATIONAL DEFINITIONS

All these possibilities derive from Marx's relational way of defining fundamental categories like fixed capital. Put simply, the category of fixed capital is not itself fixed. Marx does not here attempt to assess the historical significance of shifting relational meanings. I have found them in my own thinking to be of major significance. In Walt Rostow's theory of "the stages of economic growth," for example, written in the 1950s as a "non-communist manifesto"—and an extremely influential text at the time, which students all had to read—a phase of strong fixed-capital formation (mainly basic infrastructures such as roads, dams and harbors) was portrayed as playing a pivotal role in creating the "preconditions" for subsequent economic growth in a country. The creation of these physical infrastructures provided the basis for a subsequent "takeoff" into economic growth, which was then followed by "a drive to mass consumption." Creating mass affluence would build popular support for capitalist forms of development all around the world, and so reduce the threat of communism. This was the sequential path, Rostow argued, to compete with communist promises of affluence for all in the so-called undeveloped world. The preconditions phase of strong investment in fixed-capital infrastructures would, however, require sacrifices. Current consumption had to be curbed and belts tightened in order to allow for fixed-capital formation. Help from outside would also be important (and the primary mission of the World Bank was, and to a large extent still is, precisely to support and aid such infrastructural investments).

Rostow provided historical data to back up his developmental theory. Each country was treated as a developmental space, and the historical data he assembled showed how important a phase of strong fixed-capital formation had been in each as a precursor to strong economic growth. Leaving aside the odd idea that countries form "natural" and independent units of capitalist development, the problem Rostow ignored was that of the international capital flows that underpinned imperialist forms of expansion, as Lenin had long before described. Furthermore, Britain, which was the country where the capitalist "takeoff" first occurred, did not conform to Rostow's model. There was no identifiable phase of heightened fixed-capital formation. Colonial and imperial dispossession and merchant capital plundering were here the important precursors. In fact the problem in Britain, as several economic historians like Postan pointed out, was that the country had a huge capital surplus (much as China does today) from the seventeenth century onwards.[2] The problem was to find profitable uses for the surpluses available. Fixed-capital formation in infrastructures (abroad as well as at home) provided one convenient channel for the absorption of such surpluses. Furthermore, it was pretty easy to convert much of the physical infrastructure built up for consumption in Britain into fixed capital for production. The putting-out system, whereby merchants left materials to be worked up in peasant cottages, in effect turned those cottages into the equivalent of factories (in much the same way that micro-finance today turns peasant huts into the fixed capital of production). So there was something profoundly wrong with Rostow's "anti-communist" development theory, particularly with its emphasis upon sacrifice and austerity in the here and now for the sake of future capitalist development. What Rostow's program was really about was opening up the world to the flows of surplus capital being generated by imperialist powers, and legitimizing the "austerity" conditions that permitted a high rate of exploitation of labor-power as necessary to future prosperity. Capital exports and international capital flows did not, therefore, appear in Rostow's data.

Marx's alternative account in the *Grundrisse* (unfortunately missing from Volume II) is much more compelling:

> *The development of fixed capital indicates in still another respect the degree of development of wealth generally, or of capital*. … The part of production which is oriented towards the production of fixed capital does not produce direct objects of individual gratification, nor direct exchange values; at least not directly realizable exchange values. *Hence, only when a certain degree of productivity has already been reached—so that a part of production time is sufficient for immediate production—can an increasingly large part be applied to the production of the means of production*. This requires that society be able to wait; that a large part of the wealth already created can be withdrawn from immediate consumption, in order to employ this part for labour which is *not immediately productive* (within the material production process itself). This requires a certain level of productivity and of *overabundance* [emphasis added], and, more specifically, a level directly related to the transformation of circulating capital into fixed capital. *As the magnitude of relative surplus labour depends on the productivity of necessary labour, so does the magnitude of labour time*—living as well as objectified—*employed on the production of fixed capital depend on the productivity of the labour time spent in the direct production of products. Surplus population* (from this standpoint) as well as *surplus production* is a condition for this. … The *smaller* the direct fruits borne by *fixed capital*, the less it intervenes in the *direct production process*, the greater must be this relative *surplus population and surplus production;* thus more to build railways, canals, aqueducts, telegraphs, etc. than to build the machinery directly active in the direct production process. Hence—a subject to which we will return later—in the constant under- and over-production of modern industry, constant fluctuations and convulsions arise from the disproportion, when sometimes too little, then again too much circulating capital is transformed into fixed capital. (*Grundrisse*, 707–8)

This is not only a brilliant theorization of how capitalist development got underway in Britain, but it is nothing short of an equally brilliant evocation of the developmental process that has been occurring in China over the last thirty years. It also points to the potential dangers of cyclical phases of overinvestment in physical infrastructures, and hence yet another mode of crisis formation in capitalist economies. The crises that attach to fixed-capital formation do, however, receive brief mention in Volume II, mainly in the context of Marx's analysis of "moral depreciation," which we will take up shortly. But, again, there is much more to be done on this topic.

There are, however, some more mundane applications of these ideas. Milton Friedman, in his panegyric to capitalist forms of development, famously begins his argument by celebrating sweatshops as the beginnings of capitalist development. The home and the dwelling are converted by a mere change of use into a form of fixed capital. This generates a very interesting contrast to conditions in our own times: the costly fixed capital of textile factories in Boston and Manchester has been converted over the last forty years to consumer uses, while backrooms and basements are converted into the fixed capital for sweatshop production from Los Angeles to Manila. When microfinance is extended to peasant women in Mexico and India to buy a sewing machine, the peasant hut is simultaneously converted into the fixed capital for production for free. This is a neat way to counter any tendency for the profit rate to fall, because it dramatically reduces the value of constant fixed capital inputs relative to labor.

I find Marx's relational way of treating fixed-capital formation extremely helpful in interpreting the history of capital. His account opens up all manner of theoretical possibilities. A lot can be hung upon Marx's seemingly casual observation that an ox can either be used for consumption or function as fixed capital in production, because there are all sorts of things all around us that have that character—from pencils to houses, streets, and even whole cities. The fluidity of definition is as important as it is functionally creative. This is the sort of thing that is hard, if not impossible, to incorporate into conventional bourgeois economic theory, which cannot handle flexible definitions of categories. Fixed capital, obviously, must, in the view of conventional economists, have a fixed definition. Unfortunately, not all Marxist economists, as we shall see, understand how the relationality of Marx's definition works either. As a result, they repeat the mistakes of bourgeois theory.

MAINTENANCE, REPLACEMENTS AND REPAIRS

Marx pays considerable attention to the seemingly mundane problems posed by the different lifetimes of different components of the fixed capital (such as a railroad), and to questions of replacements, repairs and costs of maintenance. Without going into the details, there are some very important general points that should be noted.

The lifetime of fixed capital depends upon wear and tear, which is dependent on use (much-used highways, railroads, automobiles, etc. wear out faster) as well as upon environmental conditions and exposure to the elements. Even more importantly, "the various elements of fixed capital in a particular investment have differing lifespans, and hence also different turnover times. In a railway, for example the rails, sleepers, earthworks, station buildings, bridges, tunnels, locomotives and carriages all function for different periods and have different reproduction times, and so the capital advanced in them has different turnover times” (248). We all have experience with houses, cars, and all sorts of other elements in the consumption fund in which the parts have to be renewed on quite different temporal schedules. The distinction between replacement, on one hand, and reinvestment and expansion, on the other, as Marx points out, is thus often opaque. Is putting a new and much better roof on a house a replacement or a reinvestment in what will in effect be a new house? But fixed capital also requires maintenance. This is in part provided gratis by the laborers who keep the machines they mind in good working order simply by using them properly. But “additional labour” is “constantly necessary” to keep the machine in use, and Marx allocates this labor to fluid capital (253). Repairs, on the other hand, are considered “an additional component of value” to be added to the original fixed capital “according to need. … All fixed capital requires these later doses of additional capital outlay on means of labour and labour-power” (254). The implications of this for the understanding of turnover time (which is, as already noted, Marx’s primary preoccupation here) are then spelled out:

> It is however assumed in assessing the average life of the fixed capital that it is constantly maintained in working condition, partly by cleaning (which includes keeping clean its site), partly by repairs … The transfer of value through the wear and tear of the fixed capital is calculated over its average period of life, but this average period is calculated on the assumption that the additional capital required to keep it in working order is continuously advanced. (255)

This begs the question, of course, as to what happens when capital, desperately seeking to economize on its costs of constant capital, defers repairs and maintenance on its fixed capital. This often happens, particularly with respect to the built environment. This has all manner of implications for the qualities of daily life, as well as for the general *effectiveness* of the fixed capital deployed. Twenty years of deferred maintenance on the New York City subway system, on bridges and tunnels, and on public school buildings makes for a very ineffective infrastructure for further capital accumulation. The issue of who bears the costs of maintenance and repair is also crucial. Marx uses the example of housing:

> In connection with contracts of rental for houses and other things that are fixed capital for their proprietors and are rented out as such, legislation has always recognized the distinction between normal deterioration, produced by time, the influence of the elements and normal wear and tear, and the occasional repairs that are necessary from time to time for maintenance in the course of the normal life of a house and its normal use. As a rule, the first fall on the landlord, the second on the tenant. Repairs are further divided into the ordinary and the substantial. The latter represent in part the renewal of the fixed capital in its natural form, and also fall on the landlord, unless the contract expressly states the opposite.

Marx then cites the details of English law on the subject.

While Marx is inclined to get lost in technical details, I think it important to highlight the general point: as society evolves, so the whole question of maintenance, repairs and replacement of existing fixed capital (along with the consumption fund) not only absorbs increasing quantities of capital, but also requires increasing quantities of labor. In large metropolitan areas, like New York City, it could be that just as much capital and labor are deployed in maintenance, replacement and repair as are involved in the creation of new products (even allowing for the ambiguity of when replacement of parts becomes renewal of the whole). How all of this is to be accounted for in the production and circulation of values is an open question (if not, as more often than not with Marx, an accounting nightmare). But, plainly, having to invest substantial amounts of new fixed capital through replacements and repairs, along with escalating running costs of maintenance (think the New York subway system, or all those people erecting scaffolding and taking it down again), can put an enormous burden on society. For individual capitalists this changes the calculus on turnover time. At a certain point it may become more economical to abandon a fixed-capital investment (either mobile or immobile) because of escalating costs of repair and maintenance and start anew with different equipment, perhaps elsewhere.

MONETARY ASPECTS OF FIXED-CAPITAL CIRCULATION

Marx approaches the monetary aspects of fixed-capital circulation in the following way.

> The peculiar circulation of fixed capital gives rise to a peculiar turnover. The portion of value that it loses in its natural form through wear and tear circulates as a value portion of the product. Through its circulation the product is transformed from a commodity into money, and so is the portion of the value of the means of labour that is circulated by the product; its value trickles from the circulation process as money in the same proportion that this means of labour ceases to be a bearer of value in the production process. Its value thus acquires a dual existence. A part of it remains tied to its use form … while another part separates off from this form as money. (242–3)

In what follows I shall attach considerable significance to this idea of the “dual existence” of the value of the fixed capital—part increasingly in the money form as recuperated from production over successive turnover periods, and part as a diminishing residual value of the fixed capital (such as a machine) that has not yet been fully used up.

The money acquired is gradually accumulated as a reserve fund over the lifetime of the fixed capital. In the absence of a banking and credit system, the capitalist has to hoard the money capital until it comes time to replace the machine. The money returns into circulation only with the purchase of the replacement (243). If all capitalists worked on the same schedule, then the effect would be to create periods of feast and famine in the monetary circulation. Fortunately, they do not do so, but there is nothing that says they all work so as to even out the monetary circulation either, and periods of intense technological innovation may indeed induce monetary feasts and famines in the absence of a credit system.

The monetary turnover time of the fixed capital therefore has very specific qualities that are very different from those of the fluid (circulating) capital.

Ancillary materials, like energy, are consumed entirely during the turnover time it takes to produce and market the commodity, so the money equivalent to those materials circulates back regularly. The same is true for the constant capital elements that constitute the object of labor, and which reappear in the commodity. In the case of labor, variable capital is advanced on a regular schedule (for example, weekly) to the laborer, who then spends the money on commodities according to his or her needs. This latter transaction, as Marx will frequently emphasize in what follows, “is no longer between worker and capitalist as such, but between the worker as buyer of commodities and the capitalist as their seller.” For “it is the worker himself who converts the money he receives for his labour-power into means of subsistence” (245). This point will return in what follows, for in this function as buyer, the worker has the relative autonomy of consumer choice even as the choices are to some degree forced by the fact that the worker must buy in order to live.

Recall that the distinction between fixed and fluid capital is of relevance only to productive capital: “It exists only for productive capital and only within it” (247). During the turnover time of the fixed capital, however, several turnovers of fluid capital are completed. The value of the fixed capital “is advanced all at once in its entirety. … The capitalist thus casts this [monetary] value into the circulation sphere all at once; but it is withdrawn from circulation again only gradually and bit by bit” (247). But during the lifetime of the fixed capital, the capitalist does not usually need to use this money for replacement: “This transformation of money back into the natural form of the instrument of production takes place only at the end of the latter’s period of functioning, when the instrument of production has been completely used up” (248).

But the replacement schedule of fixed capital is affected by natural laws. “In the case of living means of labour, such as horses, for example, the … average life as means of labour is determined by natural laws. Once this period has elapsed, the worn-out items must be replaced by new ones. A horse cannot be replaced bit by bit, but only by another horse” (250). The “lumpiness” of fixed-capital investment, with respect to both original purchase and replacement, is therefore a noteworthy feature. It has monetary implications for how much money capital has to be withdrawn or thrown back into circulation at particular moments in time:

> Apart from the case where reproduction takes place bit by bit in such a way that new stock is added to the depreciated old stock at short intervals, a prior accumulation of money is necessary, of a greater or lesser amount according to the specific character of the branch of production in question, before this replacement can occur. This cannot be just any sum of money whatever; an amount of a certain size is required. (260–1)

All sorts of combinations are possible here. A railway cannot function until the whole line is completed, so much money must be laid out in advance—but track renewal can be carried out, unlike with a horse, on a piecemeal basis.

The monetary consequences of all this are again briefly invoked at the end of chapter 8 and, as usual, Marx ends up noting how everything looks different when the credit system is brought into play. In the absence of the credit system, a "part of the money present in society always lies fallow in the form of a hoard, while another part functions as means of circulation or as an immediate reserve fund of directly circulating money." As a result,

> the proportion in which the total quantity of money is divided between hoard and means of circulation constantly alters. In our present case, money that has to be accumulated on a large scale as a hoard in the hands of a big capitalist is thrown into circulation all at once on the purchase of fixed capital. … By way of the amortization fund in which the value of fixed capital flows back to its starting point in proportion to the wear and tear, a part of the money in circulation again forms a hoard. … There is a constantly changing distribution of the hoard existing in a society which alternatively functions as means of circulation, and is then again divided off from the mass of circulating capital as a hoard. With the development of the credit system, *which necessarily runs parallel* with the development of large-scale industry and capitalist production, this money no longer functions as a hoard but as capital, though not in the hands of its proprietor, but rather of other capitalists at whose disposal it is put. (261; emphasis added)

The "dual character" of the money and material aspects of fixed-capital circulation is thereby fundamentally modified. The monetary aspects are released from their bonding with the material depreciation process, and are freed up as potential money capital.

"MORAL DEPRECIATION"

The important problem of "moral deterioration," or "moral depreciation" as Marx called it in Volume I, is subject to rather cursory treatment in Volume II. Revolutions in production either cheapen fixed capital over time or lead to the production of better machines to replace existing ones before the lifetime of the latter is out. The result is to accelerate the depreciation, or what amounts to the same thing, reduce the effectiveness—the utility—of the old machines. This is, therefore, where we might expect a full explication of that tantalizing caveat of fixed capital "still being effective" that we noted at the outset of this chapter. Unfortunately, Marx does not enlighten us too much, except to note that "the volume of fixed capital that is invested … and has to last out for a definite average lifetime" acts as "an obstacle to the rapid general introduction of improved means of labour." From this derives an understandable reluctance to embrace technological changes and new forms of fixed capital until the old fixed capital has been fully amortized. Under conditions of monopoly control, this reluctance can lead to stagnation (though this is not a point that Marx cares to make). Against this, "competition forces the replacement of old means of labour by new ones before their natural demise, particularly when decisive revolutions have taken place. Catastrophes, crises, etc. are the principle causes that compel such premature renewals of equipment on a broad social scale" (250). This theme is taken up again in chapter 9. The lifetime of fixed capital is cut short by the constant revolutionizing of the means of production, which also increases steadily with the development of the capitalist mode of production. This also leads to changes in the means of production; they constantly have to be replaced, because of their moral depreciation, long before they are physically exhausted. … The result is that the cycle of related turnovers, extending over a number of years, within which the capital is confined by its fixed component, is one of the material foundations for the periodic cycle in which business passes through successive periods of stagnation, moderate activity, overexcitement and crisis. The periods for which capital is invested certainly differ greatly, and do not coincide in time. But a crisis is always the starting-point of a large volume of new investment. It is also, therefore, if we consider the society as a whole, more or less a new material base for the next turnover cycle. (264)

Accelerated depreciation entails devaluation of the existing fixed capital whose value has not yet been fully recovered through the production and sale of commodities. If this occurs on a widespread enough scale, then it can obviously result in crises. As Marx noted in Volume I, the implication for labor is in the form of shift- and night-work as a way to recuperate fixed-capital value as quickly as possible before the risk of moral depreciation hits home. But the general significance of the devaluation of large quantities of fixed capital due to "moral depreciation" or to other social forces (such locational shifts that leave fixed capital in place high and dry) is not emphasized at all in Volume II. It is picked up in the *Grundrisse*, both theoretically and historically. So we are left on our own to figure out some of the implications.

Generalized crises (which obviously entail value losses to capital), Marx suggests, may be good moments to renew or replace existing fixed capital. This is an idea that needs to be followed up. In a crisis, much of the existing fixed capital remains idle and devalued anyway (capital utilization is very low), so capitalists who have the monetary reserves might just as well junk it and move on (particularly since the costs of new fixed capital are likely to be low). A recent example of exactly this in the realm of public policy was the so-called "cash for clunkers" program launched by the federal government in 2008. Consumers were offered cash to ditch their old cars before their lifetime was up and to buy new ones. The aim was to keep the automobile market buoyant and the industry in business. Tax breaks for accelerated depreciation are another form of public policy incentive affecting renewal of and reinvestment in fixed capital. This occurred under Ronald Reagan in the early 1980s. It was a public subsidy to permit the accelerated write-off of the value of much existing and new fixed capital. It actually subsidized the movement of capital to the South and West and the deindustrializa-tion of the Northeast and Midwest of the United States. Whether or not this is more generally "effective" depends, of course, on the existence in the wings of new technological or locational possibilities. The great depression of the 1930s was a remarkable period of technological and institutional renewal in the midst of crisis conditions in the United States. The result was a completely different model of fixed-capital engagement (based on the automobile, electrification, and the opening up of California) that bore fruits after World War II. It laid “the new material base for the next turnover cycle.” Is there a similar process of reorganization of the fixed-capital milieu occurring in the midst of the present recessionary conditions? And if so, where? China? Marx’s theoretical question is certainly worthy of investigation.

The general significance of these aspects of Marx’s theory of crisis formation and resolution is not often remarked upon in the Marxist literature, even though there is considerable historical evidence for business cycles associated with waves of new technologies coming on line, and associated waves of extensive “moral depreciation” in the way that Marx briefly outlines. Measures of the utilization of capacity (i.e. largely fixed capital) are considered, after all, to be vital indicators of economic health. One only has to look at the vast wave of investment in fixed capital in China in response to the crisis conditions of 2008–09 to recognize how important these relations might be. On the one hand we can see how necessary it is that “there be constant over-production, i.e. production on a greater scale than is needed for the simple replacement and reproduction of the existing wealth—quite apart from any increase in population—for the society to have at its disposal the means of production to make good unusual destruction caused by accidents and natural forces” (257). While Marx obviously has in mind here the impacts of earthquakes and tsunamis, there is no reason not to extend this insight to the collapse of export markets of the sort China experienced in 2009. China has vast capital surpluses (as did Britain from the seventeenth to the end of the nineteenth century). It does not have to appeal for austerity (as Rostow and the current Republican Party in the United States do) to fund this vast wave of fixed-capital investment. However, as Marx so presciently signals, there is also a “material basis” here for the periodic crises “in which business passes through successive stages of stagnation, moderate activity, overexcitement, and crisis” (264). There are, in fact, innumerable ways in which the “moral depreciations” that occur in relation to fixed capitals of all sorts (including those immobilized in the land as vast physical infrastructures) can and regularly do morph into major disruptions and crises (particularly with respect to asset values) within the heart of a capitalist mode of production. While Marx signals the general possibility of this, he fails to elaborate in any depth. This is, in my view, a great pity. It leaves us with plenty of work to do even as it furnishes some very suggestive ideas to that end.

FIXED CAPITAL AND VALUE THEORY

There is a lot of debate, both in Marxist economics and in bourgeois theory, over how to value fixed capital. It is a very thorny and difficult problem. Marx provides us with three ways to do it. He introduces the problem by appealing to straight-line depreciation. A machine that lasts ten years recovers one tenth of its value every year, until its value is fully realized and its use-value fully used up, at which point the capitalist buys a new machine with the money that has been hoarded. The second means of valuing fixed capital is by way of replacement cost. The residual value in the machine is determined at any point in its lifetime by what it would cost to replace it with an equivalent machine. Thirdly, the value of the machine is dependent upon the social average lifetime and the general level of effectiveness of fixed capital deployed by competing capitalists in a given line of production. This is where the "moral depreciation" argument and the question of the "effectiveness" or "utility" (though Marx does not use this term) of the fixed capital dominate. Technological revolutions make new machines cheaper and/or more efficient and effective. This affects the value of the goods being produced. Rising productivity means lower commodity values, so the imputed social average value of existing fixed capital diminishes because the "level of effectiveness" or the usefulness of that existing fixed capital (such as a machine) diminishes. When commodity values plunge because of rising productivity (due to the availability of cheaper and more effective fixed-capital equipment), then individual capitalists cannot claim back the whole value of their fixed capital when they go to market. No purchaser is likely to listen when I say, "Please pay me more for this commodity because I have not yet amortized my older and clun-kier forms of fixed capital."

But Marx leaves this determinant largely uninvestigated. The question of sunk capital values and the valuation of physical fixed capital over time is left in abeyance. The valuation of fixed capital is a horror story in bourgeois economics, and it is also viewed by many as deeply problematic in Marx. In particular, it is sometimes presented as the Achilles' heel in Marx's conception of the labor theory of value. There is no question that its "peculiarities" do challenge certain conceptions of that theory. If value is interpreted as that socially necessary embodied labor input that fixes the "true" value of a commodity for all time and which underpins the "natural" or equilibrium prices observed in the market, then Marx's relational approach to deciding when something is or is not fixed capital (vis-à-vis items in the consumption fund or in joint product situations) plainly subverts this whole framework. It has certainly been shown conclusively that the circulation of fixed capital cannot be reconciled with a theory of value that rests solely on past and present embodied labor time as fixed magnitudes. But this, I argued in *The Limits to Capital*, is Ricardo's labor theory of value and not Marx's:

> While Marx frequently equates socially necessary labour with embodied labour for the sake of convenience, the latter does not embrace all aspects of value as a social relation. Value, recall, "exists only in articles of utility," so that if an article loses utility, it also loses its value." This is so because "commodities must show that they are use-values before they can be realized as values" so that "if a thing is useless, so is the labour contained in it; the labour does not count as labour, and therefore creates no value."[3]

Now, for reasons laid out at the very beginning, Marx is reluctant to deal with specificities like demand and supply, and certainly does not want to get into any version of utility theory. So it is in general assumed that either the article is or is not a use-value. But it is not hard to see how the use-value of fixed capital changes over its lifetime depending upon its "effectiveness" (which is why I so underlined that word at the outset). More generally, I argue, "value is not a fixed metric to be used to describe a changing world, but a social relation which embodies contradiction and uncertainty at its very center. There is, then, no contradiction whatsoever between Marx's conception of value and the 'peculiarities' of fixed capital circulation. The contradiction is internalized within the very conception of value itself."[4]

There is one interesting way to make this whole argument more tangible, and indeed Marx hints at but does not pursue a more thorough application of the theory of joint products. At the end of a turnover period of, say, one year, two commodities have been produced jointly—the commodity and the residual fixed capital (in the form, say, of sewing machines). At the end of the turnover time, I have the option to treat both the shirts and the sewing machines as commodity capital and to realize the value of both. The partially used sewing machines have a value on the market, but with the built environment there is a problem. The secondhand market value of a whole industrial landscape is not easy to assess. Although there are now astounding stories of whole plants being dismantled in Germany and reassembled in China, the cost of the move is likely to diminish seriously the cost of acquisition of the devalued fixed capital. But then the anticipated future value may come into play (a form of fictitious capital that we will encounter later). Yet this involves a considerable risk for the capitalist buying up the old partially devalued fixed capital in the land, and then hoping either to use it directly or convert it to other uses (for example, converting an abandoned cotton mill into condominiums).

All sorts of problems obviously exist in the field of valuing fixed-capital investments, old and new. Strategies emerge to deal with some of these difficulties, such as planned obsolescence or the leasing of fixed capital on an annual basis, such that the risk shifts from the producer who uses it to the owners who lease it (often in return for interest only). And, in practice, state and local governments often step in to provide certain elements of fixed capital in the land for little cost, to socialize both the burden and the risk of certain kinds of fixed-capital investments.

I mention all these problems and possibilities to illustrate the kind of complexity that attaches to what initially seems the very simple category of fixed capital. Marx takes up many but not all of these complexities, but does so in a relational way that emphasizes the fluidity and the instability of how the category works in and through the circulation and accumulation of capital in general. The unfinished character of Volume II means that there is still work to do on this topic, while Marx's reluctance to use all of his prior findings from the *Grundrisse* and elsewhere is somewhat puzzling. But, in spite of all these particular shortcomings, the question of the circulation of fixed capital in all its forms (mobile and immobile, in particular), and with all its relationalities (with the consumption fund, in particular), constitutes a major feature of Marx’s critical search for an understanding of the laws of motion of capital in its “pure state.” That this search brings Marx ever closer to the question of how the credit system operates in relation to fixed-capital formation, circulation and use, provides one compelling reason to interrogate more closely how the credit system itself functions within the rules of a pure capitalist mode of production.

CHAPTER FOUR

Merchants' Capital (Chapters 16–20 of Volume III)

We now move into the "grand experiment" of seeing how Marx's theory looks when we seek to integrate the technical analysis of circulation processes laid out in Volume II with their corresponding distributional forms as presented in Volume III. In venturing into Volume III, we have to confront some immediate difficulties that derive from the nature of that text.

Engels had great difficulty reconstructing much of it from Marx's draft manuscripts. Part 4, on merchants' capital, was in a reasonable state, but Part 5, which deals with money capital, finance and credit "presented the major difficulty and this was also the most important subject in the whole book." That Engels viewed it so is, I think, of more than mere passing significance. I, too, think it of the greatest significance and regret that it has not been the center of a far more wide-ranging analysis and debate within the Marxist tradition of political economy.

The problem for Engels was that there was no "finished draft, or even an outline plan to be filled in, but simply the beginning of an elaboration which petered out more than once in a disordered jumble of notes, comments and extract material." After three attempts to rewrite it, Engels gave up and just arranged the materials as best he could, while making "only the most necessary alterations." The real difficulties began, Engels reports, after chapter 30, on "Money Capital and Real Capital." "From here on it was not only the illustrative material that needed correct arrangement, but also a train of thought that was interrupted continuously by digressions, asides, etc., and later pursued further in other places, often simply in passing. There then followed, in the manuscript, a long section headed 'The Confusion'" (C3, 94–5). These materials are, in short, in pretty bad shape.

It is hard, if not impossible, to reconstruct the general flow in much of Marx's argument. There are places where this can be done, but elsewhere I find it best to extract what seem to be key insights and ideas from a lengthy text, to see if some more general framework for analysis emerges—there is no option, for example, except to read the materials on speculation speculatively.

Marx begins Part 4 of Volume III with the following observation: "Merchant's or trading capital is divided into two forms or sub-species, commercial capital and money-dealing capital" (C3, 379). While there is an obvious overlap between commodity trading and money dealing (for example, trading frequently entails offering credit), Marx separates them out from each other in exactly the same way as he distinguishes between the money and the commodity circuits of capital in Volume II. But please note that when Marx uses the term “merchants’ capital” he is combining both commercial capital (which we would normally call the activities of the merchant) and that of the bankers and money dealers.

Marx also makes clear his determination not to stray from his mission, as described in the introduction to the *Grundrisse*, to focus on the general laws of motion of capital even when he deals with the particularities of distribution. We will, he frequently declares, only go into “such detail as is needed in order to analyse capital in its basic inner structure.” He aims to locate the activities of merchants and money dealers in relation to these general laws. The trouble is that Marx is not always sure what is or is not relevant to the general laws. This is something that we need to keep a critical eye on as we proceed.

This last problem relates to another of which we also need to be keenly aware:

> As the reader will have recognized in dismay, the analysis of the real, inner connections of the capitalist production process is a very intricate thing and a work of great detail; it is one of the tasks of science to reduce the visible and merely apparent movement to the actual inner movement. Accordingly, it will be completely self-evident that in the heads of the agents of capitalist production and circulation, ideas must necessarily form about the laws of production that diverge completely from these laws and are merely the expression in consciousness of the apparent movement. The ideas of a merchant, a stock jobber or a banker are necessarily quite upside-down. The ideas of the manufacturers are vitiated by the acts of circulation to which their capital is subjected and by the equalization of the general rate of profit. Competition, too, necessarily plays in their minds, a completely upside-down role. (C3, 428)

Notice what this implies. The self-presentations, self-perceptions and ideas of the agents of finance (as well as of capitalists in general) are delusional, not in the sense that they are crazy (though, as we will see, they often are) but *necessarily* deluded in the sense that Marx described in his theory of fetishism. In that theory, the surface appearance of market exchange signals (such as prices and profits), to which we must all perforce react, conceals the real content of our social relations. We necessarily act upon the basis of these market signals no matter whether we recognize that they mask something else or not. It is therefore not surprising to find bourgeois ideas and theory replicating the misleading signals in the world of consciousness and thought. Marx’s general intent throughout *Capital* is to get behind and beyond the fetishisms of commodity exchange and see the world “right-side-up.” This was, Engels surmises in his Preface, Marx’s intent in analyzing “the confusion.” This also explains why the materials Marx assembled in Part 5 after chapter 30 consisted “simply of extracts from the parliamentary reports on the crises of 1848 and 1857, in which the statements of some twenty-three businessmen and economic writers, particularly on the subjects of money and capital, the drain of gold, over-speculation, etc., were collected, with the occasional addition of brief humorous comments” (C3, 95). These statements were the basic raw materials that needed to be turned “right-side-up.” Hardly surprisingly, the theory of commodity fetishism therefore makes an explicit reappearance in Part 5, en route to deriving the all-important category of "fictitious capital."

Marx's view on all this has immense contemporary significance. Not only do we now have to hand innumerable accounts of what happens on Wall Street (including Congressional Enquiries) that we are supposed to consider trustworthy, but we are overwhelmed with a rhetoric that says that banking is so complicated that only the expert bankers understand what it is they do. We therefore have to rely upon their expertise, we are told, to deal with the problems they created. But if Marx is correct, then we should not believe these bankers' accounts (even when "truthful" in the fetishistic sense), and certainly not trust them to devise institutional arrangements to control the inherent contradictions (most of which remain unrecognized) within the laws of motion of capital. The bankers and financiers are, in some ways, the very last people to trust, not because they are all fraudsters and liars (even though some of them patently are), but because they are likely to be prisoners of their own mystifications and fetishistic understandings. What Marx would have said of Lloyd Blankfein when he claimed, when pressed before a Congressional Committee, that his bank, Goldman Sachs, had merely been doing God's work, is not hard to imagine.

Banking and finance constitute, Marx concedes, a very complicated world. His insistence that we should only pay mind to those aspects of it that connect to the general laws of motion of capital turns out to be both helpful and frustrating. Marx's science searches for the actual inner movement in the midst of all the apparent chaos and the innumerable complications. We should strive to do no less. This saves us from getting bogged down in every detail of how this or that new financial instrument operates. But it is frustrating because Marx never completed his analysis of what was or was not relevant and, as we shall see, ran into some rather deep problems in seeking to do so. And he never completed his ambition to turn the views of the bankers right-side-up.

So let us first recall where the argument stands. We know from the analysis laid out at the beginning of Volume II that the circuit of industrial capital comprises three intertwining yet distinctive circulation processes: those of money, commodity and production capital. The money and commodity circuits (the monetization and commodifica-tion of exchange relations) had to preexist the rise of a distinctively capitalist mode of production driven by the logic of surplus-value production and appropriation, as laid out in Volume I.

The vital importance and special qualities of commodity capital within the overall circulation of industrial capital were singled out for examination in chapter 3 of Volume II. But Marx scrupulously refrained in that chapter from going any further than was necessary in order to understand the formal position of commodity capital in the overall dynamics of the circulation process. Here, in Volume III, he is prepared to go deeper and further—although, as we shall see, he is still reluctant to engage with the power relations between merchants and producers within any actually existing capitalist society.

Throughout *Capital*, Marx refers to these preexisting forms of capital as “antediluvian” (see Volume I, page 266, and chapters 20 and 36 of Volume III). How, then, are these antediluvian forms—commercial capital and usury in particular—which function independently and autonomously and with (or without) their own rules of conduct and exchange, disciplined to serve the needs of a rule-bound capitalist mode of production? Theoretically, the answer to this question entails specifying the distinctive and necessary roles of commercial and money-dealing capitals within a purely capitalist mode of production, and showing how their forms of operation (marked, as always, by certain pervasive contradictions) might affect the laws of motion of capital. This then leads into the further obvious question, first broached in the chapter on money in Volume I, of the role of commercial and financial crises, such as those which Marx experienced in 1848 and 1857 (and which we have been experiencing since 2007), in relation to the value theory and the overall dynamics of capital accumulation. These are the issues I will now take up.

ON CHAPTER 20 OF VOLUME III: HISTORICAL MATERIALS ON MERCHANTS’ CAPITAL

I find it helpful to begin with a reading of chapter 20, which provides an overview of the historical role of the “antediluvian” forms of merchants’ capital in the rise of a capitalist mode of production. Marx’s historical reconstructions are, as we have seen, often suspect, but in this instance his account is suggestive, if not informative.

Marx opens the chapter with a critique of all those economists who see merchants’ capital simply as one branch among many in the social division of labor:

> In commercial and money-dealing capital, rather, the distinctions between industrial capital as productive capital and the same capital in the sphere of circulation attain autonomy in the following way: the specific forms and functions that capital temporarily assumes in the latter case come to appear as independent forms and functions of a part of the capital that has separated off and become completely confined to this sphere.

Note the language: merchants’ capital “attains autonomy” by “appearing” as a “separate and independent” form of capital. Even if Marx means here independent and autonomous from feudal social relations, this still leaves open the question of potential autonomy and independence relative to the laws of motion of capital, as earlier defined.

It is certainly erroneous, however, to see the activities of banking, wholesaling and retailing as in principle no different from value-producing activities like mining, metallurgy and agriculture within the overall division of labor. Yet this is how these sectors were typically viewed in classical political economy, and how they continue to be represented to this day in national accounts. Marx insists they are fundamentally different activities deriving from their relation to the flow of capital in the circulation sphere, rather than in production. The “confusions” of classical political economy were expressed, firstly, by an “inability to explain commercial profit and its characteristic features” and, secondly, through the “apologetic endeavour to derive the forms of commodity capital and money capital … from the production process as such.” The idea that “production predominates” is correctly ascribed to Marx, but here he is saying that this cannot be the case in the narrowly deterministic sense that classical political economists typically proposed. “Smith. Ricardo, etc. … focused on … industrial capital … and were perplexed by commercial capital” because “value formation, profit, etc. derived from the examination of industrial capital cannot be applied directly to commercial capital. They therefore entirely ignored the latter” (C3, 440–1). The questions of how to deal with the role of merchants’ capital is just as confused today as it was in Marx’s time. So this is a great opportunity to sort the confusion out and ask some fundamental questions. Where does the profit on merchants’ (commercial and money-dealing) capital come from—and how can it be justified in relation to the laws of motion of capital—when it is not in itself a branch of production that produces value? This is the problem that the substantive chapters will attempt to address purely from “the standpoint of the capitalist mode of production and within its limits.”

But “trading capital is older than the capitalist mode of production, and is, in fact, the oldest historical mode in which capital has an independent existence.” All that is required for its existence is “the simple circulation of commodities and money. … Whatever mode of production is the basis on which the products circulating are produced—whether the primitive community, slave production, small peasant and petty-bourgeois production, or capitalist production—this in no way alters their character as commodities [and] commercial capital simply mediates the movement of these commodities” (C3, 442). The extent of the trade depends, of course, on the mode of production. In a largely self-sufficient peasant society, only surpluses over and above basic needs will be traded, and so merchants will be restricted to trading in these surpluses. Their role expands and reaches “a maximum with the full development of capitalist production, where the product is produced simply as a commodity and not at all as a direct means of subsistence.” Commercial capital “simply mediates the exchange of commodities,” but “buys and sells for many people. Sales and purchases are concentrated in his hands and in this way buying and selling cease to be linked with the direct needs of the buyer (as merchant).” While Marx does not say this here, the merchant obviously stands to make gains from the economies of scale of his or her operation.

The wealth of the merchant “always exists as money wealth and his money always functions as capital,” although its form is always M-C-M’, which means that the aim and object of the merchant’s operations must be the procurement of ΔM (C3, 443). The question is: Where does this ΔM come from, and what are the implications of its appropriation by the merchant?

There is, Marx asserts,

> no problem at all in understanding why commercial capital appears as the historic form of capital long before capital has subjected production itself to its sway. Its existence and its development to a certain level, is itself a historical precondition for the development of the capitalist mode of production (1) as precondition for the concentration of monetary wealth, and (2) because the capitalist mode of production presupposes production for trade. … On the other hand, every development in commercial capital gives production a character oriented ever more to exchange-value, transforming products more and more into commodities.

The existence of commercial capital may be a necessary condition for the transition into a capitalist mode of production, but "taken by itself, is insufficient to explain the transition" (C3, 444).

In the context of capitalist production, "commercial capital is demoted from its earlier separate existence, to become a particular moment of capital investment in general, and the equalization of profits reduces its profit rate to the general average. It now functions simply as the agent of productive capital."

We must, as I will shortly show, be very careful how we understand this statement. Marx's subsequent commentary can be misleading. He says, for example, that "where commercial capital predominates, obsolete conditions obtain," and that "trading cities," even within the same country, "exhibit a far greater analogy with past conditions than do manufacturing towns." This was, actually, a rather astute historical observation. In Britain, for example, capitalist production did not arise in the main commercial and trading cities such as Bristol and Norwich (which were dominated by conservative corporatist and guild forms of organization) but on the "greenfield" sites of villages with names like Manchester and Birmingham, where such forms of organization were absent. This led Marx to conclude that "the independent and preponderant development of capital in the form of commercial capital is synonymous with the non-subjection of production to capital," and so "stands in inverse proportion to the general economic development of society." In other words, a hegemonic merchant class would attempt to suppress the rise of the industrial form of capital, since its capacity to extract ultra-profits by exploiting weak and vulnerable producers would be curbed.

The transitional story that Marx tells runs like this: capital "appears first of all in the circulation process. In this circulation process, money develops into capital. It is in circulation that the product first develops as exchange-value, as commodity and money. Capital can be formed in the circulation process, and must be formed there, before it learns to master its extremes, the various spheres of production between which circulation mediates." Once capital has mastered the extremes, then "the production process is completely based on circulation, and circulation is a mere moment and a transition phase of production" (as described in the first chapters of Volume II). This leads to "the law that the independent development of commodity capital stands in inverse proportion to the level of development of capitalist production." There is "a decline in the supremacy of the exclusively trading peoples and in their commercial wealth" reflecting "the subordination of commercial capital to industrial capital" with "the progressive development of capitalist production" (C3, 446).

Marx illustrates the power of this law with some remarks on the nature of the carrying trade as organized through the Venetians, the Genoans and the Dutch, all of whom relied heavily upon "commercial capital in its pure form," and effectively built their wealth through positioning themselves as mediators in exchange and accumulators of money capital, by buying cheap and selling dear. While the commodities exchanged are an expression of human labor and have a value, "they are not equal values." But the more merchants transform the world of commodity exchange into one where, as he earlier argued, exchange becomes "a normal social act," so the value metric becomes increasingly hegemonic. This is an important point. The importance of the value concept and of the whole theory that Marx builds upon it depends historically upon the activities of merchant capitalists in creating exchange networks on the world market.

While this may be historically accurate, the supposed existence of such a "law" poses a serious problem for us. The rise of powerful forms of commercial capital (such as Walmart, Ikea, Nike, Benetton, the Gap, and so on) over the last thirty years suggests either that the "law" no longer holds, or that it requires a nuanced interpretation. Or are we simply being misled by surface appearances? We will return to this issue shortly.

"In the stages that preceded capitalist society," Marx continues,

> it was trade that prevailed over industry; in modern society it is the reverse. Trade naturally reacts back to a greater or lesser extent on the communities between which it is pursued; it subjects production more and more to exchange-value. … In this way it dissolves the old relationships. It increases monetary circulation. It no longer just takes hold of surplus production, but actually gobbles up production itself and makes entire branches of production dependent upon it. (C3, 448)

In its initial stages, commercial capital derives much of its wealth from "defrauding and cheating." When it held "a dominant position," it constituted "in all cases a system of plunder" which, we should note, goes entirely against the rules of free and fair market exchange generally presupposed in *Capital*, and plunges us back into the Volume I world of primitive accumulation. But as it becomes more regularized, so it becomes more rule-bound. And the rules are set, in theory at least, by what the capitalist mode of production demands, even as the development of trade promotes those demands.

> The development of trade and commercial capital always gives production a growing orientation towards exchange-value, expands its scope, diversifies it and renders it cosmopolitan, developing money into world money. Trade always has, to a greater or lesser degree, a solvent effect on the pre-existing organizations of production, which in all their various forms are principally oriented to use-value. But how far it leads to the dissolution of the old mode of production depends first and foremost on the solidity and inner articulation of this mode of production itself. And what comes out of this process of dissolution, i.e. what new mode of

production arises in place of the old, does not depend on trade, but rather on the character of the old mode of production itself. (C3, 449)

There is, therefore, no necessary movement towards a capitalist mode of production. How money "dissolves" the ancient community to become the community is a theme elaborated upon at some length and with great passion in the *Grundrisse* (see for example pages 224–8). Nevertheless,

there can be no doubt … that the great revolutions that took place in trade in the sixteenth and seventeenth centuries, along with the geographical discoveries of the epoch, and which rapidly advanced the development of commercial capital, were a major moment in promoting the transitions from the feudal to the capitalist mode of production. The sudden expansion of the world market, the multiplication of commodities in circulation, the competition among the European nations for the seizure of Asiatic products and American treasures, the colonial system, all made a fundamental contribution towards shattering the feudal barriers to production.

But while "the sudden expansion of trade and the creation of a new world market had an overwhelming influence on the defeat of the old mode of production and the rise of the capitalist mode," there occurred at some point a historic reversal in which it was no longer the expansion of trade and the world market that provided the impetus for capitalist production, but a shift in which the latter became the driving force, such that an industrializing nation (Britain) assumed a hegemonic role in capitalist development displacing commercial power (that of Holland). Those familiar with Giovanni Arrighi's history of shifting hegemonies within global capitalism—*The Long Twentieth Century*—will immediately see the historical validity of this point.[5] It was this that also drove the traders to become the cutting edge of colonial and imperialist practices, destroying Indian industry to create a market for goods produced in Britain.

"The transition from the feudal mode of production takes place in two different ways. The producer may become a merchant and capitalist," which is "the really revolutionary way. Alternatively, however, the merchant may take direct control of production himself." Marx later adds a third way in which "the merchant makes the small masters into his middlemen, or even buys directly from the independent producer; he leaves him nominally independent and leaves his mode of production unchanged" (C3, 454).

There are two perceptive points here. First, the overwhelming power of merchants' capital and its forms of organization just as often inhibited the development of full-fledged industrial capitalism as they promoted it. There is considerable historical evidence to support this view. But there is a more contemporary point. When the merchants retain control, they often preserve and retain old and backward forms of production organized on traditional lines. This

stands in the way of the genuine capitalist mode of production and disappears with its development. Without revolutionizing the mode of production, it simply worsens the conditions of the direct producers, transforms them into mere wage-labourers and proletarians under worse conditions than those directly subsumed by capital, appropriating their surplus labour on the basis of the old mode of production. Somewhat modified, the same relationships are to be found in the manufacture of furniture in London, which is partly carried out on a handicraft basis. This is particularly the case in Tower Hamlets. (C3, 453)

The case of Tower Hamlets provides some very important insights:

The whole of furniture production is divided into very many separate branches. One firm just makes chairs, another tables, a third chests and so on. But these firms are themselves conducted more or less on a handicraft basis, by one master with a few journeymen. Despite this, production is on too large a scale to work directly for private clients. The buyers are the proprietors of furniture stores. On Saturday the master goes to these stores and sells his products. … These masters need their weekly sale simply to buy more raw materials for the coming week and to pay wages. Under these conditions they are really only middlemen between the merchant and their own workers. *The merchant is the real capitalist and pockets the greater part of the surplus-value*, (C3, 453; emphasis added).

Systems of production of this sort have long existed in the history of capitalism, and this form has proliferated (though in modern guise) over the past forty years, as merchant capitalist organizations like Benetton, Walmart, Ikea, Nike, and so on, almost certainly "pocket the greater part of the surplus-value" from the producers whom they subcontract. In what sense, then, can we still say that "production predominates?"

In Volume I, Marx concedes that capital was in his time constituted by all manner of different or "hybrid" labor systems (ranging from the factory to domestic workers). But there was a definite teleological thrust in which Marx seemed to assume that mixed and hybrid labor systems of the Tower Hamlets sort were transitional toward a factory system that would dominate over all else. In a purely capitalist mode of production the factory would be all there was. I challenged that teleological presumption in the *Companion* to Volume I. In my own studies of industrial organization in Second Empire Paris, I had found that the Tower Hamlets kind of organization was proliferating and not shrinking. But where Marx was right was in remarking the vicious exploitation entailed in such forms of labor organization. Zola, in his novel *l'Assomoire*, has a devastating description of the oppressive conditions lived by a husband-and-wife team making gold chain in their apartment on command from merchants who supplied the gold and collected the product on a monthly basis. And there is a good deal of evidence in the contemporary world that super-exploitation characterizes many of the subcontracting networks mobilized and organized by merchant capital (hence the scandals that burst into the mainstream press regarding Liz Claiborne clothing, Nike shoes, children making carpets and soccer balls —to be kicked around by soccer players earning millions—and harvesting cacao).

But the super-exploitation to be found here is significant in another way. As the factory system did indeed proliferate and grow, putting sometimes incredible competitive pressures on these other systems of production, then workers began to organize on the basis of factory labor, as Marx predicted. They formed unions and exerted political pressures of the sort that became generalized toward the end of the 1960s in many parts of the advanced capitalist world. It was under such political conditions that the turn toward older commercial forms of super-exploitation became far more attractive. Hence the rebirth of the merchant capitalists (and even the renewal of mercantilist practices and theories) and the proliferation of their super-exploitative networks and chains of dispersed and subcontracted production. But, in certain arenas and areas of production, such practices had never disappeared; they had always retained their competitive edge over factory production. Hong Kong, for example, is celebrated for such forms of workshop and family labor production—in contrast with, say, Singapore, which is more corporately organized, and South Korea, which took the classic path into large-scale factory production, and ended up with a strong labor movement of the sort that would be unthinkable in Hong Kong. The teleological presumption cannot, in my view, be sustained. Competition between different labor systems remains, I would argue, a vital aspect of contemporary global capitalism, which in turn implies different relative roles for producers vis-à-vis merchants. There are certain sectors, as well as certain spaces in the global economy, in which it would seem that the producers do indeed dominate the merchants, whereas there are other places and sectors where the opposite is true. In the automobile industry, for example, producers tend to dominate distributors, but in textiles it is almost always the other way round these days. In the case of General Motors, however, a hybrid form emerged in the form of General Motors Acceptance Corporation, which became an independent and autonomous branch of General Motors organizing credit (it eventually qualified as a bank in the crisis of 2008–09).

There is still a clear sense in which Marx's proposition that "production predominates," and that the activities of the merchants are rendered "subservient" to the requirements of a capitalist mode of production, remains true. Whereas merchant capitalists at one time lived off fraudulent and predatory practices of buying (or procuring) cheap and selling dear, they now have to organize the direct producers under their influence to maximize the production of surplus-value even as they, the merchants, appropriate the lion's share of that value. Marx's proposition concerning the subservience of merchants' capital to the requirement of surplus-value production therefore still holds good. This does not mean the merchant capitalists have to be or currently are subservient to the power of the producers. Nor does it mean that the merchants stop engaging in fraudulent practices of accumulation by dispossession (in which they have a lot of historical experience). In the recent foreclosure crisis in the United States, for example, a mortgage institution like Countrywide was shown to have defrauded millions of people of billions of dollars in asset values during the housing boom from 2000 to 2007.

Marx readily concedes the perpetuation and periodic return of such practices, but his intent is to locate the origins of the profits of merchant capital within the rules of a purely capitalist mode of production. This requires that he define the logic of merchant capitals' position, and the contributions they and the labor they employ make to the production and realization of surplus value within a purely functioning capitalist mode of production. This is the focus of the substantive analytic chapters on merchants' capital, to which we now turn.

ON CHAPTER 16 OF VOLUME III: COMMERCIAL CAPITAL

Marx opens his chapter on commercial capital (defined as that part of merchants' capital that deals primarily in commodities) by reminding us of its connectivity to the circulation of commodity capital as presented in Volume II. One part of the total social capital

> is always on the market as a commodity, waiting to pass over into money. … Capital is always involved in this movement of transition, this metamorphosis of form. In as much as this function acquires independent life as a special function of a special capital and is fixed by the division of labour as a function that falls to a particular species of capitalists, commodity capital becomes commodity-dealing capital or commercial capital. (C3, 379)

Our task, then, is to understand the role this "particular species" of capitalist plays in the accumulation of capital.

In order to get at commercial capital in its pure form, Marx reminds us that there are certain activities—most notably transportation—that are part of value production even though they are often carried out by commercial capital. Marx proposes to ignore these functions here (C3, 380). This leaves him with the bare distinction between circulating (or fluid) capital and capital engaging in production within the overall circulation of industrial capital. "Commercial capital" is

> nothing but the transformed form of a portion of the circulation capital which is always to be found on the market. … We refer here to a portion only, because another part of the buying and selling of commodities always takes place directly between the industrial capitalists themselves. We shall ignore this other portion of circulation capital completely in the present investigation, since it contributes nothing to the theoretical definition, to our understanding of the specific nature of commercial capital, and has moreover been exhaustively dealt with, for our purposes, in Volume II. (C3, 380)

The commercial capitalist "appears on the market as the representative of a certain sum of money that he advances as a capitalist," with the intent of gaining profit (Δm). In order to deal in commodities, "he must first buy them, and be therefore the possessor of money capital. … What then is the relationship between this commodity-dealing capital and commodity capital as a mere form of existence of industrial capital?" (C3, 381). This is the question.

The linen manufacturer realizes "the value of his linen with the merchant's money." As far as the manufacturer is concerned this completes the circuit of capital and frees him or her to use the money so gained to continue and if necessary expand production activities. But the linen itself is still on the market as a commodity. All that has happened is that its ownership has changed, and it is now in the hands of the merchant whose special business it is to realize the linen's value in the market. This special business is "separate from the other functions of industrial capital and hence autonomous. It is a particular form of the social division of labour, such that one part of the function which has to be performed in a particular phase of capital's reproduction process, here the phase of circulation, appears as *the exclusive function of a specific agent of circulation distinct from the producer*" (C3, 384; emphasis added). This implies that the "autonomy" of commercial or trading capital that had been so important historically is preserved within the framework of a capitalist mode of production. So what, exactly, does this "autonomy" allow?

First notice that what appears as a simple exchange of C-M for the producer now takes the form of an operation by the merchant of M-C-M' (C3, 385). "Thus the way that commodity capital assumes in commercial capital the form of an independent variety of capital is by the merchant advancing money capital that is valorized as capital and functions as capital, only because it is exclusively engaged in facilitating the metamorphosis of commodity capital in making it fulfill its function as commodity capital." The money capital advanced by the merchant is exclusively wrapped up in buying and selling, and "remains for ever penned into capital's circulation sphere" (C3, 386).

The benefit to the industrial capitalist is that the turnover time of his capital is shortened. His production process "goes forward without a break" because "as far as he is concerned, the transformation of his commodity into money has already taken place." This does not mean that the problem of circulation time is abolished. But, without the intervention of the merchant, "the part of the circulation capital that exists in the form of a money reserve would always have to be greater in proportion to the part employed in the form of productive capital, and the scale of reproduction would be accordingly restricted." The producer "can now regularly apply a greater part of his capital in the actual production process, leaving a smaller money reserve" (C3, 387). Furthermore, "if the merchant remains a merchant … the producer saves time in selling which he can apply to supervising the production process, while the merchant has to spend his entire time selling." This is what makes the activities of merchant capital logically consistent with the rules of a purely capitalist mode of production. Or, more accurately, this is what makes the emergence of an autonomous class of merchant capitalists within a capitalist mode of production both advantageous and logically necessary.

Marx then lists some of the important functions of the rise of a form of capital exclusively devoted to buying and selling. By selling the products of several different producers or of several different lines of production within the division of labor, they can compensate for and smooth out different turnover times while achieving certain economies of scale. The more efficient they are and the faster their own turnover time, the less capital they will require. They also have a role to play in increasing the velocity of circulation of their own money capital and of influencing the speed of consumption. This last point is, I think, now of great importance in our consumerist world, and could do with further elaboration. But

> commercial capital is nothing more than capital functioning within the circulation sphere. The circulation process is one phase of circulation, no value is produced, and thus also no surplus-value. The same value simply undergoes changes of form. Nothing at all happens except the metamorphosis of commodities, which by its very nature has nothing to do with the creation or alteration of value. If a surplus-value is realized on the sale of the commodity produced, this is because it already existed in the commodity … *Commercial capital thus creates neither value nor surplus-value*. (C3, 392; emphasis added)

But the indirect effects described in this chapter are of considerable significance:

> In so far as (commercial capital) contributes towards shortening the circulation time, it can indirectly help the industrial capitalist to increase the surplus-value he produces. In so far as it helps to extend the market and facilitates the division of labour between capitals, thus enabling capital to operate on a larger scales, its functioning promotes the productivity of industrial capital and its accumulation. In so far as it cuts down turnover time, it increases the ratio of surplus-value to the capital advanced, i.e. [raises] the rate of profit. And in so far as a smaller part of capital is confined to the circulation sphere as money capital, it increases the portion of capital directly applied in production. (392–3)

Capital, we have seen all along, is very much about maintaining the continuity, smoothness and fluidity of movement, and commercial capital plays a crucial role in doing this.

ON CHAPTER 17 OF VOLUME III: COMMERCIAL PROFIT

As was shown in Volume II, and firmly reasserted in chapter 16, “the pure functions of capital in the circulation sphere create neither value nor surplus-value.” But the industrial capitalist always has some money capital tied up in circulation. “The time these operations require sets limits to the formation of value and surplus-value, objectively as far as the commodities are concerned and subjectively as concerns the capitalist” (C3, 394). The implication, of course, is that any relaxation of these limits can contribute to the capacity to produce even more surplus value, as was shown in the preceding chapter. We now have a situation where a special capital performs these functions:

> Commercial capital … stripped of all the heterogeneous functions that may be linked to it, such as storage, dispatch, transport, distribution and retailing, and confined to its true function of buying in order to sell, creates neither value nor surplus-value, but simply facilitates their realization, and with this, the actual exchange of commodities, their transfer from one hand to another, society’s metabolic process. (C3, 395)

But this commercial capital is still capital and must, like any capital, “yield the average profit.” If it yielded a higher rate than industrial capital, then a portion of the latter would switch into it (and vice versa if its rate was lower). “No species of capital finds it easier than commercial capital to change its function and designation.”

Marx is here invoking the principle of the equalization of the rate of profit examined at length in Part 2 of Volume III. Since we have not considered this principle, let me inject a brief comment on its significance. Capital tends to flow, Marx argues, to wherever the rate of profit is highest (particularly under competitive conditions). Intuitively, this makes sense. The result is a tendency for the profit rate to equalize across all sectors of the economy, from textiles to agriculture to oil production. The problem is that this tendency does not lead capital to flow to the areas that are most prolific in the production of surplus-value. Capital-intensive sectors (sectors with high value or organic composition of capital) capture surplus-value from labour-intensive (low-value or organic composition) sectors. This misallocation of investment in relation to value and surplus-value production has all manner of complicated consequences (including a tendency for the rate of profit to fall, because the profit rate, not surplus-value production, is necessarily the incentive to which the capitalist responds, given market forces). The effects of this tendency are occasionally invoked in the chapters that follow. Here, however, Marx simply asserts that the rate of profit on commercial capital will tend to equalize with the rate of profit on industrial capital. Later on, there will be instances where he will argue that, if the rate of profit in general tends to fall, then so must the rate of return on commercial capital. The question of whether the rate of interest on money capital equalizes with the rate of profit on industrial capital will be taken up in subsequent chapters.

Returning to the text, it is clear, says Marx, that, if the rate of profit on commercial capital is equalized with that of industrial capital, and if investment in commercial operations yields no value or surplus-value in itself, then “the surplus-value that accrues to it in the form of the average profit forms a portion of the surplus-value produced by the productive capital as a whole.” The question then becomes: “How does commercial capital attract the part of the surplus-value or profit produced by productive capital that falls to its share?” (C3, 395).

After the usual tedious detailed calculations, Marx exposes as an “illusion” the idea, promoted from the standpoint of commercial capital, that it adds value because it buys cheap from the industrial capitalists and sells dearer to the consumer. The difference in value between what it pays out and what it sells for is construed and appears as a measure of the distinctive value that it produces.

“Assuming the predominance of the capitalist mode of production, this is not the way commercial profit is realized.” Although it appears as if “the merchant sells all commodities above their values” (C3, 397), commercial capital in fact “contributes to the formation of the general rate of profit according to the proportion it forms in the total capital” (C3, 398). If “we consider all commodities together, the price at which the industrial capitalist class sells them is less than their value” (C3, 399). Therefore, “the merchant’s sale price is higher than his purchase price not because it is above the total value, but rather because his purchase price is below this total value.” In other words, “the average rate of profit already takes into account the part of the total profit that accrues to commercial capital.” “Commercial capital is involved in the equalization of the rate of profit even though it is not involved in the production of surplus-value. The general rate of profit thus already takes account of the deduction from the surplus-value which falls to commercial capital, i.e. a deduction from the profit of industrial capital” (C3, 400). It then follows that “the bigger the commercial capital is in comparison with industrial capital, the smaller the rate of industrial profit, and vice versa. While Marx does not make the point, this is vital for understanding the increasing importance and power of commercial capital in recent times. Once it is conceded that the relationship between the profits of industrial and commercial capital is in some sense contingent, then all sorts of possibilities exist for lopsided power relations to distort and disturb the supposed equilibrium that Marx assumes will be achieved through the equalization of the rate of profit. It also means that the investment of industrial plus commercial capital earns a lower aggregate rate of profit than that on industrial capital alone (the latter measure had been used in all earlier calculations in Volume III).

Marx then goes on to point out that, when “all other circumstances are the same, the relative size of commercial capital (though retailers, a hybrid species, form an exception) will be in inverse proportion to the speed of its turnover, i.e. in inverse proportion to the overall vigour of the reproduction process” (C3, 400). Historically this had not been the case, because it was commercial capital (as we saw in the historical chapter) that first fixed the prices of commodities “more or less according to their values, and it is the sphere of circulation that mediates the reproduction process in which a general rate of profit is first formed.” Historically, “commercial profit originally determined industrial profit.” As the capitalist mode of production matured, however, this relationship was reversed in ways already described in the history chapter. What we see here is the externalization of a whole series of internal costs and burdens that already existed for the industrial capitalist by virtue of his having a portion of his total capital wrapped up in circulation times and costs. The industrial capitalist in effect passes on all those costs and temporal problems to a different capital that manages them as best it can, in return for receiving a portion of the surplus-value produced in the form of the average rate of profit.

Later in the chapter, Marx restates this idea more explicitly:

> Since commercial capital is nothing at all but the form in which a part of industrial capital functioning in the circulation process has become autonomous … the problem must at the outset be put in the form in which the phenomena peculiar to commercial capital do not yet appear independently but are still in direct connection with industrial capital, of which commercial capital is a branch. (C3, 412)

Commercial capital incurs costs, of course. Many of these costs are of a form similar to the *faux frais* of circulation considered in Volume II, and fixed capital (the office space) is also involved. “Price calculation, bookkeeping, fund management and correspondence are all part of this.” Although in the beginning “the office is always infinitesimally small in relation to the industrial workshop. … The more the scale of production grows … the greater also the labour and other circulation costs involved in the realization of value and surplus-value” (C3, 413).

The most significant question, however, is “the position of the commercial wage-labourers employed by the merchant capitalist, in this case the dealer in commodities” (C3, 406). The commercial capitalist could of course operate entirely on his or her own. But with the development of accumulation this is no longer feasible, so wage labor has to be employed. “From one point of view, a commercial employee of this kind is a wage-labourer like any other. It is purchased as variable capital (not as a service out of revenues). Its value is determined in the normal way by the value of labor-power. But then there is a difference: “The commercial workers … cannot possibly create surplus-value for [the commercial capitalist] directly” (C3, 406). While the commercial capitalist might gain extra by paying workers less than their value (and in practice, of course, this often happens), in a purely functioning capitalist mode of production such cheating is ruled out by assumption. Obviously, commercial capital does not pay for the unpaid labor employed by the industrial capitalist, and so is complicit with labor exploitation in that sense. So it “appropriates a portion of this surplus value by getting it transferred from industrial capital to itself.” But

> for the individual merchant, the amount of profit depends on the amount of capital that he can employ in this process, and he can employ all the more capital in buying and selling, the greater the unpaid labour of his clerks. … Their unpaid labour, even though it does not create surplus-value, does create his ability to appropriate surplus-value, which, as far as this capital is concerned, gives exactly the same result; i.e. it is its source of profit. Otherwise the business of commerce could never be conducted in the capitalist manner, or on a large scale. Just as the unpaid labour of the worker creates surplus-value for productive capital directly, so also does the unpaid labour of the commercial employee create a share in that surplus-value for commercial capital. (C3, 407–8)

The greater the rate of exploitation by commercial capital, the greater the share of surplus-value it can appropriate from industrial capital.

But there is a residual difficulty: How to account for the variable capital laid out for the purchase of labor-power by the commercial capitalist? Should it be included in the total variable capital employed by the total capital even though it is not surplus-value producing? Is it productive or unproductive labor? Marx concedes that there is still a lot to do to investigate this topic, and attempts to do so with his usual meticulous investigations, which I do not intend to repeat here. His tentative conclusion is that

> what the merchant buys with [his variable capital] is merely commercial labour, i.e. labour needed for the functions of capital circulation, C-M and M-C. But commercial labour is the labour that is always necessary for a capital to function as commercial capital, for it to mediate

> the transformation of commodities into money and money into commodities. It is labour that realizes value but does not create any. And only in so far as a capital performs these functions [does this capital] take part in settling the general rate of profit, by drawing its dividends from the total profit. (C3, 411–12)

The upshot is that the wages of the commercial laborer do not

> stand in any necessary relationship to the amount of profit that he helps the capitalist realize. What he costs the capitalist and what he brings in for him are different quantities. What he brings in is a function not of any direct creation of surplus-value but of his assistance in reducing the cost of realizing surplus-value, in so far as he performs labour (part of it unpaid). (C3, 414)

This emphasis upon the imperative to reduce costs puts fierce pressure on the efficiency, forms of organization, wage rates, and rates of exploitation associated with commercial capital.

Generally speaking, Marx opines, "the commercial worker proper belongs to the better paid class of wage-labourer; he is one of those whose labour is skilled labour above average labour. His wage, however, has a tendency to fall … Firstly, because the division of labour within the commercial office means that only a one-sided development of ability need be produced" and, "Secondly, because basic skills, knowledge of commerce and languages, etc., are produced ever more quickly, easily, generally and cheaply, the more the capitalist mode of production adapts teaching methods, etc., to practical purposes. The general extension of popular education permits this variety of labour to be recruited from classes which were formerly excluded from it and were accustomed to a lower standard of living. … With few exceptions, therefore, the labour-power of these people is devalued with the advance of capitalist production." (C3, 415)

What has subsequently happened to this class of laborers, and what its current status is, clearly require detailed investigation. Its condition has plainly changed since Marx's day.

Nevertheless, it is always crucial to realize—and this is the important point —that "the increase in this labour is always an effect of the increase of surplus-value, and never a cause of it" (C3, 415).

ON CHAPTER 18 OF VOLUME III: THE TURNOVER OF COMMERCIAL CAPITAL

"The merchant buys, transforming his money into commodities, then sells, transforming the same commodities again into money, and so on in constant repetition." The merchant, in short, engages in two sets of metamorphoses —M-C and C-M—but conducts those operations in the sphere of circulation alone. It then follows that the speed of turnover is, for the commercial capitalist, of the essence: "Just as the same shilling circulating ten times buys ten times its value in commodities, so the same money capital belonging to the merchant … realizes a total commodity capital of ten times its value." The only difference is that "the same money capital, irrespective of the pieces of money of which it is composed, repeatedly buys and sells commodity capital to the amount of its value and hence repeatedly returns to the same owner as $M + \Delta M$" (C3, 418).

There are, however, limits and barriers to this turnover process:

> Now commercial capital certainly facilitates the turnover of productive capital; but it only does this in so far as it cuts down the latter’s circulation time. It has no direct effect on the production time, which also forms a barrier to the turnover time of industrial capital. This is the first limit to the turnover of commercial capital. Secondly, however … this turnover is decisively restricted by the speed and volume of the total individual consumption. (C3, 418)

The implications of this last point are largely ignored in what follows, presumably because consumption, for Marx, is a “singularity” and, as he argues in the *Grundrisse*, outside of the purview of political economy (I can think of no other reason). But, historically, it has been very much the role of the commercial capitalist to stimulate consumer desires, titillate the public with the wares the industrial capitalist might have to offer, and ensure, as far as possible, that potential customers have the money (usually credit) at their disposal to absorb the product speedily and keep the consumption dynamic expanding at a pace consistent with the endless accumulation sought by industrial capital. But Marx characterizes this barrier of consumer turnover time as “decisive.” I am surprised that more has not been made of this point.

Some of this is mentioned in the passages that follow. But the issues are largely technical, and arise out of the autonomy of commercial capital within the circulation sphere. “Given the tremendous elasticity of the reproduction process, which can always be driven beyond any given barriers, [the commercial capitalist] finds no barrier in production itself, or only a very elastic one.” Furthermore, “given the modern credit system, [commercial capital] has a large part of the society’s total money capital at its disposal, so that it can repeat its purchases before it has definitively sold what it has already bought.” It is therefore, by virtue of its autonomy, perpetually extending beyond what the market will bear so as to drive “this process beyond its own barriers” (i.e. beyond the “decisive restriction” set by the capacity of consumers to use up the product):

> Despite the autonomy it has acquired, the movement of commercial capital is never anything more than the movement of industrial capital within the circulation sphere. But by virtue of this autonomy, its movement is within certain limits independent of the reproduction process and its barriers. … This inner dependence in combination with external autonomy drives commercial capital to a point where its inner connection is forcibly re-established by way of a crisis. (C3, 419)

The language here is very important. Commercial capital is autonomous, and can drive the whole system well beyond its limits (in particular with the help of credit). But there is an inner connection with the laws of value and surplus-value production and realization, and it is this inner connection that is reasserted in commercial (and financial) crises. This is the general proposition with which Marx is working. We will see it very much in action in subsequent chapters dealing with the circulation of interest-bearing capital. We here begin to see why it might be that crises within capitalism so often appear in the first instance as commercial and financial crises.

In the paragraphs that follow, Marx adduces some evidence in support of this idea. He asserts, for example, that commercial crises typically originate in the wholesale trade and banking, rather than in the retail trade (I am not sure this is empirically true). The full employment of both capital and labor leads to overextension that can

> continue quite happily for a good while, stimulated by prospective demand, and in those branches of industry business proceeds very briskly, as far as both merchants and industrialists are concerned. The crisis occurs as soon as the returns of these merchants who sell far afield (or who have accumulated stocks at home) become so slow and sparse that the banks press for payment for commodities bought, or bills fall due before any resale takes place. And then we have the crash, putting a sudden end to the apparent prosperity. (C3, 420)

This actually shifts the problem to ask why the bankers suddenly demand payments (which we will examine later).

But I think it is clear what is happening in the text here: we are moving onto that terrain where the formation and role of commercial and financial crises are being tentatively broached in a context where there is a complicated relation between the autonomy of merchants' capital (commercial and money capital) and some inner connection with value and surplus-value production and realization.

One of the ways in which the inner connection is asserted is through the equalization of the rate of profit, which is, however, sensitive to the different turnover times of industrial and commercial capital. The turnover of commercial capital "can mediate the turnovers of various different industrial capitals" simultaneously or in succession (C3, 420). The turnover of industrial capital, on the other hand, is set by the periodicity of production and reproduction, in which circulation time also "forms a limit … which may have a more or less constricting effect on the formation of value and surplus-value through its effect on the scale of the production process … and hence on the formation of the general rate of profit" (C3, 424). Reducing the turnover time of industrial capital by reducing circulation time can raise the rate of profit. Commercial capital receives (in theory) the general rate of profit no matter what its turnover time. So, while commercial capital cannot increase its own rate of profit by accelerating its turnover time, it can affect the general rate of profit because less commercial capital is required for realization to be completed. "The absolute size of the commercial capital required stands in inverse proportion to the speed of its turnover." Furthermore, "circumstances that shorten the average turnover of commercial capital, such as the development of means of transport, for example, reduce in the same proportion the absolute magnitude of this commercial capital and hence raise the general rate of profit" (C3, 425).

There is, Marx argues, a "double effect" at work. Faster turnover is reducing the quantities of commercial capital required, while the general expansion of the scale and diversity of commodification is increasing the demand for commercial capital to deal with the rapidly increasing mass of commodities being produced. The result is “that not only does the mass of commercial capital grow, but so too does that of all the capital invested in circulation, e.g. in shipping, railways, telegraphs, etc.” (C3, 426). Marx also concedes that a great deal of “semi-functioning commercial capital also grows … with the increased ease of entry into the retail trade, with speculation and a surplus of unoccupied capital” (C3, 426). The role of surplus capital in *Capital* always intrigues me. It keeps on cropping up as an issue, but is rarely highlighted as a founda-tional problem (I am on record as saying it is).

Marx closes out this chapter with some acerbic observations on how fetish conceptions and beliefs can all too easily be constructed out of the complex intertwining of merchant and productive activities: “All superficial and distorted views of the overall reproduction process are derived from consideration of commercial capital and from the notions that its specific movements give rise to in the heads of the agents of circulation.” He even goes so far as to suggest that, “in the heads of the agents of capitalist production and circulation, ideas must necessarily form about the laws of production that diverge completely from [reality such that] the ideas of a merchant, a stock-jobber or a banker are necessarily quite upside-down.” Even competition, he asserts, “necessarily plays in their minds a completely upside-down role.”

“From the standpoint of commercial capital, therefore, turnover itself seems to determine price. On the other hand, while the speed of industrial capital’s turnover, in so far as it enables a given capital to exploit more or less labour, has a determining and delimiting effect on the mass of profit and hence on the general rate of profit as well, commercial capital is faced with the rate of profit as something external to it, and this rate’s inner connection with the formation of surplus-value is entirely obliterated.” This turns out to be a generic problem when we enter into the realm of distribution, and we will encounter this phenomenon again when dealing with the circulation of interest-bearing capital. All trace of connection to surplus-value production is obliterated on the surface of society, and this is the source of all manner of fetish beliefs.

The power of this world of appearance is redoubled by the fact that individual commercial capitalists can indeed gain extra profit in competition by accelerating their turnover in relation to the social average. “In such a case he may make a surplus profit, just as industrial capitalists make surplus profits if they produce under more favourable conditions than the average” (this is what the theory of relative surplus-value in Volume I presents). Furthermore, “If the conditions that enable him to have a quicker turnover can themselves be purchased, e.g. the location of his sales outlet, he may pay extra rent for this; i.e. a part of his surplus profit is transformed into ground-rent” (C3, 430). This takes us into the realm of relations of commercial capital to land rent, and the ways this relation gets structured in urban settings (just look at the stores on Madison Avenue or Oxford Street and you will get Marx's meaning here).

Chapter 19 is a transitional chapter that leads into Part 5, dealing with money and finance capital and the credit system. It largely focuses on "the purely technical movements that money undergoes in the circulation process of industrial capital," but goes on to make clear that "these movements, having acquired autonomy as the function of a special capital which practises them, and them alone, as its specific operations, transform this capital into money-dealing capital." As a result,

> a definite part of the total capital now separates off and becomes autonomous in the form of money capital, its capitalist function consisting exclusively in that it performs these operations for the entire class of industrial and commercial capitalists. … The movements of this money capital are thus again simply movements of a now independent part of the industrial capital in the course of its reproduction process. (C3, 431)

The language of "autonomy" and "independence" of this form of capital is crucially important, and has all manner of implications for the analysis that later follows. Since the most important theses in this chapter are, however, elaborated upon later in the context of Marx's studies of money capital and finance, I shall not consider them further here.

CHAPTER FIVE

Interest, Credit and Finance (Chapters 21–26 of Volume III)

GENERAL REMARKS

I begin with an overview of Marx's argument in these first few chapters on money capital because, as is often the case with Marx, it is difficult to see the wood for the trees. The overall flow of argument is in fact very interesting, and the links that bind these chapters together are quite strong. I must first remind you, however, that the text we have was painstakingly reconstructed by Engels from Marx's manuscripts. While most would agree that his was a stirring effort to be faithful to Marx's intent, subsequent studies of the original manuscripts have suggested that not all of Engels's choices might have been right. It was Engels, for example, who created the chapter headings out of a continuous manuscript. So it is hardly surprising that the links between the chapters are so strong. You will also notice that several long passages have been inserted by Engels himself in an effort to complete, correct or update Marx's own work. I will not dwell upon these problems here. I shall proceed as if the text before us is an accurate if incomplete sketch of Marx's views.

Marx begins by observing that there is something more to money in its role as capital than we have hitherto appreciated. Possession of money opens the way to (and is a necessary precondition for) the production of surplus-value and, consequently, the production of capital. Money capital (defined as money used to produce surplus-value) can consequently take on commodity form. It has both an exchange-value (a price) and a use-value. Its use-value is that it facilitates the production of surplus-value. Its exchange-value (price) is interest. This is a very different reading from that set out in Volume II, where Marx held that money as capital can only do as money does, i.e. be used for buying and selling. This conceptual shift is significant. I don't think it is about Marx just changing his mind or being inconsistent. Nor is it one of those examples of how relational meanings change as the context of the study unfolds. So what is going on here?

It is always wise, I think, when confronted with questions of this kind to examine the overall movement of Marx's argument. The significant clue in these chapters is Marx's explicit resurrection of the concept of fetishism, which has a vital place in the very first chapter of Volume I. The real foundations of capital (i.e. surplus-value production), he argued there, lie buried under surface appearances that are real but misleading. We really do go into a marketplace and use money to buy commodities (including labor-power). The problem is that these market relations mask the sociality and sensuality of the labor congealed in the production of commodities and the whole process that brought the commodities to market. Marx's project is to get behind these surface appearances.

So why does Marx return to the fetish nature of surface appearances at this point in the third volume of *Capital*?[1] Nowhere else in *Capital* does he do this so explicitly. Here he proclaims that "the fetish character of capital and the representation of this capital fetish is now complete" (C3, 516). He almost sounds gleeful and triumphalist about it. Interest-bearing money capital is, he proclaims, "the capital mystification in the most flagrant form."

I attach great significance to these remarks. It seems to me as if Marx, having defined the fetish at the outset as an external, objective and real barrier to true understanding, can now return to its very heart with a deep internal and subjective understanding of its destructive and potentially violent powers. We can, in short, now hope to get inside the head of the Wall Street speculator. But who among us can truly claim that we are immune to the fetish siren of the pure lust for money and to its seemingly limitless powers of endless accumulation at a compounding rate? Can we now hope to understand what has entered our own heads too?

To put it more technically, money is portrayed in Volume I as the consummate fetish (it simultaneously represents and hides the sociality of labor). How money circulates as capital is the subject of investigation in Volume II. Here, in Volume III, the circulation of interest-bearing capital reappears as the consummate fetish form of capital's circulation. But we should now understand how it is that money capital appears to have the magical and occult power to create ever more money in and by itself. This power has real effects. It "distorts" and "mystifies" (these are the words that Marx favors) the laws of motion of capital with dizzying and dire effects. Capital is therefore perpetually in danger of falling victim to its own fetish forms, and the false and fictitious understandings that flow therefrom. So how does Marx put flesh upon the bones of this argument?

The price (exchange-value) of the money capital commodity is called interest, and the circuit of money capital now appears as the circulation of interest-bearing money capital. There is, however, no "natural rate of interest" of the sort that bourgeois theory proposed. Recall that Marx viewed "natural" price (the price of commodities when supply and demand are in equilibrium in the market) as an approximation to value. But in this case a "natural price" cannot exist.

So what determines the rate of interest, given that there is no inherent value to money capital as a commodity, or any "natural" rate of interest? It is set in the first instance, Marx argues, by the supply and demand for money capital. But, so far throughout *Capital*, Marx has held that supply and demand, being "particularities," explain nothing when they are in equilibrium. There is no "natural" point of equilibrium here. To believe so would be to accept the truth of a tautological proposition: that a value can be put on value. The interest rate is also set, he says, through competition.

But the coercive laws of competition are also viewed as particularities, as the enforcers of inner laws of motion of capital that are not dictated by competition. Both supply and demand and competition have hitherto been dismissed as "particularities" (as the formulation given in the *Grundrisse* has it). Yet, at this point, they move center stage and explain everything. This is a huge conceptual shift.

We have here, I would like to suggest, a deep stress point in Marx's analysis. His reluctance (to the point of obsessive refusal) to deal in particularities in Volume II contrasts with the necessity of dealing with them here in order to understand the circulation of interest-bearing capital.

This then poses the question of the relation between these particularities and the general laws of motion of capital. It is in this context that the movement from the underlying reality examined in Volume II to the fetish of surface appearances in Volume III makes sense. We see why capital cannot survive without its fetish forms, and how those fetish forms distort and mystify the general laws of motion. But then, as some bourgeois critics have noted, if capitalism actually works on the basis of its forms of appearance, then why not simply describe these forms and forget all this complicated stuff about underlying realities, value theory, and the like? Marx's answer to that would presumably be that the violent contradictions exhibited in the surface movement can only be both anticipated and understood through a study of the underlying dynamics that both produce the fetish forms and underpin the fetish interventions in capital's laws of motion. Our objective in reading these chapters is therefore to uncover how these relations between underlying laws and forms of appearance actually work.

Marx treats of interest as both "autonomous and independent" (his words), but subsumed under the world of value and surplus-value production. What he means by "subsumed under" is what has to be established. Put another way, the interest rate and the circulation of interest-bearing capital can move in autonomous and independent ways because they are particularities determined by the vagaries of supply and demand and competition. Are there, to invoke the language of the introduction to the *Grundrisse*, ways in which these particularities return to affect the generality of production in determinate rather than merely contingent ways? If so, how do the general laws of motion of capital work when these particularities operate freely? Or are the particularities in some way beholden to the general laws of motion of capital?

This question becomes paramount because Marx clearly recognizes that the mass of money capital that comes together on the money market can and does act as "the common capital of the class," (C3, 490). It was in this form that it produced the huge financial and commercial disruptions of 1847–48 and 1857, in much the same way as the crisis of 2007–09 has shaken capital to its roots in our own times. If the circulation of interest-bearing capital functions as the "common capital of the class" then how can we possibly exclude it from any specification of the general laws of motion of capital? I pose that question as starkly as I can because whatever answer is given has huge consequences for how we theorize crisis formation under capitalism in general, and how we might use Marx's insights to approach the analysis of recent events in particular.

The first step is to examine how the circulation of interest-bearing capital acquires its autonomy and independence vis-à-vis the surplus-value (profit) generated through the circulation of industrial capital. Marx begins by distinguishing between money capitalists (those who hold money power) and industrial capitalists (those who organize the production of surplus-value). The rate of interest is fixed by competition between these two class factions. This puts the power relation between money capitalists and industrial capitalists into a central position, historically if not theoretically.

The history of this relation is sometimes interpreted teleologically—finance capital has inevitably moved into an increasingly dominant position vis-à-vis industrial capital since 1980 or so, and this produces a different kind of capitalism—finance capital—one that has different laws of motion to those defined when industrial capital was dominant (as was supposedly the case in Marx's time). Marx does not generally make this argument (though there are passages that make it seem so). I would not make this argument either. But there is no question that the balance of forces between these two class factions (as well as between them and the other major class factions, such as landlords and merchants) has never been stable, and that shifting hegemonies have certainly occurred. In the work of Giovanni Arrighi, for example, the very plausible argument is constructed that hegemonic shifts in the global economy (for example, from Britain to the US in the first half of the twentieth century) were preceded by phases of financialization (of the sort that Hilferding, Hobson and Lenin described in the early 1900s).[2] The undoubted wave of financialization that has occurred since the 1970s would then seem to presage another hegemonic shift (from the US to East Asia?). Understanding capitalism's history, therefore, requires that we come to terms with the balance of forces actually existing between these different class factions in different times and places, and the consequences that flow from competition between them.

But Marx goes further. What initially appears as a relation between class factions is actually internalized within the persona of the individual capitalist. All capitalists embrace two very distinctive roles. Industrial capitalists must always hold some of their capital in money form. They always have the option, therefore, to use their money to produce more surplus-value (and profit) through the expansion of production, or simply to lend it to someone else in return for interest. The logic of this decision holds out enticing possibilities to the individual capitalist. What would you rather do? Go through all the trouble of actually producing surplus-value (dealing with pesky workers, unreliable machinery or fickle markets), or just lend the money away to earn interest and go and live in the Bahamas on the proceeds? The ambition of many industrial capitalists in Britain, Marx records, was often to engage with production up to the point where it allowed them to become rentiers or financiers, and to retire to a country estate and live comfortably off the rents. But if everyone becomes a rentier trying to live off interest or rent and no one produces surplus-value, Marx observes, then the interest rate would fall to zero, while the potential profit on reinvesting in production would soar to untold heights (C3, 501). We here encounter at least one point where the circulation of interest-bearing capital has to be subservient and submissive to surplus-value production.

This immediately leads to another question: Is there an equilibrium of some sort between the profit rate on industrial capital and the interest rate on money capital? Does interest join profit on commercial capital in the equalization of the profit rate? In the case of commercial capital, there is a metamorphosis (an actual transaction) in which capital in commodity form is realized as money. But interest is very different, because it is a relation of money to money. There is no metamorphosis involved at all. The problem is also that money, as Marx insisted in Volume I (C1, 253), can be accumulated without limit. Interest-bearing capital, in short, seems to have the magical (fetish) power to grow at a compound rate (it is the goose that seems to have the power to lay its own golden eggs, as Marx put it in Volume I). I put money in a savings account and it grows as if by magic. If money can be accumulated without limit, then so can money capital. This is the ultimate capitalist fetish fantasy.

The fantasy of compound growth forever takes hold—a fantasy that Marx highlights here by reference to this wonderful image from a tract published in 1772—"a shilling put out to 6 per cent compound interest at our Saviour's birth would have increased to a greater sum in gold than the whole solar system could hold" (C3, 520). This might explain, by the way, why we had to go off the gold standard and in the end relinquish any commodity base to paper money. The global money supply is then limitless, because it is just numbers. The Federal Reserve adds a trillion or so to the money supply at the drop of a hat (adding gold bullion would be a completely different proposition). While the idea of accumulation without limit "beggars all belief," it actually underpinned, Marx shows, the monetary and commercial explosions of 1847–48 and 1857–58. Lending and borrowing relations can spiral out of control to produce more and more money in credit form (the proliferation of paper IOUs). This necessarily lends a fictitious character to all credit markets.

It is here, therefore, that Marx invokes the very important but underdeveloped concept of fictitious capital. This gives a more tangible shape and form to the fetish of money capital. Its role is taken up through an incomplete and somewhat confusing examination of the commercial and financial crisis of 1847–48, all of which is mixed up with a critique of the ideas of someone called Overstone. I re-emphasize, once more, that fetishism, as defined in Volume I, is real and objective even as it disguises underlying value relations. The commodity really does exchange for money in the supermarket, but it does so in a way that conceals information about the labor (value) that went into its creation. Fictitious capital has to be understood in the same way. It is not the product of the delirious brain of some Wall Street banker high on cocaine. It is a real form of capital—money which has become a commodity with a price. While the price may be fictitious, we are all nevertheless forced to respond to it (be it in paying a mortgage, seeking interest on our savings, or borrowing to get a business off the ground).

We will take up the details later. But one neat illustration of its significance arises out of Marx's discussion of the distinction between loan capital (money lent for the expansion of production) and money extended to discount bills of exchange (which facilitates the realization of value in the market). Money capital intervenes in the circulation of industrial capital at two different points—at both the beginning and the conclusion of its circuit. The same financier can lend to developers to build tract housing and then ensure the market for that housing by lending to purchasers to buy that housing. Money capital thereby facilitates the supply of commodities as well as the demand. It is easy to see how this can become a closed circuit (an asset bubble in, say, the production and realization of housing). This is where the interest rate and the profit rate intersect and interact in powerfully important and all too often speculative ways.

The flow of argument in these chapters moves, therefore, from the technical aspects of circulation into far deeper territory in which all the vulnerabilities, fragilities and potential points of disruption identified in Volume II are made more and more tangible. Money capital and, even more importantly, money capitalists become autonomous and independent, but in some way subordinate to surplus-value production. The fetish character of the money form permits the creation of fantasies and fictions that periodically explode as uncontrollable and violent financial and commercial crises.

But the two roles of money and productive capitalist are internalized within the same person. How individual persons perceive their situation and behave therefore has great importance for understanding the dynamics of capital accumulation. Marx was not at all comfortable with exploring such "singularities" as the inner workings of the spirit of entre-preneurship, the psychology of expectations, and the role of trust in financial affairs, but there are enough occasional asides in these chapters to suggest that he could see how important such questions might be in any full analysis (the psychological aspects of this were later to be taken up much more explicitly, of course, by Keynes, and "expectations" have now become a whole field of investigation in bourgeois economics).

The analysis laid out here helps understand the financial and economic crisis of 2007–09 and the whole sequence of financial crises that preceded it. But we have to be careful not to misinterpret Marx's meaning or overextend what we might possibly learn from his incomplete and frequently foggy theorizing in relation to the crises of 1847–48 and 1857–58.

The philosophical pivot on which Marx's more technical argument rotates is, I think, laid out in the following commentary.

> If interest is spoken of as the price of money capital, this is an irrational form of price, in complete contradiction with the concept of the price of a commodity. Here, price is reduced to its purely abstract form, completely lacking in content, as simply a particular sum of money that is paid for something which somehow or other figures as a use-value; whereas, in its concept, price is the value of this use-value expressed in money. Interest, as the price of capital, is a completely irrational expression right from the start. Here, a commodity has a double value, firstly a value, and then a price that is different from this value, although price is the money expression of value. (C3, 475)

What we are looking at here is nothing less than the tautology of the value of value. We have actually encountered something close to this argument before. In Volume I Marx notes that

> things which in and for themselves are not commodities, things such as conscience, honor, etc., can be offered for sale by their holders, and thus acquire the form of commodities through their price. Hence a thing can, formally speaking, have a price without having a value. The expression of price is in this case imaginary, like certain quantities in mathematics. On the other hand, the imaginary price form may also conceal a real value relation or one derived from it, as for instance the price of uncultivated land, which is without value because no human labour is objectified in it. (C1, 197)

The key example Marx cites here is of the rent and price of uncultivated land. He could also have pointed out that the same is true of money. But, in the Volume I chapter on money, it would have undoubtedly confused matters beyond belief in a chapter that confuses quite enough as it is. Now we see that the imaginary price form applies to money itself. This poses some very deep and particular problems: what does this fetish "imaginary price form" conceal in relation to "real value relations"? And how should we think about its role?

And what, exactly, does Marx mean by "irrational and contradictory" here? He does not mean that interest is irrational and contradictory in the manner of a Sarah Palin speech or a Groucho Marx monologue. If it were so, then we would have to dismiss the category of interest as whimsical and arbitrary, throw up our hands in frustration, and just laugh or weep, depending on the implications. Marx is, I believe, making an analogy with number theory (hence the allusion to "certain quantities in mathematics" in the Volume I, quote above), in which the distinction between rational and irrational numbers is crucial. The irrational numbers are those that cannot be reduced to a fraction, and include such well-known examples as Ö2 and π (which, far from being whimsical or arbitrary, is one of the most important constants in mathematical theory, fixing the ratio of a circle's circumference to its diameter).

Marx is saying in effect that there is something incommensurable, and therefore irrational and contradictory, going on in the determination of the interest rate. When I consulted Wikipedia on irrational numbers (not being an expert at all on such matters), I found something interesting. Hippasus was a Greek Pythagorean who proved the existence of irrational numbers, and he showed that they are (just like the interest rate) “incommensurable, irrational and contradictory.” Since the Pythagorean position was broadly that all relations can be reduced to whole numbers and their ratios, this finding came as quite a shock to his fellow Pythagoreans. According to one legend, Hippasus made his discovery while out at sea, and was promptly thrown overboard. This is, of course, a typical reaction of academicians when someone disproves their favorite theory. Marx was long ago thrown overboard by the economists, who probably to this day would be horrified to hear that one of their most fundamental categories—the interest rate—is incommensurable, irrational and contradictory. But Marx is a strong swimmer in the tides of history. He keeps clambering back on board to remind everyone that this is indeed the case, as should be apparent to everyone who watched the events of 2007–09 in even the most cursory manner. Whether he will be thrown overboard yet again depends upon whether things settle down to a level satisfactory to the compound accumulation of capital and wealth without limit.

The irrationality and the contradictory character of interest on capital has to be appreciated in this number-theory sense. We can then more easily see how fictitious forms get produced and with what effects, in much the same way that constants like π can be used in engineering. Thinking this way puts us in a better position to understand both the practical and theoretical consequences that flow therefrom.

There are, however, two big and interrelated problems that then need to be addressed. First, to what degree does Marx’s insistence on the fetish character of the interest that underpins the category of fictitious capital, alter our understanding of how the general laws of motion of capital work? While the distributive category of commercial capital appears absorbable into the general theoretical framework that Marx has hitherto constructed, this does not appear to be the case with the effects of the circulation of interest-bearing capital in relation to the circulation of industrial capital. Nor, in my view, and in spite of Marx’s protestations to the contrary, is this the case with the other crucial “irrational number” in Marx’s theory—land rent. Like interest, this is a form of fictitious capital that is real and has real consequences. When you come to Manhattan to live, you can’t say that land rent and house prices are fictitious and that you are not going to pay anything for such a fiction. And most people who buy do so by paying interest on a mortgage—which is a form of fictitious capital.

So where does this leave us with respect to the forces that render the interest rate subservient and subordinate to the production of value and surplus-value? While it is clear that we cannot all live on interest or rents if no one produces value, and while there is also an overwhelming sense that in commercial and monetary crises such as those of 1847–48 and 1857–58, and in our case 2007–09, there is some kind of disciplinary power being exerted in which all the fantasies and fictions of speculative financial activity are brought back to the earth-liness of real production, there are also disturbing indications in Marx's analysis that the power relation between finance and production might also be the other way around.

One indication of this is found in a seemingly interesting sidebar to Marx's analysis. When an industrial capitalist accumulates capital in money form and puts it in a bank to earn interest (which happens, as we saw, in relation to fixed-capital circulation because the capitalist has to hoard money capital for replacement), then that interest appears as a pure rate of return on the property right of ownership. This passive return on the pure property right contrasts with the active creation of surplus-value through the organization and superintendence of production. Why, therefore, would the capitalist not pay someone wages of superintendence to take care of production while they live on the return to the pure property right? Out of this arises an interesting and crucial distinction within the history of capitalism between ownership on the one hand and superintendence and management on the other. With these general points in mind, let us take up the details of the text.

ON CHAPTER 21 OF VOLUME III: INTEREST-BEARING CAPITAL

Marx begins by reminding us that the general rate of profit is created out of the activities of both industrial and merchant (i.e. commercial) capital, and that the profit rate is equalized between them. "Whether capital is invested industrially in the sphere of production, or commercially in that of circulation, it yields the same annual average profit in proportion to its size" (C3, 459). Money, however, is different. It acquires

> an additional use-value, namely the ability to function as capital. Its use-value here consists precisely in the profit that it produces when transformed into capital. In this capacity of potential capital, as the means to the production of profit, it becomes a commodity, but a commodity of a special kind. Or what comes to the same thing, capital becomes a commodity. (C3, 459–60)

The holder of money possesses the means to make surplus-value, and can lend that money to another in return for interest. The money capitalist and the producer share the surplus-value that the money capital can be used to produce. Interest is "a particular name, a special title, for a part of the profit which the actually functioning capitalist has to pay the capital's proprietor, instead of pocketing it himself." Thus does Marx acknowledge the power of pure ownership of capital as a right to claim a rate of return.

Commodity and money movements and exchanges occur all the time within the industrial circuit of capital and, at each moment, there is the potential for either to be deployed to make more surplus-value. But, in these transactions, money can only do as money does (i.e. facilitate buying and selling), and the commodity can only do as the commodity does (be sold for either final or productive consumption). But "with interest-bearing capital," says Marx,

> the situation is different, and this is precisely what constitutes its specific character. The owner of money who wants to valorize this as interest-bearing capital parts with it to someone else, puts it into circulation, makes it into a commodity *as capital;* as capital not only for himself but also for others. It is not only capital for the person who alienates it, but it is made over to the other person as capital

—to be used as such right from the start, as value that possesses the use-value of being able to create surplus-value or profit. "It is neither paid out nor sold, but simply lent; alienated only on condition that it is, first, returned to its starting point after a definite period of time, and, second, is returned as realized capital, so that it has realized its use-value of producing surplus-value" (C3, 464–5).

A possible source of confusion may arise because capital can be lent out in either money or commodity form. Factories and machines can just as easily be lent in return for interest as money. Indeed, certain commodities, "by the nature of their use-value, can be lent only as fixed capital, such as houses, boats, machines, etc. But all loan capital, whatever form it might have and no matter how its repayment might be modified by its use-value, is always a special form of money capital" (C3, 465). Hereafter, Marx subsumes loans in commodity form under the general form of the circulation of interest-bearing capital. One very important implication does follow, however. If property (houses, for example) and land can also be lent out, then an inner relation is surely established between rent and the circulation of interest-bearing capital. Marx does not note this inner relation here, but I have pursued it elsewhere, and the more I pursue it the more this seems to me a vital but missing link in Marx's political economy.

Marx concludes this part of the argument a few pages later (after a diversion to subject Proudhon's views to critique):

> The lending capitalist parts with his capital, transfers it to the industrial capitalist, without receiving an equivalent. But this is in no way an act of the actual cyclical process of capital; it simply introduces this circuit, which is to be effected by the industrial capitalist. This first change of place on the part of the money does not express any act of metamorphosis, neither purchase nor sale. Ownership is not surrendered, since no exchange takes place and no equivalent is received. (C3, 468–9)

After the industrial capitalist has used it to produce surplus-value, the money has to be returned to the lender. All of this is a matter of legal transactions.

> The initial act which transfers the capital from the lender to the borrower is a legal transaction that has nothing to do with the actual reproduction process of capital [i.e. the labor process], but simply introduces it. The repayment which transfers the capital that has flowed back from the borrower to the lender again is a second legal transaction, the complement of the first; the one introduces the real process, the other is a subsequent act after that is completed. The point of departure and the point of return, the lending-out of the capital and its recovery, thus appear as arbitrary movements mediated by legal transactions. (C3, 469)

So what, then, is the relation between these legal transactions and the underlying realities of surplus-value production?

> Capital as a special kind of commodity also has a kind of alienation peculiar to it. Here therefore the return does not appear as a consequence and result of a definite series of economic processes, but rather as a consequence of a special legal contract between buyer and seller. The period of the reflux depends on the course of the reproduction process; in the case of interest-bearing capital, its return as capital *seems* to depend simply on the contract between lender and borrower. And so the reflux of capital, in connection with this transaction, no longer appears as a result determined by the production process, but rather as if the capital lent out had never lost the form of money. Of course, these transactions are actually determined by the real refluxes. But this is not apparent in the transaction itself. (C3, 470)

In other words, the legal relations and contracts conceal a relation between the circulation of interest-bearing capital on the one hand and the production of surplus-value on the other. But the word "appear" recurs frequently in these sentences and, as I have often noted, that usually signals that something else is also going on that is not easily visible:

> In the real movement of capital, the return is a moment in the circulation process. Money is first transformed into means of production; the production process transforms it into a commodity; by the sale of the commodity it is transformed back into money, and in this form it returns to the hands of the capitalist who first advanced the capital in its money form. (C3, 470)

But all these intermediate steps are eliminated from view in the legal contract that specifies M-M' and nothing more. "The real cyclical movement of money as capital is the assumption behind the legal transaction by which the borrower of the money has to return it to the lender." Thus, Marx concludes, "lending is thus the appropriate form for its alienation *as capital*, instead of as money or commodity" (C3, 471).

The next step is to take up specifically the question of interest. The circulation process here considered has the form of M-M + ΔM, where ΔM is the interest, "or that part of the profit which does not remain in the hands of the functioning capitalist but falls rather to the money capitalist" (C3, 472). "With other commodities, the use-value is ultimately consumed, and in this way the substance of the commodity disappears, and with it its value. The commodity of capital, on the other hand, has the peculiar property that the consumption of its use-value not only maintains its value and use-value but in fact increases it." So the "use-value of the loaned money capital … appears as a capacity to represent and increase value." Again, "as distinct from an ordinary commodity, however, this use-value is itself a value, i.e. the excess of the value that results from the use of money as capital over its original magnitude. The profit is this use-value" (C3, 473).

This is a very important statement. In the same way that Marx argued in Volume I that, unlike other commodities, money never leaves circulation once it enters it ("circulation sweats money from every pore" was how he charmingly put it), so interest-bearing capital can continue circulating indefinitely. But we also see here how it can endlessly grow.

More specifically, "the use-value of money lent out is its capacity to function as capital and as such to produce the average rate of profit under average conditions. … The sum of value, the money, is given out without an equivalent"—again, a condition that marks this transaction off from other forms of commodity exchange—"and returned after a certain period of time. The lender remains the owner of this value throughout, even after it has been transferred from him to the borrower." This means that interest is, in effect, a rate of return to be attributed to pure ownership, as opposed to actual use. It is, however, "only by its use that it is valorized and realized as capital. But it is as *realized* capital that the borrower has to pay it back, i.e. as value plus surplus-value (interest); and the latter can only be a part of the profit he has realized. Only a part, and not the whole" (C3, 474). If it were the whole, then the industrial capitalist would have no incentive to produce.

This relation entails a relation "between two kinds of capitalist, the money capitalist and the industrial or commercial capitalist." So here, then, we have the introduction of the idea of different factions of capital in relation to each other, but each with distinctive concerns, interests and needs. What then follows is a disquisition on the irrationality and contradictory qualities of the price of money as already outlined above, concluding that, in spite of everything, "a price that is qualitatively distinct from value is an absurd contradiction" (C3, 476).

What, then, are the inner connections at work here that tie the interest rate to value production? Marx goes back to the beginning of his analysis:

> Money or a commodity is already potential capital in itself, just as labour-power is potential capital. For (1) money can be turned into elements of production, and is already, just as it is, simply an abstract expression of these elements, their existence as value; (2) the material elements of wealth possess the property of being already potential capital, because their complementary antithesis, the thing that makes them capital—namely wage-labour—is present as soon as capitalist production is assumed.

For these reasons, "money, and likewise commodities, are in themselves latent, potential capital, i.e. can be sold as capital; in this form they give control of the labour of others, give a claim to the appropriation of others' labour, and are themselves self-valorizing value" (C3, 477). Then follows the real kicker:

> Capital further appears as a commodity in so far as the division of profit into interest and profit proper is governed by supply and demand, i.e. by competition, just like the market prices of commodities. But here the distinction is just as striking as the analogy. If supply and demand coincide, the market price of the commodity *corresponds to its price of production* [emphasis added; see below], i.e. its price is then governed by the inner laws of capitalist production, independent of competition, since fluctuations in supply and demand explain nothing but divergences between market prices and prices of production.

This is a familiar argument from Volume I—that supply and demand cease to explain anything when in equilibrium. This is even true with wages:

> If supply and demand coincide, their effect ceases, and wages are equal to the value of labour-power. It is different, though, with interest on money capital. Here competition does not determine the divergences from the law, for there *is* no law of distribution other than that dictated by competition; as we shall go on to see, there is no "natural" rate of interest. What is

called the natural rate of interest simply means the rate established by free competition. There are no “natural” limits to the interest rate. Where competition does not just determine divergences and fluctuations, so that in a situation where its reciprocally acting forces balance, all determination ceases, what is to be determined is something lawless and arbitrary. (C3, 478)

This is a big statement: the dynamics of capital accumulation become lawless and arbitrary. The whole edifice for rules of engagement that Marx set up in the *Grundrisse*, and that he has hitherto deployed throughout *Capital* to explore the generality of the laws of motion of capital, here appears to be stretched to breaking point. Whether or not the whole edifice crumbles depends on what happens in the subsequent chapters. As Marx says: “more about this in the next chapter”!

What is clear is that the avoidance of particularities that restricts the analysis in Volume II is here abandoned. If the result is “lawless and arbitrary,” then what happens to the general laws of motion that have hitherto been Marx’s main focus of concern? We have a very paradoxical situation. Competition is throughout envisaged as the enforcer of the inner laws of motion of capital; the enforcement mechanism is here understood to be determinant in the circulation of interest-bearing capital in its role as the common capital of the class—but the enforcer is lawless and arbitrary.

This constitutes a clear break with the framework given in the *Grun-drisse*. Marx recognizes that he cannot accommodate the circulation of interest-bearing capital within the framework of assumptions that have hitherto guided his studies. While there may be ways to understand how and why this divergence occurs in the case of interest-bearing capital (as opposed to other aspects of distribution, such as rent and profit on merchants’ capital, that Marx believed he had successfully incorporated within the framework), I cannot help but think it must have been difficult and stressful for him to confront where this break might take him. On the one hand, the nervous energy on display in these chapters suggests a certain exhilaration at leaving the constraints of the framework behind, while the loss of control (the indeterminacy and the autonomization) threatens the theoretical edifice he has constructed. It is no wonder that, as Engels reports in his introduction, Marx’s health deteriorated markedly when writing these chapters. I sympathize, since it took me more than two years to write the two chapters on Marx’s views on money capital and finance in *The Limits to Capital*, and I became pretty demented in the process.

There is another point of stress hidden in these paragraphs. Marx uses the term “prices of production” rather than “values.” This change of language is significant, but we are not in a position to understand it here because it arose earlier in Volume III (chapters 9 and 10), out of an analysis of what happens when the profit rate is equalized through competition across industries operating with different value compositions. Briefly summarized, the effect of the equalization of the rate of profit is that commodities trade at prices of production formed by the value of constant and variable capital plus the value of the average rate of profit (c + v + p), rather than according to the formula earlier assumed which, was that commodity values were constituted as c + v + s. The result is that sectors with low value composition (high labor content) end up subsidizing sectors with high value composition (high constant capital content). We cannot go further into this here. While I do not think this has a huge impact upon what happens with the circulation of interest-bearing capital, it points to yet another foundational shift in Marx’s analysis.

So what happens when competition moves from being the mere enforcer of the inner laws of motion of capital to become an active determinant of the lawlessness of capital accumulation? In several of the outlines that Marx sketched out of what *Capital* would look like as a series of books, he recognized that a book on competition would be logically required to complete the analysis. The book was never written (though there is a draft chapter included at the end of Volume III on “the illusions created by competition”). Here we are seeing exactly why such a book might be, and still is, needed.

There are a couple of minor asides in this chapter that are worthy of some comment. Firstly, Marx early on subjects to critique Gilbart’s view on the “justice of transactions between agents of production” (C3, 460). This issue arises because the interest rate is a legal contract and not an exchange of commodities. In Marx’s view, justice is a “natural consequence” of “the relations of production.” While the “legal forms” appear as “voluntary actions of the participants, as the expressions of their common will and as contracts that can be enforced on the parties concerned by the power of the state,” the content of this justice “corresponds to the mode of production and is adequate to it.” So both slavery and cheating on the quality of commodities can be considered unjust from the standpoint of the capitalist mode of production, whereas wage-labor cannot.

Several times in *Capital*, Marx attacks the idea that there is some ideal, abstracted notion of justice outside of existing social relations. He does not entirely embrace the idea that Plato, in *The Dialogues*, attributes to Thrasymachus—that justice is that which the most powerful players in society dictate (a view that Plato endeavors to disprove in favor of some perfected ideal of justice); Marx resolutely refuses, however, to accept the Platonic universal ideal. Justice is embedded in the social relations of a given mode of production (the liberal theory of justice therefore derives from the rise of capital to dominance in social relations). The “just” rate of interest is that which is consistent with the continuous reproduction of capital. It is clearly distinguishable from usury. This should not be taken to mean that there is nothing contradictory in bourgeois conceptions of justice that might be played upon in the course of class struggles. But Marx rejects the idea that there is some Archimedean point from which some perfected version of justice and of ethics can be applied to judge the world. This is the major defect, he argues, in Proudhon’s reasoning.

The second aside is the direct critique of Proudhon's views on interest and credit. As I have noted elsewhere, Marx is not always fair to Proud-hon, but here I think he is quite right to point out that Proudhon's failure to understand the theory of surplus-value and its relation to the circulation of interest-bearing capital led Proudhon to suppose that some sort of free credit bank would mark the end of exploitation (C3, 467). For Marx, it is the exploitation of living labor in production that matters, and not the extraction of interest. Tinkering with the interest rate while ignoring the exploitation of living labor in production was, in Marx's view, ridiculous politics.

ON CHAPTER 22 OF VOLUME III:
DIVISION OF PROFIT AND THE RATE OF INTEREST

Marx recognizes that the rate of interest can fluctuate over the short term for all sorts of reasons. He abstracts from all these movements and the tendency to equalize the rate of interest on the world market in order to concentrate on "the way that interest acquires autonomy vis-à-vis profit" (C3, 480). He begins by assuming that there is "a fixed ratio between the total profit and the part of it paid to the money capitalist as interest" (C3, 481). This means that the average rate of profit ultimately determines the maximum limit of interest (C3, 482). If there is a tendency for the rate of profit to fall, as Marx often argues, then obviously the rate of interest must also tend to fall. But if the interest rate depends on conditions of supply and demand for money capital, then how does this vary over the industrial cycle? "If we consider the turnover cycles in which modern industry moves—inactivity, growing animation, prosperity, overproduction, crash, stagnation, inactivity, etc., cycles which it falls outside of our scope to analyze further—we find that a low level of interest generally corresponds to periods of prosperity or especially high profit, a rise of interest rate comes between prosperity and its collapse, while maximum interest up to extreme usury corresponds to a period of crisis." This is an empirical generalization, however, and not a theoretical statement. It also presumes no state intervention in the money supply of the sort that could drive the interest rate down to close to zero at the height of the crisis (as has been the case in the US since 2007). I say this because Marx is obviously struggling to get a handle on the supply and demand conditions for money capital as they fluctuate, and has no way to do it apart from empirical generalization of the moving relation between the rate of profit and the interest rate.

There are, he notes, some independent reasons (other than that given by the tendency of the profit rate to fall) for the rate of interest to fall. To begin with, there is a perpetual temptation for those who make money out of the production of surplus-value to retire, particularly as they age, simply to live off the interest of money capital and not be troubled by the uncertainties of production. Marx quotes George Ramsay's remark on "how much more numerous in proportion to the population is the class of *rentiers* … in

England! As the class of *rentiers* increases, so also does that of lenders of capital because they are one and the same." This tendency is exacerbated by "the development of the credit system, the ever growing control this gives industrialists and merchants over the monetary savings of all classes of society through the mediation of the bankers, as well as the progressive concentration of these savings on a mass scale, so that they can function as money capital." This "must also press down the rate of interest" (C3, 484). For the first time, Marx here addresses a crucial question: the role of the financial system in assembling the initial capital for circulation (promising, as always, "more on this later"). The role of the financial system in mobilizing the savings of all classes and deploying those savings as money capital has been of increasing importance throughout the history of capitalism.

The problem, however, is that "the prevailing average rate of interest in a country, as distinct from the constantly fluctuating market rate, cannot be determined by any law. There is no natural rate of interest, therefore, in the sense that economists speak of a natural rate of profit and a natural rate of wages" (C3, 484). It is, therefore, "competition as such that decides, [and consequently] the determination is inherently accidental, purely empirical, and only pedantry or fantasy can seek to present this accident as something necessary" (C3, 485). But the effects of competition are mitigated by the fact that "custom, legal tradition, etc. are just as much involved," while "how the two parties who have claims on this profit [the industrial capitalists and the lenders] actually share it between them is as it stands a purely empirical fact, pertaining to the realm of chance, just as respective shares in the common profit of a business partnership are distributed among its various members" (C3, 486). This is very different with the relation between wages and profit (and, Marx claims, with the relation between rent and profit): "With interest … the *qualitative distinction* proceeds from the *purely quantitative division* of the same piece of surplus-value," whereas, in the case of wages and rents, it is the other way round. The landlord delivers a tangible commodity—land—and the laborer delivers labor-power, but the money capitalist delivers only money capital, which is the representation of value and which contributes nothing tangible to production.

The general rate of profit is determined, of course, by the factors that determine the surplus-value (the mass of surplus-value, the mass of capital advanced, and the state of competition). This contrasts with interest which, as we have seen, is determined through supply and demand. But there are two factors

which favor the consolidations of the interest rate: (1) the historical pre-existence of interest-bearing capital and the existence of a general rate of interest handed down by tradition; (2) the far stronger direct influence that the world market exerts on the establishment of the interest rate, independently of the conditions of production in a country, as compared with the influence of the profit rate. (C3, 490)

Money, particularly in its credit form, is, as I remarked earlier, the "butterfly" form of capital that can flit around pretty much at will. Reports on interest rate movements on the stock markets are like "meteorological reports," yet there are convergences toward a generality of price on loan capital:

On the money market it is only lenders and borrowers who face one another. The commodity has the same form, money. All particular forms of capital, arising from its investments in particular spheres of production or circulation, are obliterated here. It exists in the undifferentiated, self-identical form of independent value, of money. Competition between particular spheres now ceases; they are all thrown together as borrowers of money, and capital confronts them all in a form still indifferent to the specific manner and mode of its application. Here capital really does emerge, in the pressure of its demand and supply, as *the common capital of the class*. (C3, 490)

This is a pretty startling idea. How on earth can we uncover the general laws of motion of capital without understanding how money capital works as the common capital of the class?

Money capital on the money market, moreover, really does possess the form in which it is distributed as a common element among these various spheres, among the capitalist class, quite irrespective of its particular application, according to the production requirements of each particular sphere. On top of this, with the development of large-scale industry money capital emerges more and more, in so far as it appears on the market, as not represented by the individual capitalist, the proprietor of this or that fraction of the mass of capital on the market, but rather as a concentrated and organized mass, placed under the control of the bankers as representative of the social capital in a quite different manner to real production. The result is that, as far as the form of demand goes, capital for loan is faced with the entire weight of a class, while as far as supply goes, it itself appears *en masse* as loan capital. (C3, 491)

For all of Marx's attempts to reduce the "arbitrary and lawless" movements of interest rates deriving from competition and supply and demand conditions to empirical regularities and customary habits, there is at the core of all of this a deep asymmetry within the functioning of the financial and monetary system: individual capitalists have to procure money capital for particular projects from bankers who control a mass of the universal equivalent (which mirrors the asymmetry of the movements M-C and C-M noted in Volume I).

ON CHAPTER 23 OF VOLUME III: INTEREST AND PROFIT OF ENTERPRISE

The capitalist class is divided between money capitalists and industrial capitalists, and competition between them creates the rate of interest (C3, 493). So "how does it happen," Marx asks, "that even the capitalist who simply uses his own capital, and no borrowed capital, classes part of his gross profit under the special category of interest and takes particular account of it as such? And how does it subsequently happen that all capital, whether borrowed or not, is distinguished as interest-bearing capital from itself in its function as capital bringing a net profit?" (C3, 495). The answer to these questions requires that we proceed from the assumption that the money capitalist and productive capitalist actually do come face to face, not just as legally separate persons but as persons who play quite different roles in the reproduction process, or in whose hands the same capital really does go through a double and completely different movement. The one simply lends the capital, the other applies it productively. (C3, 495)

What then emerges is the significance of the legal status of ownership of property. "The interest that he pays to the lender appears therefore as a part of the gross profit that accrues to *property in capital as such*" (C3, 497; emphasis added). Interest therefore

appears as the mere fruit of property in capital, of capital in itself, abstracted from the reproduction process of capital in so far as it does not "work", i.e. function; whereas profit of enterprise appears to him as the exclusive fruit of the functions he performs with the capital, as the fruit of capital's movement and process, as process that appears to him now as his own activity, in contrast to the non-activity and non-participation of the money capitalist in the production process.

Interest "accrues to the money capitalist, the lender, who is simply the owner of the capital and thus does represent mere property in capital before the production process and outside it." This "mutual ossification and autonomization" (note the theme of autonomy here) "of the two parts of the gross profit, as if they derived from two separate sources, must now be fixed for the entire capitalist class and the total capital" and this is so "irrespective of whether the capital applied by the active capitalist is borrowed or not, or whether or not the money capitalist who owns the capital uses it himself." In fact,

the person who applies the capital, even if he works with his own capital, breaks down into two persons, the mere owner of capital and its user; his capital itself, with respect to the categories of profit that it yields, breaks down into *owned* capital, capital *outside* the production process, which yields an interest, and capital *in* the production process, which yields profit of enterprise as capital in process. (C3, 498)

This then becomes a "qualitative division for the total capital and the capitalist class as a whole" (C3, 499).

The passivity of money capital as property commanding interest confronts the activism of the capitalist producer who uses the money capital to produce the surplus-value and receive profit of enterprise. This distinction not only applies to the whole capitalist class, but is internalized within the capitalist as person.

"Whether the industrial capitalist operates with his own capital or with borrowed capital in no way alters the fact that the class of money capitalists confronts him as a special kind of capitalist, money capital as an autonomous kind of capital, and interest as the separate form of surplus-value that corresponds to this specific capital" (C3, 500). But the individual capitalist "has the choice between lending his capital out as interest-bearing capital or valorizing it himself as productive capital, no matter whether it exists as money capital right at the start or has first to be transformed into money capital" (C3, 501). An entrepreneur can start up a business on borrowed capital, but once surplus-value is produced that entrepreneur can choose to lend out a part of that surplus-value to someone else rather than reinvest it.

But it would be "utter nonsense" to suppose that "all capital could be transformed into money capital." The idea that "capital could yield interest on the basis of the capitalist mode of production without functioning as productive capital, i.e. without creating surplus-value, of which interest is simply one part," is "still greater nonsense":

> If an inappropriately large number of capitalists sought to transform their capital into money capital, the result would be a tremendous devaluation of money capital and a tremendous fall in the rate of interest; many people would immediately find themselves in the position of being unable to live on their interest and thus compelled to turn themselves back into industrial capitalists. (C3, 501)

Here we see one clear point where the circulation of interest-bearing capital is subordinated to and dominated by surplus-value production.

So while there is no "natural rate of interest," there is some suggestion here that a balance of forces (or in the case of individuals, some balance of sentiments) would be necessary between the money capitalists on the one hand and the activities of surplus-value production on the other. Where that balance might lie we have at this point no means of knowing. (Is it purely conjunctural and accidental?) But that the consequence of chronic imbalance towards, say, money capital would be its devaluation is clearly signaled. Is this the kind of imbalance that is signaled by the very low rates of interest that have prevailed in Japan since 1990 and in the US since 2007?

Marx then examines the impact this has upon class relations. The antithesis and opposition between labor and capital occur at the point of production of surplus-value. But we are now looking at the relation between money capitalists and production capitalists. As a result, the

> antithesis to wage-labour is obliterated in the form of interest; for interest-bearing capital as such does not have wage-labour as its opposite but rather functioning capital; it is the capitalist actually functioning in the reproduction whom the lending capitalist directly confronts, and not the wage-labourer. … Interest-bearing capital is capital *as property* as against capital *as function*. But if capital does not function, it does not exploit workers and does not come into opposition with labour. (C3, 503)

The importance of this idea for thinking through the dynamics of class struggles cannot be overemphasized. Whereas the lines of opposition and struggle between workers and functioning capitalists are clear both in the labor process and in the labor market, the relation between workers and money capital as property is far more abstract and opaque. Worker mobilization against the power of money capital and its mode of circulation is much more problematic. Small businesses are much more likely to oppose the power of banks and financial institutions than are workers. Such struggles are hard to incorporate into the usual interpretations of class struggle. Historically, struggles against the powers of money capitalists (and against rentiers more generally) have tended to take (and continue to take) a populist form. The intuitive populism manifest in the "Occupy Wall Street" movement provides an excellent recent example.

But interest-bearing capital puts pressure on productive capital to produce surplus-value, and the higher the interest rate the more pressure it exerts. Producers can then say to workers that the high rate of exploitation they have to impose upon them reflects high rates of interest, and so divert attention from themselves to the greed and power of the bankers. The dynamics of class struggle can thus be displaced, and even distorted.

There is yet another, deeper complication. The internalization of the two different roles of money capitalist and production capitalist within the same person naturally leads the functioning capitalist to interpret his profit of enterprise

> as independent of his property in capital and rather as the result of his functions as a non-owner, as a *worker*. He inevitably gets the idea into his head that his profit of enterprise—very far from forming any antithesis with wage-labour and being only the unpaid labour of others—is rather itself a wage, "wages of superintendence of labour", a higher wage than that of the ordinary wage labourer (1) because it is complex labour, and (2) because he himself pays the wages. (C3, 503–4)

Once things are conceptualized in this way, however, the capitalist can choose between doing the work himself (and paying himself the wages of superintendence), or paying someone else to do that work. It then becomes all too easy to forget that interest and profit of enterprise are "simply parts of surplus-value, and that such a division [between wages in general and wages of superintendence] can in no way change its nature, its origin and its conditions of existence" (C3, 504). The remainder of the chapter takes up the ramifications of such a choice.

The capitalist's logic runs as follows. If "interest represents mere ownership of capital," then in relation to surplus-value production it "is a relationship between two capitalists, not between capitalist and worker." It thus

> gives the other part of profit the qualitative form of profit of enterprise, and subsequently of wages of superintendence. [The capitalist] obtains surplus-value not because he works as a *capitalist* but rather because, leaving aside his capacity as a capitalist, he *also* works. This part of surplus-value is therefore no longer surplus-value at all, but rather its opposite, the equivalent of labour performed. Since the estranged character of capital, its antithesis to labour, is shifted outside the actual process of exploitation, i.e. into interest-bearing capital, this process of exploitation itself appears as simply a labour process[!], in which the functioning capitalist simply performs different work from that of the workers. The labour of exploiting and the labour exploited are identical, both being labour.

All of this is mirrored, of course, "in the consciousness of the capitalist" (C3, 506).

In this way, "one part of the profit can be separated off as wages." In large-scale enterprises marked by a complicated, detailed division of labour, this wage can actually be paid to a manager. This "work of supervision and management necessarily arises" (note the necessity invoked here) "where the direct production process takes the form of a socially combined process," but the form of this association varies (C3, 507). Complicated cooperation relations in enterprises require a "conductor of the orchestra" (an image evoked in the chapter on cooperation in Volume I), and this form of productive labor can command a higher rate of remuneration. But the management of exploitation through domination and despotism also requires a governing authority. Marx here cites Aristotle to the effect that "domination in the economic domain as well as in the political, imposes on those in power the functions of dominating, so that, in the economic domain, they must know how to consume labour power." As soon as they become wealthy enough, "the master leaves the 'honor' of this drudgery to an overseer." The figure of the overseer had already been noted in the chapter on cooperation in Volume I. The question of the supervision of labor is, however, common to many modes of production. It is clear from Marx's examples that the management of slave labor was a vital precursor to capitalist management practices. Doctrines of racial inferiority played an important role in justifying the organization of the labor of distinctive "others." According to the "lawyer O'Connor" speaking in New York ("to thunderous applause"), the master ought indeed to command "just compensation for the labour and talent employed in governing [the slave] and rendering him useful to himself and to the society" (C3, 510). There is a considerable literature now that shows how the techniques of factory management that became common in Britain were pioneered on the West Indian sugar plantations through the management of large numbers of slave laborers.

"Mr Ure has already noted," Marx continues, "how it is not the industrial capitalists but rather the industrial managers who are 'the soul of our industrial system'." However this may be, it is sure that "capitalist production has itself brought it about that the work of supervision is readily available, quite independent of the ownership of capital. It has therefore become superfluous for this work of supervision to be performed by the capitalist" (C3, 511). The wages for this management "appear as completely separate from profit of enterprise both in the workers' cooperative factories and in capitalist joint-stock companies." But the practices in both of these cases, which Marx briefly describes, are obviously very different:

> In the case of the cooperative factory, the antithetical character of the supervisory work disappears, since the manager is paid by the workers instead of representing capital in opposition to them. Joint-stock companies in general (developed with the credit system) have the tendency to separate this function of managerial work more and more from the possession of capital, whether one's own or borrowed … (C3, 512)

This leads to an interesting conclusion:

> The confusion between profit of enterprise and the wages of supervision or management originally arose from the antithetical form that the surplus of profit over interest assumes in opposition to this interest. It was subsequently developed with the apologetic intention of presenting profit not as surplus-value, i.e. as unpaid labour, but rather as the wage that the

capitalist himself receives for the work he performs. The socialists then raised the demand that profit should be reduced in practice to what it claimed to be in theory, i.e. simply to the wages of supervision.

But the false theory came more under pressure as the wages of supervision tended to fall due to deskilling. With the formation of workers' cooperatives and with the rise of joint-stock companies, "the last pretext for confusing profit of enterprise with the wages of management was removed, and profit came to appear in practice what it undeniably was in theory, mere surplus-value" (C3, 514).

But there is a final and very prescient twist in this chapter: "On the basis of capitalist production, a new swindle with the wages of management develops in connection with joint-stock companies, in that, over and above the actual managing director, a number of governing and supervisory boards arise, for which management and supervision are in fact a mere pretext for the robbery of shareholders and their own enrichment."

The contemporary significance of all of this calls for some commentary. In Marx's time, the wages of superintendence would likely be far less than the profit of enterprise actually generated. But once this distinction is introduced, then the balance of power between owners and superintendents can shift around in all manner of ways. In the case of joint-stock companies the superintendents—the CEOs and the management—have increasingly succeeded in feathering their own nests at the expense of owners. In a very influential book published in the 1930s, Berle and Means pointed to the rise of a distinctive managerial stratum that was radically reshaping the dominant class relations of capitalism.[3] Marx (drawing upon Ure) anticipates the potential significance of the separation between ownership and management, and the likelihood of the emergence of a managerial class. He does not anticipate its full flowering, partly because the joint-stock company form was only just getting going. But he certainly sees the possibility of all manner of "swindling" in the new forms being generated under what subsequently came to be called "money-management capitalism."

In the case of cooperatives, which were a popular socialist form at the time (as in the case of Robert Owen), the question of managerial rewards was also being posed. Plainly, if all institutions and corporations operated today on the Mondragon model (described earlier), we would be living in a very different world. University presidents in the United States would be receiving no more than $150,000 per year, as opposed to well over $1 million, while adjunct teachers would be earning $50,000 instead of $20,000 (if they are lucky).

The conflict in our own times between owners and managers of corporations is plainly of great significance economically, socially and politically. The idea that capitalism is really about "other people's money" was jokingly understood even in the latter half of the nineteenth century, and this is what Marx is picking up on. But it is now a real issue, and is not at all helped by the recent habit of paying managers in stock options, which muddles the distinction between ownership and management. Marx's commentaries on all of this therefore have contemporary significance, as does, even more importantly, his fundamental position that the evolution of wages of superintendence as a form or remuneration for capital is a mask for the extraction of surplus-value from the laborer engaged in production.

ON CHAPTER 24 OF VOLUME III: FROM FETISHISM TO FICTITIOUS CAPITAL

"In interest-bearing capital, the capital relationship reaches its most superficial and fetishized form." So begins chapter 24, which is followed by a chapter on "Credit and Fictitious Capital," thus initiating a transition in Marx's thinking in which the ultimate fetish—credit money—takes command of the laws of motion of capital to produce fictitious forms that mystify, distort, and ultimately undermine the laws of motion of capital accumulation that Marx has hitherto been concerned to theorize. The language here is quite stunning.

> Capital appears as a mysterious and self-creating source of interest, of its own increase. The thing (money, commodity, value) is now already capital simply as a thing; the result of the overall reproduction process appears as a property devolving on a thing in itself. … In interest-bearing capital, therefore, this automatic fetish is elaborated into its pure form, self-valorizing value, money breeding money, and in its form it no longer bears any marks of its origin. The social relationship is consummated in the relationship of a thing, money, to itself.
>
> …
>
> There is still a further distortion. While interest is simply one part of the profit … it now appears conversely as if interest is the specific fruit of capital, the original thing, while profit, now transformed into the form of profit of enterprise, appears as a mere accessory and trimming added in the reproduction process. *The fetish character of capital and the representation of this capital fetish is now complete*. In M-M' we have the irrational form of capital, the misrepresentation and objectification of the relations of production, in its highest power; the interest-bearing form, the simple form of capital, in which it is taken as logically anterior to its own reproduction process; the ability of money or a commodity to valorize its own value independent of reproduction—the capital mystification in the most flagrant form. (C3, 516; emphasis added)

This mystification is a "godsend" for vulgar economists, because they can then "present capital as an independent source of wealth, of value creation," having an "autonomous existence." But the far grander question is: To what degree do capitalists become so locked into the distortions of the fetish forms that they act irrationally in relation to their own reproduction? If the coercive laws of competition and all the market signals they receive point them in the wrong direction, then how can capital, left to itself, do anything other than dig for itself an ever deeper hole—if not a grave?

This issue has been on the cards right throughout *Capital*. It first and most conspicuously cropped up in the chapter on "The Working Day," in Volume I, where competition drives capital to so increase the length of the working day as to endanger the lives of those that produce the surplus-value. In this instance, it was state intervention to regulate the length of the working day that saved the capitalists from this "Après moi, le déluge" politics. So it is interesting that Marx here speaks explicitly of how "the fetish character of capital and the representation of this capital fetish is now complete." It is almost as if Marx's project throughout *Capital* has been to reveal the fetishisms that rule the capitalist system, and that he has here brought this project to completion.

The consequences are legion. One of the most crucial is how this fetish form (which Marx goes over in several compelling passages—citing Goethe's "the money's body is now by love possessed") produces the fancy and fantasy of compound interest. A certain Dr. Price, we learn, "was simply dazzled by the incredible figures that arise from geometric progression," as was the commentator who fantasized in 1772 that investing "a shilling at 6 per cent compound interest at our Saviour's birth would … have increased to a greater sum in gold than the whole solar system could hold" (C3, 520). Given this magical capacity, all existing debts (both public and private) could easily be retired with only a token of initial saving! This led the *Economist* to observe, in 1851: "Capital, with compound interest on every portion of capital saved, is so all-engrossing that all the wealth in the world from which income is derived, has long ago become the interest of capital," adding, significantly, that "all rent is now the payment of interest on capital previously invested in the land." To this, Marx acidly remarks that this implies that "by its own inherent laws, all surplus labour that the human race can supply" now apparently belongs to "capital in its capacity as interest-bearing capital" (C3, 521).

Marx brings this "absurdity" of automatically compounding growth forever back to earth by pointing out that "the accumulation process of capital may be conceived as an accumulation of compound interest, in so far as the part of profit (surplus-value) that is transformed back into capital, i.e. which serves to absorb new labour, may be called interest." But there is another reality: "a large part of the existing capital is always being more or less devalued in the course of the reproduction process," partly because of the rising productivity of social labor (which devalues the products of past labor, and which may also produce a falling rate of profit as laid out in the earlier chapters in Volume III). Wherein lies the balance between creation and destruction? The truth of the matter is this:

> The identity of surplus-value and surplus labour sets a qualitative limit to the accumulation of capital: *the total working day*, the present development of the productive forces and population which limits the number of working days that can simultaneously be exploited. But if surplus-value is conceived in the irrational form of interest, the limit is only quantitative, and beggars all fantasy.

The power of the fetish is that a reality is built around this fantasy. Interest-bearing capital "displays the conception of the capital fetish in its consummate form, the idea that ascribes to the accumulated product of labour, in the fixed form of money … the power of producing surplus-value in geometric progression by way of an inherent secret quality, as a pure automaton” (C3, 523). Consequences then follow as capital seeks to chain the use of both past and present labor to this fetish conception and its concomitant commitment to never-ending compound growth. It is not hard to spot the potential contradiction in all of this. While interest-bearing capital circulating within a monetary system that has no limits can spiral onwards and upwards into the stratosphere of compounding asset and fictitious capital values, the quantitative limits of real surplus-value production are quickly left behind, only to assert their limiting power in the course of a crisis.

ON CHAPTER 25 OF VOLUME III: CREDIT AND FICTITIOUS CAPITAL

After the quite stunning revelations of chapter 24, the two following chapters come as a bit of a disappointment, particularly given the promise of the title of chapter 25 to unpack the mysteries of the category of fictitious capital. This results partly from Marx’s decision to refrain from any “detailed analysis of the credit system and the instruments it creates,” including the development of state credit. He confines himself to examining “commercial and bank credit,” because these are “necessary to characterize the capitalist mode of production in general.” In other words, he returns to the level of generality, to the exclusion of all else. The wild assertions of the previous chapter are constrained by an attempt at sober analysis.

The credit system “is expanded, generalized and elaborated” as trade in commodities increases with capitalist development. Money is increasingly used as “money of account,” as the practices of buying now and paying later become more common. Promises to pay can also circulate, and Marx lumps all such practices together under the heading of “bills of exchange.” Since many of these bills cancel each other out through the balancing of debts and claims, so they function as money even though no metallic or government paper money is involved (C3, 525).

Marx cites a banker, W. Leatham (I think approvingly—though it is hard to tell), who attempted to calculate the volume of such bills of exchange circulating in Britain. It was clear that the nominal value of these bills far exceeded the amount of gold on hand. Leatham wrote that the bills of exchange were not

> placed under any control, except by preventing the abundance of money, excessive and low rates of interest or discount, which create a part of them, and encourage their great and dangerous expansion. It is impossible to decide what part arises out of real bona fide transactions, such as actual bargain and sale, or what part is fictitious and mere accommodation paper, that is, where one bill of exchange is drawn to take up another running, in order to raise a fictitious capital, by creating so much currency. In times of abundance, and cheap money, this I know reaches an enormous amount. (C3, 526)

Strikingly, this is the only explicit mention of the category of fictitious capital in this chapter. It is only in chapter 29 that Marx takes up the category on his own account. But here he does examine some of the practices involved in this trade in paper IOUs through which property rights change hands without the aid of conventional moneys.

This trade defines a new and very specific economic role, that of the money dealer—or banker—middlemen who specialize not only in the discounting of bills of exchange, but also "in the management of interest-bearing capital" and the borrowing and lending of money. "The business of banking consists … in concentrating money capital for loan in large masses in the bank's hands, so that, instead of the individual lenders of money, it is the bankers as representative of all lenders of money who confront the industrial and commercial capitalists. They become the general managers of money capital"—which is, recall, the common capital of the capitalist class. "A bank represents on the one hand the centralization of money capital, of the lenders, and on the other hand the centralization of the borrowers. It makes its profit in general by borrowing at lower rates than those at which it lends." Marx briefly describes the multiple functions of the various types of banks, and concludes by noting that the bank in effect interposes its own cred-itworthiness in between all lenders and borrowers, and can also in some instances issue banknotes that are "nothing more than a bill on the banker, payable at any time to its possessor and given by the banker in place of private drafts." The banks that issue notes are usually "a peculiar mishmash between national banks and private banks and actually have the government's credit behind them, their notes being more or less legal tender" (C3, 529). While Marx does not dwell on the point, what we are in effect seeing here is a banking system and banking functions that arise out of the activities of commercial exchange, but that "mishmash" together private and state functions in peculiar combinations. It was left to Engels, however, to insert a number of instances where this had gone badly awry, helping to produce the financial and commercial crises of 1847–48 and 1857–58.

ON CHAPTER 26 OF VOLUME III: THE ACCUMULATION OF MONEY CAPITAL

This chapter is largely made up of lengthy quotes from other commentators, along with extensive quotation from the evidence given in the Report of the Parliamentary Committee on the Bank Acts (with the evidence from Overstone being the main focus). While Marx does insert some critical commentary here and there, it is hard to identify any systemic critique. It is not clear whether Marx fully accepts some of the views he presents or is merely copying passages out for later critical examination.

He starts, for example, with a long quote from Corbet which I find particularly interesting. The steady accumulation of wealth in England in money form poses a problem for Corbet:

> Next in urgency, perhaps, to the desire to acquire money, is the wish to part with it again for some species of investment that shall yield either interest or profit; for money itself, as money, yields neither. Unless, therefore, concurrently with this ceaseless influx of surplus capital, there is a gradual and sufficient extension of the field for its employment, we must be subject to periodical accumulations of money seeking investment, of more or less volume, according to the

movement of events. For a long series of years, the grand absorbent of the surplus wealth of England was our public debt … Enterprises which entail a large capital and create an opening from time to time for the excess of unemployed capital … are absolutely necessary, at least in our country, so as to the take care of the periodical accumulations of the superfluous wealth of society, which is unable to find room in the usual fields of application. (C3, 543)

Marx does not offer any commentary on this passage, either pro or con. But, at several points throughout *Capital*, what I call "the capital surplus disposal problem" does come into focus. I find it interesting that, in Corbet's account, the national debt, far from being the awful burden that it is so often presumed to be, is a welcome outlet, and that large-scale enterprises (for example, large public works, physical infrastructures, and urbanization projects) are also "absolutely necessary" if capital surpluses are to be absorbed. All of this fits with the general idea, of which I am personally rather fond, that the accumulation of wealth has to be paralleled by the accumulation of debt. Whether Marx would have come to that view explicitly I cannot tell. But he certainly does not reject it.

What we do know from this chapter is that Marx most certainly did disapprove of the so-called "currency principle," as advanced by Mr. Norman, then director of the Bank of England, and that he had nothing but contempt for the views of "the usurer logician" banker, Lord Over-stone. But since the substantive issues raised are taken up later in Marx's text, I will delay consideration of them until my next chapter.

CHAPTER SIX

Marx's Views on the Credit System (Chapters 27–37 of Volume III)

There is a rapid deterioration in the quality of Marx's text on the role of credit in relation to capital after chapter 28. As I have noted, it was after chapter 30 that Engels found that "the real difficulty" began:

> From here on it was not only the illustrative material that needed correct arrangement, but also a train of thought that was interrupted continuously by digressions, asides, etc., and later pursued further in other places, often simply in passing. There then followed, in the manuscript, a long section headed "The Confusion", consisting simply of extracts from the parliamentary reports on the crises of 1848 and 1857, in which the statements of some twenty-three businessmen and economic writers, particularly on the subjects of money and capital, the drain of gold, over-speculation, etc., were collected, with the occasional addition of brief humorous comments. (C3, 94–5)

After several attempts, Engels gave up on trying to reconstruct Marx's views on "the confusion," and confined his efforts simply to replicating the notes while emphasizing the occasional points of critical engagement.

I do not recommend any attempt at a close reading of chapters 30–35 on the first time through. But the challenge of trying to understand what "the confusion" is all about has to be addressed. Is Marx suggesting that bourgeois thought is confused and that his is not? If so, then he does a poor job at clarifying matters. Or does he mean that the contradictions run so deep with respect to the world of credit moneys as to produce damaging confusions and crises all around? Knowing Marx, he probably means both. Some commentary on this is surely called for. So I shall first offer my overview of what I think is going on before delving into individual chapters and commenting on the more relevant passages. I do so, I should make clear, without making any claim whatsoever to a definitive, let alone correct, reading.

THE GENERAL ARGUMENT

After sketching in the general role of credit in capitalist production in chapter 27, Marx devotes two chapters to considering the role of banks and bankers in providing liquidity (cash or banknotes) for either the production or realization of capital. The following three chapters, on money capital and real capital, focus mainly on what happens as fictitious capital takes on a life of its own, permitting all manner of speculations and inversions of power relations in ways that may have little to do with the actual production of surplus-value, even as the latter seems to exercise some sort of shadowy disciplinary power over the excesses within the financial system. The three technical chapters that follow are largely compiled from official reports, and it is hard to decipher Marx's own views, so I will not attempt to synthesize or interpret these materials here. The final chapter, on pre-capitalist relations, offers an interesting account of the history of credit as usury, and some provocative thoughts regarding political possibilities.

Some key threads run through these chapters. Marx clearly saw that profound consequences flowed from the consolidation of the credit system into the "common capital of the class," as already stated in chapter 22 and in his general introduction to merchant's capital. I cannot overemphasize the importance of this idea. It repositions the circulation of money capital as a kind of central nervous system guiding the capital flows that reproduce capital in general. It implies, furthermore, a socialization of capital that signals some radical change in its character. Joint-stock companies, for example, facilitate the emergence of collective and associated capitals, which, on the one hand, permit a vast extension in the scale, range and form of capitalist endeavors while, on the other hand, they open a path toward a world market in which associated labor and collective property rights might find an increasing place. Marx even thought joint-stock companies, because of their associative character, could become the basis for a transition to a noncapitalist mode of production. This seems today to be a quaint, if not astonishingly mistaken idea, but at the time there were some interesting reasons one might have thought of such possibilities.

The positive and negative possibilities inherent in the rise of the capitalist credit system were embodied, says Marx, in the person of the French banker Isaac Péreire, who had "the nicely mixed character of swindler and prophet" (C3, 573). So let me digress a little (as Marx does in chapter 36) on what this "character" is about.

The Péreire brothers—Isaac and Émile—were schooled in Saint-Simonian utopianism in France in the 1830s, and put some of those utopian ideas, particularly regarding the power of associated capitals, into practice during the Second Empire (1852–70). Saint-Simon (1760–1825), whose "genius and encyclopedic mind" Marx, according to Engels, much admired (C3, 740), sought to give advice to the King. He sent many epistles suggesting this or that way of improving collective life so as to avoid the violence of change typified by the French Revolution, the excesses of which Saint-Simon deemed abhorrent. He was probably one of the first thinkers to propose something like the European Union. Had anyone listened, two world wars might have been avoided. He proposed rationalized and representative forms of government that would legislate for the benefit of all classes under benevolent monarchical rule. He also emphasized the importance of bringing both capital and labor (which included artisans and working capitalist entrepreneurs) together to produce very large-scale (and to some degree planned) projects and public works that would contribute to everyone's well-being. For this to happen required that the small amounts of money capital wastefully dispersed in society be assembled in associated form.

Louis Napoleon, who proclaimed himself Emperor in 1852 after a coup d'état in 1851, was a fan of Saint-Simon's ideas. He was sometimes referred to as “Saint-Simon on horseback.” Louis looked to large-scale projects to mop up unemployed capital and labor after the crash and revolutionary movements of 1848. The Péreire brothers played an important role in this. They developed new credit institutions and assembled small amounts of capital into the associated forms that Saint-Simon had advocated, and thus came to dominate the world of Second Empire finance. Through their control over credit paper moneys, they became key participants in Haussmann’s large-scale mission to absorb surplus capital and labor by rebuilding and transforming Paris. They were active in the construction of apartment buildings and new department stores, while they monopolized public utilities (such as gas lighting) and new transport and communications structures within the city. But the boom of the 1850s and early 1860s, along with the legendary rivalry between the Péreires and the conservative banking house of Rothschild (the centerpiece of Zola’s novel, *Money)*, came to an end in the financial crash of 1867, which destroyed the Péreires’ speculative credit empire. It could well be that Marx had this rivalry in mind when he wrote:

The monetary system is essentially Catholic, the credit system essentially Protestant. “The Scots hate gold.” As paper, the monetary existence of commodities has a purely social existence. It is *faith* that brings salvation. Faith in money value as the immanent spirit of commodities, faith in the mode of production and its predestined disposition, faith in the individual agents of production as mere personifications of self-valorizing capital. But the credit system is no more emancipated from the monetary system as its basis than Protestantism is from the foundations of Catholicism. (C3, 727)

Rothschild (while Jewish) believed in the “catholicism” of gold as the monetary base, whereas the Péreires (also Jewish) put their faith in paper. When the crash came, the paper proved worthless while gold never lost its luster, and indeed glittered more tantalizingly than ever.

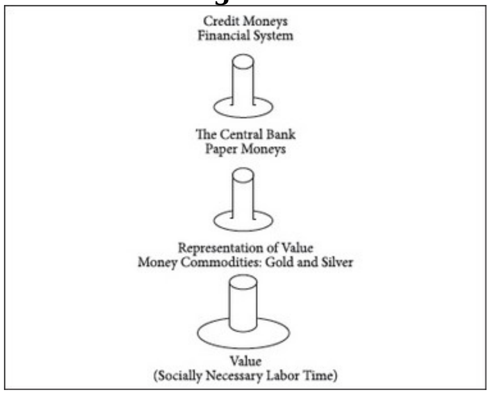
The tension between paper credit and commodity moneys (such as gold) is omnipresent in these chapters. Marx treats of it most explicitly fairly late on, in the midst of an otherwise rambling chapter on precious metal and the rate of exchange:

It is precisely the development of the credit and banking system which on the one hand seeks to press all money capital into the service of production, while on the other hand it reduces the metal reserve in a given phase of the cycle to a minimum, at which it can no longer perform the functions ascribed to it—it is this elaborate credit and banking system that makes the entire organism oversensitive.

The metal reserve functions “as the pivot of the entire credit system” by guaranteeing the convertibility of banknotes. The structure that emerges is that

the central bank is the pivot of the credit system. And the metal reserve is in turn the pivot of the bank. It is inevitable that the credit system should collapse into the monetary system. … A certain quantity of metal that is insignificant in comparison with production as a whole is the acknowledged pivot of the system. Hence, on top of the terrifying illustration of this pivotal character in crises, the beautiful theoretical dualism. (C3, 706)

Figure 4



While even the pretense of a metallic or commodity base to the global credit and money system was abandoned in the early 1970s (though so-called "gold bugs" who advocate a return to a gold standard still abound), the idea of a hierarchical structure of pivots (with the US dollar central) to the global financial system still seems an appropriate conception. It is even more true now than when Marx was alive, that

> credit, being … a social form of wealth, displaces money and usurps its position. It is the confidence in the social character of production that makes the money form of products appear as something merely evanescent and ideal, as a mere notion. But as soon as credit is shaken, and this is a regular and necessary phase in the cycle of modern industry, all real wealth is supposed to be actually and suddenly transformed into money, into gold and silver—a crazy demand, but one that necessarily grows out of the system itself. And the gold and silver that is supposed to satisfy these immense claims amounts in all to a few million in the vault of the bank. (C3, 708)

Earlier, Marx had provided an even richer account of these relations: "It is the foundation of capitalist production that money confronts commodities as an autonomous form of value, or that exchange-value must obtain an autonomous form in money." Commodity money as the universal equivalent is that autonomous form. What then happens when credit moneys and credit operations replace the money commodity? "In times of pressure, when credit contracts or dries up altogether, money suddenly confronts commodities absolutely as the only means of payment and the true existence of value. Hence the general devaluation of commodities and the difficulty or even impossibility of transforming them into money, i.e. into their own purely fantastic form." The allusion to the theory of fetishism is here unmistakable. Secondly, "credit money is itself only money in so far as it absolutely represents real money." When gold gets drained abroad, the convertibility of credit into gold

> becomes problematic. Hence we get forcible measures, putting up the rate of interest, etc. in order to guarantee … convertibility. … A devaluation of credit money (not to speak of a complete loss of its monetary character, which is in any case purely imaginary) would destroy all the existing relationships. The value of commodities is thus sacrificed to ensure the fantastic and autonomous existence of this value in money. … This is why many millions' worth of

commodities have to be sacrificed for a few millions in money. This is unavoidable in capitalist production, and forms one of its particular charms. … As long as the social character of labour appears as the monetary existence of the commodity and hence as a thing outside actual production, monetary crises, independent of real crises or as an intensification of them, are unavoidable. (C3, 648–9)

Is this what broadly happened in the 1930s depression? And is this the "unavoidability" that Keynesianism strove to correct?

While this tension between credit and "real" money had long been identifiable,

it is only with this system that the most striking and grotesque form of this absurd contradiction and paradox arises, because (1) in the capitalist system production for direct use-value, for the producer's own use, is most completely abolished, so that wealth exists only as a social process expressed as the entwinement of production and circulation; and (2) because with the development of the credit system, capitalist production constantly strives to overcome this metallic barrier which is both a material and an imaginary barrier to wealth and its movement, while time and again breaking its head on it. (C3, 707–8)

So the form of commodity moneys is an obstacle to expansion that is overcome or circumvented by credit moneys, but at some point the quality and reliability of credit moneys can be validated only by their exchangeability against commodity moneys.

One of the things that is difficult for all analysts (including Marx) to grapple with is the difference between wealth circulating in the financial and credit system on the one hand and supposedly "real" wealth production on the other. The relation between Wall Street and Main Street (or, as the British refer to it, between the City and the High Street) puzzles everyone. The current arguments over what to do about the euro provide a wonderful demonstration of the confusions that reign. What Marx suggests is that a monetary system based purely on commodity moneys acts as a barrier to further capital accumulation because there is only so much gold to be had. There is a clear and constant danger of what is now called "financial repression," which occurs when there is not enough money (of any sort) to circulate the expanding volume of commodities being produced as capital accumulation proceeds. Credit moneys therefore become not only necessary but crucial to the continuous expansion of capitalism. There is prima facie evidence to suggest (though to my knowledge it has never been empirically studied) that the history of capital accumulation has been paralleled by an accumulation of credit moneys and their concomitant debts. Only in this way can capital be accumulated "without limit." But if capital accumulation depends upon a parallel accumulation of credit moneys and credit instruments, then it necessarily produces a fetish monster of its own design, based on faith, confidence and expectation, that periodically lurches out of control. Credit moneys do not simply replace metallic money: they shift the monetary system and the conception of money on to a wholly new plane that embraces rather than punctures the fetishisms implicit in the credit system. Credit "froth," asset bubbles, and speculative booms and busts are the price that capital has to pay for temporarily liberating itself from money-commodity restraints.

These restraints reappear, however, during phases of crisis. The volume of credit obligations periodically goes way beyond that of real value production (however that may be measured); then commodity moneys (the representatives of value) bring the craziness of credit moneys back to earth in the course of a financial crisis. It is the discipline of real hard money that connects Wall Street to Main Street. This is the "catholicism" of the monetary base in action. The religious reference, by the way, reflects the Catholic Church's long-standing proscription of interest (a stance which continues under contemporary Islamic law, and which the Catholic Church abandoned only late in the nineteenth century). Martin Luther's famous distinction between the evils of usury and the legitimacy of a "fair" rate of interest was critical to the protestant movement's break with Rome.

What is so crucial about the credit system is its ability to burst through any and all monetary barriers to accumulation into a world of unlimited growth. Limitless possibilities exist for the creation of paper money (IOUs). This is what happened with the housing bubble after 2001 in the United States. Prices were going up, and everyone was cashing in on rising housing asset values—and the more they cashed in, the more the prices went up. Houses seemed like ATMs, with no limit placed on withdrawals until people realized that housing prices had become far, far out of line with incomes. The crash then followed. The same thing happened with the Japanese land boom of the 1980s. When the crash comes, the liquidity of the owners (command of real hard cash) is all that then matters. To the degree that this is found wanting, the foreclosures, losses and asset devaluations pile up and up.

So what is the general contemporary significance of this? The metallic base to the world's money system was formally abandoned in the early 1970s. This would seem to render Marx's thinking irrelevant. Did he not say that "money in the form of precious metal remains the foundation from which the credit system can *never* break free?" Gold still plays an important residual role, of course. When faith in paper and credit moneys gets badly shaken, gold prices surge, as they have over the past few years. A minority still feels that gold is the safest way to store real money values. Advertisements to invest in the safety of gold now abound. Maybe there is some truth to this (and we will all kick ourselves for not investing if the gold price triples in the next five years!). But there is little likelihood of a contemporary return to the gold standard. Conventional wisdom has it that this would be an unmitigated disaster for the continuous expansion of world trade, and plunge the world into permanent depression. The world economy rests on the plane of the credit economy, and cannot get off.

But, if the metallic "pivot" to the whole monetary system disappears, then what replaces it? The answer is the world's central banks in combination with state regulatory authorities (a state-finance nexus, as I call it). Together, these now form the "pivot" of the global money and credit system.

For Marx, this pivot was the Bank of England, and for us it is the Federal Reserve Bank of the United States (coupled with the US Treasury) and the world's other central banks and regulatory authorities, such as those of Britain, Japan and the European Union. The effect, however, is to replace a regulating mechanism that rests on real commodity production (of gold and silver) with a human institution. Human judgment is the only discipline exerted over credit creation. But will this human institution do the right thing? Critical focus must then shift to how central banks are structured and regulated, and how policies are formulated within the state apparatus to deal with the periodic excesses that occur within the credit system.

If the central bank and the regulatory authorities are badly structured, or if they operate on the basis of some erroneous economic theory (like monetarism), then policy can become deeply implicated in the processes of crisis formation and/or resolution. Central bank policy is believed by many to have played an important role in exacerbating the great depression of the 1930s (as did Winston Churchill's disastrous decision, when chancellor of the exchequer, to put Britain back on the gold standard in the 1920s). Some now claim that Bernanke's policies at the Federal Reserve are taking the US in entirely the wrong direction, and that Alan Greenspan's years at the helm of the Fed that looked so wonderful at the time played a role in the devastating crash of 2007–08. Certainly, the idea of regulatory failure is now widely canvassed as having affected recent events, and a better regulatory structure is touted by some as one important answer to the crisis in the United States, and even globally. But what are we to make of a European Central Bank that is mandated to keep inflation under control without any regard for unemployment, and that consequently appears paralyzed over the question of how to respond to the Greek debt crisis other than by promoting a debilitating and ever-deepening austerity? Human institutions are fallible, and subject to all manner of social forces and conflicting opinions. They create a very different regulatory mechanism to that which prevails when commodity moneys still operated as the pivot upon which central bank policy had to turn.

Even in Marx's time, the fallibility of the financial institutions and their policies played an important role. Marx cites the "mistaken" British Bank Act of 1844 as his prime example. That legislation divided the Bank of England into "an Issue Department and a Banking Department" (C3, 688). The former department held government securities and the metal reserve, and issued banknotes backed by these reserves. It exchanged its notes (which were far more convenient for trading purposes) for gold, and the notes promised in return "to pay the bearer" (on British banknotes that language of promising to pay the bearer can still be found) in gold if necessary. So, at any time, I could go to the bank with the notes and get the gold back. The notes were, in short, "convertible." (The suspension of convertibility was always then a political option, and had actually already occurred in Britain at one point during the Napoleonic Wars.) The other part of the bank discounted bills of exchange, passed checks, issued bonds and engaged in other conventional bank business. The legislation of 1844 created a firewall between the two parts of the bank. But in 1848 a crisis of confidence hit the latter banking part. There was a run on the bank as people lost trust in the discounted commercial paper and the bonds. The Banking Department ran out of gold while the Issue Department was flush with it:

> The separation of the Bank into two independent departments withdrew the directors' power of free disposal of their entire available means at decisive moments, so that situations could come about in which the Banking Department was faced with bankruptcy while the Issue Department still had several millions in gold. … The Bank Act of 1844 thus directly provokes the entire world of commerce into meeting the outbreak of crisis by putting aside a reserve stock of banknotes, thereby accelerating and intensifying the crisis. And by this artificial intensification of the demand for monetary accommodation … it drives the interest rate in crisis times up to a previously unheard-of level.

The parallels with what happened to the interest rate on Greek bonds in the crisis of 2011 is striking:

> Thus instead of abolishing crises, [the Bank of England] rather intensifies them to a point at which either the entire world of industry has to collapse, or else the Bank Act. On two occasions, 25 October 1847 and 12 November 1857, the crisis reached such a height; the government then freed the Bank from the restriction on its note issue, by suspending the Act of 1844, and this was sufficient on both occasions to curb the crisis. (C3, 689)

I do not read Marx as here saying that the Bank Act of 1844 was the cause of a crisis: but it did serve to intensify and accelerate a crisis that had arisen for other reasons (what they were, Marx does not say). But what kind of institutional arrangement is it that cannot respond adequately to the inevitability of periodic crises? This is, surely, the foundational question that was being asked of the European Central Bank during the debt crises that engulfed not only Greece, but also Ireland, Portugal, Spain and Italy during 2011. To depict the Bank Act of 1844 as "mistaken" is to infer that Marx believed a Bank Act possible that would not exacerbate crises. Human credit and banking institutions might be constituted that would be flexible enough to accommodate changing outputs and prices and, even more importantly, changing sentiments among investors. But were financial institutions possible that could contain the foundational contradictions that underpinned crisis formation? For Keynesians this was the holy grail of public policy. Marx did not think it was possible. "Ignorant and confused banking laws, such as those of 1844–5, may intensify the monetary crisis. But no bank legislation can abolish crises themselves" (C3, 621).

So what does it mean that the rootedness of credit in commodity moneys was entirely and formally abandoned from the early 1970s onwards (it had been informally bypassed by Keynesian policies after the 1930s)? Where Marx might stand on such contemporary shifts is hard to tell. He would certainly have lined up far more closely with the Keynesians than with the monetarists (he repeatedly criticizes the quantity theory of money as advanced by Ricardo). But he would never, I think, have believed that the crisis tendencies of capitalism could ever be contained, let alone overcome, by financial reforms. A careful reading of these chapters, I believe, supports that view. It is important to pose these questions here because, with the analysis of credit, Marx seems to take his concept of capital into a radically different dimension.

The evident, if periodic, craziness that arises within the financial system provokes the question: Why on earth does any society tolerate it? Marx's answer is very clear. Credit is absolutely essential if the expansionary thrust of perpetual capital accumulation is to be accommodated in monetary terms. The barrier constituted by the metallic base (and banknotes convertible into gold) has to be overcome, because the amount of gold and silver is both inadequate (because relatively inflexible in relation to fluctuations in commodity output) and in the end insufficient, because finite. Furthermore, the speculative character of all forms of capital investment (all of which presuppose that expansion in the form of more surplus-value will be produced at the end of the day) is ineluctably embedded in the circulation of interest-bearing money capital. And, as we have seen again and again throughout Volume II of *Capital*, the vagaries of different circulation times (of fixed capital in particular) can only be accommodated by way of an active credit system; the release of "dead capital" from the hoards that would otherwise be required plays a critical role in accelerating rather than retarding accumulation. The Péreire brothers represented all of this and more. They broke through the restrictions of the monetary base, to the horror of the conservative House of Rothschild, which controlled so much of the gold. But the crash of 1867 showed the weakness of the Péreires' position, and seemed therefore to prove Rothschild's (and Marx's?) belief in the ultimate power of gold. But the Péreires had helped successfully to absorb surpluses of capital and labor for fifteen years, and they had also left behind a radically transformed built environment that we can to this day still admire when we stroll along the Parisian boulevards, enjoy the parks, and still benefit from the water supply and sewage-disposal systems that serve the stately if standardized boulevard housing that still characterizes much of central Paris. The Péreires were the visionaries and the adventurers, the real entrepreneurial capitalists; they had faith and got things done, whereas the House of Rothschild dragged its feet.

This raises some interesting questions of faith, beliefs and psychology. Zola's novel *Money*, which centers on the rivalry between Saccard (the Péreires) and Gunderman (Rothschild) during the Second Empire, pivots on the clash of sentiments and the mentalities at work in financial speculation. Here is what Saccard says as he seeks to persuade his demure, respectable and thoughtful niece, Mme Caroline, of the justice of what she worries to be his shady speculative activities:

> "Look here," cried Saccard … "you will behold a complete resurrection over these depopulated plains, those deserted passes, which our railways will traverse—Yes! Fields will be cleared,

roads and canals built, new cities will spring from the soil, life will return as it returns to a sick body, when we stimulate the system by injecting new blood into exhausted veins. Yes! Money will work the miracles …

"You must understand that speculation, gambling, is the central mechanism, the heart itself, of a vast affair like ours. Yes, it attracts blood, takes it from every source in little streamlets, collects it, sends it back in rivers in all directions, and establishes an enormous circulation of money, which is the very life of great enterprises.

"Speculation—why it is the one inducement that we have to live, it is the eternal desire that compels us to live and struggle. Without speculation, my dear friend, there would be no business of any kind. … It is the same as in love. In love as in speculation there is much filth; in love also, people think only of their own gratification; yet without love there would be no life and the world would come to an end."[1]

It is in the context of such sentiments that it becomes much easier to understand what Marx meant when he referred to Isaac Péreire as having "the charming character of swindler and prophet."

The credit system appears on the surface to be lawless, chaotic and seemingly unbridled in its capacity for incubating speculative fevers and periodic crashes. This might be expected because interest is, in the language of the *Grundrisse*, a particularity, and it is regulated (if at all) by other particularities—notably, as we have seen, the supply of and demand for money capital, along with competition between different factions of capital. It is bound therefore to be accidental, lawless and conjunctural. It also depends upon faith. The psychology of it all, as Keynes later was at pains to emphasize (and which Zola so brilliantly depicts), becomes crucial. But for Marx, that question is posed in a rather different way. It boils down to asking how capitals and capitalists might function when they are locked into the inherent fetishisms of capital's surface forms. Once lost in the labyrinth of their own fetish constructs, how can capitalists possibly divine the root of their own dilemmas, let alone find a way out? This is, I suspect, the "confusion" that Marx wanted to expose. Its unraveling depends on a closer understanding of the category of fictitious capital, which I will take up shortly.

Marx also suggests that the tendency toward overproduction and the overaccumulation of capital—or what he later refers to as a "plethora" of capital—earlier identified as fundamental features of the general laws of motion of capital, act as triggers, or even as underlying causes, of the crises of confidence that periodically wrack the credit system. The "catholicism" of the monetary base, where real value is represented by the money commodities of gold and silver, is positioned by Marx as the ultimate reality check on speculative fevers. So, even when commodity moneys—the precious metals—are relieved from their mediating role as representations of value, it would surely be unlikely that Marx would agree to removing value itself from its central role as arbiter of the laws of motion of capital. The question of the relation between the immaterial but objective powers of value and the efflorescences of the credit system then moves into the foreground of theoretical concern.

While he does not come to definitive answers, Marx generates insights in these chapters upon which it might be possible to build. Chief among these is the role of fictitious and speculative forms of capital in shaping ("disrupting" might be a better word) the actual as opposed to general laws of motion of capital accumulation. But the relations between Wall Street and Main Street remain as opaque and controversial today as they were for Marx. Can Marx's intuitive ability to ask the right critical questions be helpful for further enquiry? This is the question it is useful to keep in mind as we delve a little more closely into the individual chapters. I will begin, however, with chapter 36, which takes up the prehistory of the credit system.

ON CHAPTER 36: THE PREHISTORY OF THE CREDIT SYSTEM

"Interest-bearing capital, or, to describe it in its archaic form, usurer's capital, belongs together with its twin brother, merchant's capital, to the antediluvian forms of capital which long precede the capitalist mode of production and are to be found in the most diverse socio-economic formations" (C3, 728). This formulation parallels that given elsewhere (for example, C1, 267). Notice that interest-bearing capital exists *before* the capitalist mode of production. This roundly contradicts the mistaken story that Marx occasionally repeats from Adam Smith, that there was a natural evolution from barter to a money economy, and finally to the credit economy (see C2, 195). Commodification, money and the buying and selling of labor-power all had to exist prior to the capitalist mode of production (as we saw in the first chapters of Volume II). But we now see that even money as interest-bearing capital had to preexist the rise of its own distinctive mode of production.

Surplus moneys (hoards) were always and necessarily to be found in precapitalist societies. But they only became capital when the hoarder "transform[ed] himself into a money lender." This requires that "money can be valorized as capital," that it can be lent out to appropriate the labor of others (C3, 729). "The development of usurer's capital is bound up with that of merchant's capital, and particularly with that of money-dealing capital." In ancient Rome these two forms of capital "were developed to their highest point." In the chapter on merchant's capital, Marx complained of "the confusion" of the economists who treated money and merchants' capital as branches of production (like agriculture, industry and other divisions of labor) rather than as categories embedded within circulation.

In precapitalist times, usurious lending took two forms—"firstly, usury by lending money to extravagant magnates, essentially to landed proprietors; secondly, usury by lending money to small producers who possess their own conditions of labour, including artisans, but particularly and especially peasants." Usury therefore "works on the one hand to undermine and destroy ancient and feudal wealth and ancient and feudal property." It also "undermines and ruins small peasant and petty-bourgeois production." In short, it completes the process of primitive accumulation described in Volume I (though Marx does not use that term here). In the process, "usurer's capital and mercantile wealth bring about the formation of a monetary wealth independent of landed property" (C3, 732–3). This echoes an argument in the *Communist Manifesto* where the superior mobility of money (the "butterfly" form of capital) and of commodities contributes to the domination of merchant capital over feudal land-based powers.

Whether, however, the resultant "concentration of large money capitals" leads to the establishment of "the capitalist mode of production in its place, depends entirely on the historical level of development and the conditions that this provides" (C3, 729). Usury may have helped undermine and destroy feudal and ancient modes of production, but it did not and could not in itself give rise to a capitalist mode of production. While usury concentrates money power, "usurer's capital impoverishes the mode of production, cripples the productive forces instead of developing them, and simultaneously perpetuates these lamentable conditions in which the social productivity of labour is not developed even at the cost of the worker himself, as it is in capitalist production" (C3, 731–2). It "does not change the mode of production, but clings on to it like a parasite and impoverishes it. It sucks it dry, emasculates it and forces reproduction to proceed under ever more pitiable conditions," even as "the mode of production remains unaltered" (C3, 731).

The destructive powers of usury provoked popular abhorrence and resistance on the part of many powerful institutions, such as the Catholic Church, which proscribed usury along with interest until the late nineteenth century. At the end of the chapter, Martin Luther's distinction is duly noted between usury and a "fair and just" rate of interest—one dimension of the break with Rome that constituted the Protestant Reformation.

Marx considers it

> quite absurd to compare the level of *this* interest [that of the usurer] in which *all* surplus-value save that which accrues to the state is appropriated, with the level of the modern interest rate, where interest, at least the normal interest, forms only one part of this surplus-value. This is to forget that the wage-labourer produces and yields to the capitalist who employs him profit, interest and ground-rent, in short the entire surplus-value.

Wage-laborers cannot therefore be debt-slaves in their role as producers under capitalism, though they can be so, Marx presciently notes, in their "capacity as consumer"(C3, 730). This is one of the rare occasions when Marx mentions the possibility of consumer debt on the part of the worker.

So "usury has a revolutionary effect on pre-capitalist modes of production only in so far as it destroys and dissolves the forms of ownership which provide a firm basis for the articulation of political life and whose constant reproduction in the same form is a necessity for that life," and "it is only where and when the other conditions for the capitalist mode of production are present that usury appears as one of the means of formation of this new mode of production, by ruining feudal lords and petty production on the one hand, and by centralizing the conditions of labour on the other" (C3, 732). Marx does not elaborate on what these "other conditions" might be, but his caginess in not designating any one condition (such as a revolution in productive forces or a radical transformation of mental conceptions of the world) suggests that he has in mind a variety of conditions rather than a "single-bullet" explanation of the transition from feudalism to capitalism, with usury playing a potentially important role.

"The credit system develops as a reaction against usury. But this should not be misconstrued, nor by any means taken in the sense of the ancient writers, the Fathers of the Church, Luther or the early socialists. It means neither more nor less than the subordination of interest-bearing capital to the conditions and requirements of the capitalist mode of production." What does this imply?

> Interest-bearing capital retains the form of usurer's capital vis-à-vis persons and classes, or in conditions where borrowing in the sense appropriate to the capitalist mode of production does not and cannot occur; where borrowing results from individual need, as at the pawnshop; where borrowing is for extravagant consumption; or where the producer is a non-capitalist producer, a small peasant, artisan, etc. … finally where the capitalist producer himself operates on so small a scale that his situation approaches that of those producers who work for themselves. (C3, 735)

We have to expect, in short, the continuation of usurious practices within capitalism, from the contemporary impoverished inner cities of the United States (where the pawnshop is a vital institution) to the ubiquitous moneylenders that live parasitically off Indian peasant populations.

What sets interest-bearing capital apart under capitalism are "the changed conditions under which it functions" and "the totally transformed figure of the borrower who confronts the money lender." That borrower is given credit "as a potential capitalist" even if the borrower is himself without means. "A man without wealth but with energy, determination, ability and business acumen can transform himself into a capitalist in this way." This is seen as something admirable by the economic apologists, when it "actually reinforces the rule of capital itself, widens its basis and enables it to recruit ever new forces from the lower strata of society. … The more a dominant class is able to absorb the best people from the dominated classes, the more solid and dangerous is its rule" (C3, 735–6). The "rags to riches" myth of capital thus serves as a powerful ideological justification for the perpetuation of this class relation at the same time as it serves to rejuvenate the capitalist class and preserve its energy and power. The lack of upward mobility (or its diminution, as in the United States in recent times) is therefore often viewed as dangerous to the perpetuation of the capitalist social order. To the degree that the modern credit system facilitates this mobility and flexibility, it was and is viewed in a positive light.

Marx then goes on to give a brief description of how usury was tamed, and how the circulation of interest-bearing capital was subordinated "to commercial and industrial capital, instead of vice versa" (C3, 738). He sees the pioneering role of the credit associations that formed in Venice and Genoa in the twelfth and fourteenth centuries as crucial, followed by the developments centered in Holland in the seventeenth century, where "commercial credit and dealing in money did develop along with trade and manufacture, and by the course of development itself, interest-bearing capital became subordinate to industrial and commercial capital."

This is fairly standard economic history by now, and those familiar with Giovanni Arrighi's account of the role of financialization in facilitating the shift in hegemony within global capitalism from the Italian city-states to Holland, Britain, and later the United States will notice the parallels. But there is one aspect of Marx's account that has particular significance. With respect to Venice and Genoa, he notes that

> the banks proper that were founded in these urban republics were at the same time institutions for public credit, from which the state received advances against taxes anticipated. It should not be forgotten that the merchants who formed these associations were themselves the most prominent people in those states and were equally interested in emancipating both their government and themselves from usury, while at the same time subordinating the state more securely to themselves.

This points to the crucial importance of what I call a "state-finance nexus" in the rise of capital as a distinctive mode of production. The underlying importance of this state-finance nexus in the history of capital has not been fully appreciated. There is now a substantial literature on the formation of what is called the "military-fiscal state" from the late medieval period onwards, which focuses on how state power merged with financialization in the perpetual wars of the late medieval period, and how this form of the state became an important agent in dictating those "conditions" to which Marx vaguely alludes as being necessary for the transition to a capitalist mode of production. To those who prefer a literary rendition of this process, I refer you to Hilary Mantel's historical novel, *Wolf Hall*, which is about the life of Thomas Cromwell, who became financial advisor to Henry VIII and played a crucial role in the merging of state and capital during that period. Of course, the novel is about all the court intrigues (everything from the marriage and execution of Anne Boleyn to the execution of Sir Thomas More); but, beneath the surface, we see the nature of the British state evolving in crucial ways. It is still the case that, at crucial moments, the pinnacle of the banking system (currently the Federal Reserve in the United States) must come together with that aspect of state power that deals in monetary questions (currently the US Treasury) to devise common policies to confront crisis conditions that threaten jointly both state and capital. Those common policies have to deal with both commercial and state debts, and the relations between them. It was no accident that, in the wake of the Lehman Brothers collapse, the two figures who dominated the media in the United States were Hank Paulson (secretary of the Treasury) and Ben Bernanke (chair of the Federal Reserve), while the President had little or nothing to say. This was the state-finance nexus in action, both exposed (it prefers to remain in the shadows) and personified. The crisis of the euro has been as deep as it has precisely because this state-finance nexus has yet to cohere and perform adequately within the European Union as a whole, even as the appointed "technocratic" governments that temporarily replaced the democratically elected governments of Italy and Greece actually signify the assertion of direct rule on the part of the state-finance nexus. The president of France and the German chancellor now seem to recognize the necessity (to a considerable degree in opposition to their own stated political beliefs) to modify or renegotiate the European charter (and revise the powers of the European Central Bank) to confront the same sorts of issues (perhaps even in the same way) that arose in Venice and Genoa so long ago.

Be that as it may,

> this violent struggle against usury, the demand for the subjection of interest-bearing capital to industrial capital, is simply the prelude to the organic creation that these conditions of capitalist production produce in the form of the modern banking system, which on the one hand robs usurer's capital of its monopoly, since it concentrates all dormant money reserves together and places them on the money market, while on the other hand restricting the monopoly of the precious metals themselves by creating credit money. (C3, 738)

In Britain, this transition was greeted by a "howl of rage" on the part of goldsmiths (who had a vested interest in preserving the monopoly power of the precious metals) and the pawnbrokers against the formation of the Bank of England, which was designed to consolidate the functioning of an open money market. The hegemonic demand at the time was for "the subjugation of interest-bearing capital and loanable means of production in general" as one of "the preconditions" for a fully functioning capitalist mode of production. Marx amusedly noted, "If we just look at the phrases used, the way they coincide with the banking and credit illusions of the Saint-Simonians is often astonishing, right down to the very words" (C3, 740). This leads him into some commentary on the "religion saint-simonienne" and the role of the Péreire brothers, which I have already elaborated upon.

> It must never be forgotten, however, firstly that money in the form of precious metal remains the foundation from which the credit system can *never* break free, by the very nature of the case. Secondly, that the credit system presupposes the monopoly possession of the social means of production (in the form of capital and landed property) on the part of private individuals and that it is itself on the one hand an immanent form of the capitalist mode of production and on the other hand a driving force of this development into its highest and last possible form. (C3, 741)

Marx evidently forgot the golden rule that one should "never say never," because we now have a monetary system without a metallic base. We might also view with some skepticism the teleological idea, promoted by Lenin a century ago, that finance capital is the "highest and last possible form" that a capitalist mode of production can assume. While historical phases undoubtedly exist in which finance capital becomes more prominent, and even hegemonic, I do not believe that the balance of forces between factions of capital is destined to evolve in one direction only.

But we may now have arrived at the point where the “immanent relation” between money and the state has become so tightly bound that it is impossible to imagine a state power that can regulate and control financialization from the outside. Evidence for this can be seen in the recent Dodd-Frank financial regulatory reform act in the United States, which was basically written by bankers and, to the degree that its implementation was left vague, is being undermined clause by clause largely according to the desires of the banking lobby. But if I am right about the long-lasting role of the state-finance nexus in the history of capitalism, then this “immanence” goes back to the origins of capital itself. Does this mean that the state is simply a tool of capital, or has the long-standing fusion of state and finance (and note it is finance and not capital in general) morphed into something radically different in recent years? Certainly, the overt power of the bondholders over state policies now seems greater than before. But I can also remember Harold Wilson, British Labour prime minister back in the 1960s, complaining about the power of the “gnomes of Zurich” to dictate his economic policy, even as he conceded to the demands of the financiers of the City of London against the interests of productive capital in Britain. There is a parallel with Bill Clinton’s famous frustrated exclamation as he sat down with his economic advisors before his first inauguration: “You mean to say my economic policy and my prospects for reelection depend on the views of a bunch of fucking bond traders?” To which the answer was a resounding “Yes!” We do not, I think, have a sufficiently sophisticated history of the intertwining powers of state and finance to tell whether we are now in a different situation or not, although we do know for sure that the problems of financial regulation and institutional reform are now international in scope, and beyond the power of any one state to dictate.

But Marx gives a peculiar twist to where this “immanent force” within the credit system might lead. The “social character of capital is mediated and completely realized only by the full development of the credit and banking system. … It thereby abolishes the private character of capital and thus inherently bears within it, though only inherently, the abolition of capital itself.” This is a pretty astonishing statement, but it will be repeated elsewhere, as we shall see. Banking and credit “also become the most powerful means for driving capitalist production beyond its own barriers and one of the most effective vehicles for crises and swindling” (C3, 742). So which direction will capital go? This is, of course, the question that underpins the characterization of Isaac Péreire as both “swindler and prophet.”

The prophetic aspect is important to Marx:

> There can be no doubt that the credit system will serve as a powerful lever in the course of transition from the capitalist mode of production to the mode of production of associated labour; however, only as one element in connection with other large-scale organic revolutions in the

> mode of production itself. On the other hand, illusions about the miraculous power of the credit and banking system, in the socialist sense, arise from complete ignorance about the capitalist mode of production and about the credit system as one of its forms. (C3, 743)

The ignoramus in this case, it soon becomes clear, is Proudhon, with his proposal for free credit as the socialist panacea.

What Marx seems to be proposing here is that, in the same way that usury played an important precursive if antediluvian role in the rise of capitalism, but had to be revolutionized into the sociality of the money market and the circulation of interest-bearing capital, so the latter is destined to play a precursive role in the transition to socialism. The "organic transition" to socialism will depend, however, upon many other conditions and factors. What this leaves us with is a tantalizing set of open questions about the role of money, banking and credit not only in the transition but within socialist/communist society itself.

One further point in this chapter is worthy of note:

> We have seen how merchant's capital and interest-bearing capital are the oldest forms of capital. But it lies in the very nature of the matter that interest-bearing capital should appear to the popular mind as the form of capital *par excellence*. … In interest-bearing capital … the self-reproducing character of capital, self-valorizing value, the production of surplus-value, appears as a purely occult quality. (C3, 744)

Everything therefore seems derivative of it. The result is that "the internal articulation of the capitalist mode of production is misconstrued." Interest-bearing capital can and does take paths other than those defined directly by the production of surplus-value. These other paths will later be examined under the heading of fictitious capital. But here, says Marx, it is

> irrelevant and senseless to drag in the renting of houses, etc., for individual consumption. It is plain enough that the working class is swindled in this form too, and to an enormous extent, but it is equally exploited by the petty trader who supplies the worker with means of subsistence. This is secondary exploitation, which proceeds alongside the original exploitation that takes place directly within the production process. (C3, 745)

Marx is not often very sensitive to these "secondary" forms of exploitation, no matter how vicious. This is one of the rare moments when they at least rate a mention. It implies the possibility of a serious gap between where surplus-value is produced and where and how it is recuperated and realized by the capitalist class as a whole.

CHAPTER SEVEN

The Role of Credit and the Banking System (Chapter 27 Onwards in Volume III)

So why, then, is credit necessary for the production and reproduction of capital? In what sense is it possible to view the activities of the financial sector as productive of value and/or of surplus-value? In chapter 27, Marx lists a number of crucial roles that it plays. Summarizing:

1. It facilitates the smooth flows of money capital between sectors and industries in such a way that the profit rate is everywhere equalized. This is, I think, what Marx primarily had in mind when he referred earlier to credit as functioning as "the common capital of the class." The "butterfly" form of capital moves to standardize the rate of return across different industries, activities and places.

2. It significantly reduces (a) the costs of circulation by dispensing with the use of commodity moneys, replacing gold with paper and reducing the necessity for a reserve fund (hoarding) to accommodate fluctuations in commodity exchange, while (b) reducing turnover times (or, what amounts to the same thing, "accelerating the velocity of the metamorphoses of commodities" and increasing "the velocity of monetary circulation"). This acceleration of circulation carries over to the reproduction process of capital in general. In short, it facilitates speed-up (which is clear from the analysis of turnover times).

3. It allows the formation of joint-stock companies, which dramatically expand the scale of possible production enterprises, permit the privatization of formerly government functions, and help centralize capitals (as mentioned in Volume I). This means that many capitalist enterprises now take on a social as opposed to a private and individual character. Marx somewhat surprisingly concludes that "this is the abolition of capital as private property within the confines of the capitalist mode of production itself." It consolidates the "transformation

of the actual functioning capitalist into a mere manager, in charge of other people's capital and of the capital owner into a mere owner, a mere money capitalist" (C3, 567).

A variety of consequences flow from this last transformation. If the manager does indeed merely earn wages of superintendence, then capital now appears as the property right inherent in the ownership of pure money capital seeking interest "vis-à-vis all individuals really active in production from the manager down to the lowest day-labourer" (C3, 568). The production of surplus-value appears as a mere means to satisfy that right. The capitalist as direct producer becomes a manager of other people's money capital:

In joint-stock companies, [production] is separated from capital ownership, so labour is also completely separate from ownership of the means of production and of surplus labour. This result of capitalist production in its highest development is a necessary point of transition towards the transformation of capital back into the property of the producers, though no longer as the private property of individual producers but rather as their property as associated producers, as directly social property. It is furthermore a point of transition towards the transformation of all functions formerly bound up with capital ownership in the reproduction process into simple functions of the associated producers, into social functions. (C3,568)

Whenever the concept of the "associated producers" enters into Marx's argument, it usually holds out some progressive possibilities. The "socialization" of capital through the formation of joint-stock companies suggests a transitional state that has the potential to evolve in different directions. There are implications for how the laws of motion of capital operate:

Since profit here simply assumes the form of interest, enterprises that merely yield an interest are possible, and this is one of the reasons that hold up the fall in the general rate of profit, since these enterprises, where the constant capital stands in such a tremendous ratio to the variable, do not necessarily go into the equalization of the general rate of profit. (C3, 568)

Paul Boccara, chief theorist of the French Communist Party in the late 1960s, argued this was a major force counteracting the tendency for the rate of profit to fall during those years. Capital invested in large-scale infrastructures (no matter whether financed by the state or by joint-stock companies) can indeed, and generally does, circulate in this way—commanding interest only—in effect subsidizing profits elsewhere. Individual capitalists may also choose to rent much of their constant capital (such as forklift trucks and other forms of machinery), and in so doing they reduce the cost (to them) of that constant capital considerably. They simply pay the equivalent of interest on the loan of that capital in commodity form, rather than paying the equivalent of the commodity's full value (interest plus profit).

The physical mass of the fixed capital now embedded in the built environment (a physical mass that gives credence to the idea of a massive rise in the ratio of constant to variable capital circulating in production) for the most part circulates as interest-bearing capital capturing rents, rather than through the direct buying and selling of the commodities involved. The relationship between the extraction of rents and the circulation of interest-bearing capital (as best exemplified in the existence of huge mortgage markets) would then become an important feature in capitalist dynamics. This is a topic that Marx barely touches upon (though mortgages, as we shall shortly see, are defined as a form of "fictitious capital").

But the deeper possibility is this. The transformation of the productive capitalist into a mere manager entails "the abolition of the capitalist mode of production within the capitalist mode of production itself, and hence a self-abolishing contradiction, which presents itself prima facie as a mere point of transition to a new form of production" (C3, 569). This is a fairly astonishing statement. What does it signify? This transformation does not necessarily point in a progressive direction:

It gives rise to monopoly in certain spheres and hence provokes state intervention. It reproduces a new financial aristocracy, a new kind of parasite in the guise of company promoters, speculators and merely nominal directors; an entire system of swindling and cheating with respect to the promotion of companies, issues of shares and share dealings. It is private production unchecked by private ownership. (C3, 569)

This is what happens when capital and business become, as witty commentators in Second Empire Paris liked to call it, "other people's money." This was the world that the Péreire brothers constructed: Saint-Simonian utopianism become dystopian. The "financial aristocracy" to which Marx points is even more prominent today.

"Credit offers the individual capitalist, or the person who can pass as a capitalist, an absolute command over the capital and property of others … and through this, command over other people's labour. It is disposal over social capital, rather than his own, that gives him command over social labour." Marx attaches great potential importance to the sociality that is involved here. "The actual capital that someone possesses, or is taken to possess by public opinion, now becomes simply the basis for a superstructure of credit." As a result, "all standards of measurement, all explanatory reasons that were still more or less justified within the capitalist mode of production, now vanish. What the speculating trader risks is social property, not his own. Equally absurd now is the saying that the origin of capital is saving since what this speculator demands is precisely that *others* should save for him" (C3, 570).

Goodbye to the Weberian myth of the abstemious Protestant ethic and the rise of capitalism—the "illusion" that "capital is the offspring of a person's own work and savings is thereby demolished" (C3, 640). It gives the lie to the theory of abstinence and undermines the moral case for profit as a reward for bourgeois virtue. The capitalist merely borrows and makes money using the savings of others.

Conceptions that still had a certain meaning at a less developed state of capitalist production now become completely meaningless. Success and failure lead in both cases to the centralization of capitals and hence to expropriation on the most enormous scale. Expropriation now extends from the immediate producers to the small and medium capitalists themselves. Expropriation is the starting-point of the capitalist mode of production, whose goal is to carry it through to completion, and even in the last instance to expropriate all individuals from the means of production. … Within the capitalist system itself, this expropriation takes the antithetical form of the appropriation of social property by a few, and credit gives these few ever more the character of simple adventurers. Since ownership now exists in the form of shares, its movement and transfer become simply the result of stock-exchange dealings, where little fishes are gobbled up by the sharks and sheep by the stock-exchange wolves. (C3, 570–1)

The credit system, in short, becomes the main vehicle for that contemporary form of primitive accumulation that I call "accumulation by dispossession." How much of the wealth of today's financial aristocracy has been accumulated through the expropriation of the wealth of others (including other capitalists) through the machinations of the financial system?

But there is something deeply discordant about all this that Marx does not explicitly address. The general theme he enunciates in the history of money-dealing capital is that usury and interest had to be disciplined and rendered subservient to the requirements of a capitalist mode of production in general, and to the circulation of industrial capital in particular. Yet these passages suggest that the capitalist credit system is totally out of control, that it now returns to threaten the world of capital and surplus-value production in pernicious and perverted ways. It centers an economy of accumulation through dispossession rather than an economy of labor exploitation in production. It reinscribes usurious practices in the economy, though in a very different way from the usury of yore. Can this threaten the sustainability of capital accumulation? Marx gives no clear answer, but the possibility is certainly implied.

This question seems to permeate the subsequent investigations. The result is an interesting analytic description that has some relevance to an understanding of the global state we are currently in, and its financial contradictions. “If the credit system appears as the principal lever of overproduction and excessive speculation in commerce, this is simply because the reproduction process, which is elastic by nature, is now forced to its most extreme limit; and this is because a great part of the social capital is applied by those who are not its owners” (C3, 572). This was, of course, the rationale that led Adam Smith to voice his disapproval of joint-stock companies, except to finance large-scale transport enterprises (such as canals) and public utilities that could not otherwise be constructed. The rise of the credit system clearly shows “how the valorization of capital founded on the antithetical character of capitalist production permits actual free development only up to a certain point, which is constantly broken through by the credit system.” Credit is, in short, the primary means by which the accumulation of capital evades all limits, because credit moneys can be created without limit. “The credit system,” Marx continues, “accelerates the material development of the productive forces and the creation of the world market, which it is the historical task of the capitalist mode of production to bring to a certain level of development, as material foundations for the new form of production.” (Note the teleology here, but note also that there is no immediate hint as to what this new form of production might look like.) From this standpoint, the credit system contributes mightily to the production of value and surplus-value: “At the same time, credit accelerates the violent outbreaks of this contradiction, crises, and with these the elements of the dissolution of the old mode of production.” The credit system “develops the motive of capitalist production, enrichment by the exploitation of others’ labour, into the purest and most colossal system of gambling and swindling, and restricts ever more the already small number of the exploiters of social wealth; on the other hand it constitutes the form of transition to a new mode of production”(C3, 571).

So what is it that the “swindler” Isaac Péreire prophesized? Marx takes up some positive possibilities. Joint-stock companies emphasize the sociality of production, and thus an “opposition between the character of wealth as something social" and the way this wealth "remains trapped" within "capitalist barriers" of private ownership. Can this sociality be liberated? Can this contradiction be exploited? Marx seems to think so:

> The cooperative factories run by the workers themselves are, within the old form, the first examples of the emergence of a new form, even though they naturally reproduce in all cases, in their present organization, all the defects of the existing system, and must reproduce them. But the opposition between capital and labour is abolished here, even if at first only in the form that the workers in association become their own capitalist. … These factories show how, at a certain stage of development of the material forces of production, and of the social forms of production corresponding to them, a new mode of production develops and is formed naturally out of the old. (C3, 571)

This development could not occur had it not been for the rise of the factory system, with its emphasis upon cooperation and organized detailed divisions of labor, while the credit system presents

> the means for the gradual extension of cooperative enterprise on a more or less national scale. Capitalist joint-stock companies as much as cooperative factories should be viewed as transition forms from the capitalist mode of production to the associated one, simply that in the one case the opposition is abolished in a negative way, and in the other in a positive way. (C3, 571–2)

This positive potentiality is periodically revisited by socialist thinkers in, for example, Peter Drucker's commentary on "pension fund socialism," or the more active Rudolf Meidner plan for the gradual displacement of capitalism by worker's corporate ownership, by the payment of workers partly through stock acquisitions that would ultimately confer worker ownership of the corporations that now employ them.[2] While hopes of such transitions continue to spring eternal, there is unfortunately no doubt whatsoever that the dominant historical trend has been of an opposite, negative sort.

This brings us back to the idea, occasionally broached throughout all three volumes of *Capital*, that collective and associated labor constitutes the basis for the construction of an anticapitalist alternative. Since this is one of the few occasions where Marx actually describes a transitional mechanism from capitalism to socialism and communism, it cries out for some commentary. After Marx had drafted this chapter, Engels inserted a couple of pages describing the evolution of the power of corporate capital. The inference is that Engels thought that the moment at which anything progressive might be constructed out of all of this had long passed. Engels elsewhere notes Marx's profound respect for the ideas of Saint-Simon, which centered on the power of associated capitals to be mobilized for progressive purposes. Marx here embellishes on that idea, and takes up the prospects for associated capital to be managed through workers' cooperative control. While he concedes that such worker cooperatives are bound to reproduce many of the defects of the existing system, they at least provide a basis for the conquest of a national space through the spread of cooperative movements and practices. Marx seems to have thought this possibility to be very real back in the 1850s and 1860s. Engels seems to think that this moment of possibility quickly passed. But was it real even then?

This question is important, since there are many movements in motion in our own times that believe that this moment has come again—that the democratization of production through factory takeovers, the development of alternative solidarity economies, bartering networks and other cooperative forms can in itself be a path towards a radical anticapitalist reconstruction of political and economic life. Even as many participants recognize the difficulty of self-exploitation and the inevitable reproduction within the cooperative forms of many of the defects of the capitalist system they seek to displace, this path is often depicted as the only one possible for a democratic anticapitalist movement. It seems as if the rise of the credit system and the socialization of capital provides a "natural" basis upon which cooperatives and worker control might flourish. There is no mention here, however, of the demand articulated in the *Communist Manifesto* for the centralization of all credit in the hands of a worker-controlled state.

We come back in our own time to the compelling example of Mondragon. It succeeds without state support. But it survives, as we have seen, partly because it builds relations across the circulations of production, money and commodity capital. It has its own credit and retail structures. Differentials in remuneration between the shareholders are much circumscribed, and decision-making is democratized. Ironically, the main left criticism of Mondragon is that it acts like a corporation and like a joint-stock company. There appears, therefore, to be something to Marx's intuitive sense of some underlying continuities between the association of capitals of which Saint-Simon made so much and the creation and survival of alternative cooperative worker structures within the framework of capitalism. If the earth were covered with Mondragons, if the recuperated worker-controlled enterprises in Argentina could survive and proliferate, even as they necessarily reproduced capitalist forms of competition and self-exploitation, then we would be living in a very different and potentially far more progressive world. Is this what Marx means when he refers to the abolition of the capitalist mode of production within the capitalist mode of production, and depicts it as a self-dissolving contradiction? These are interesting questions.

But there are also plenty of cautionary tales. Some years back, in an influential book by Piore and Sabel called *The Second Industrial Divide*, the argument was made that new labor practices of flexible specialization and small-batch production were opening a space (similar to that which existed in 1848) where small-scale cooperative production under the control of workers (as exhibited in places like the Third Italy of Emilia-Romagna) would drive out the corporate-dominated factory form and provide a transitional mechanism to a decentralized social-ism.[3] Piore and Sabel waged a quite effective campaign (particularly in Europe) to persuade organized labor to drop opposition to these new technological and organizational forms and embrace flexible specialization as liberatory (they were very much enamored of Proudhon's ideas, which Marx, of course, could not abide). What Piore and Sabel did not recognize was that flexible specialization was to underpin the viciously exploitative practices of flexible accumulation so central to the neolib-eral project. Flexible specialization became the primary means to discipline and repress the workforce everywhere it was deployed. Nobody now speaks favorably of its emancipatory possibilities. There is, sadly, a long history of seemingly liberatory possibilities being recuperated into the dominant practices of capitalist exploitation. So, be careful what you wish for.

ON CHAPTER 28 OF VOLUME III: MEANS OF CIRCULATION AND CAPITAL

Chapter 28 is largely taken up with disputing the views of Tooke and others who held there was a distinction between money as capital and money as currency in circulation. I will not examine Marx's critique (or Engels's additions) in any detail. From Marx's perspective, the more relevant distinction is between money used by capitalists to buy the commodities to be used in production and money borrowed to purchase the commodities produced. The distinction is "between *the money form of revenue* and *the money form of capital*" (C3, 575). Both uses of money are incorporated into the circulation of industrial capital. Marx sometimes refers to the flow of credit into production as "money capital," as opposed to the "money-dealing capital" that flows to consumers to support the realization of value and surplus-value in the marketplace.

Bankers can furnish loan capital for production and credit to consumers to buy the commodities produced. For example, the same bankers can lend both to developers to build tract housing and to consumers to buy them with a mortgage. The demand for means of payment (consumer credit) and for means of purchase (loan capital) are neither synchronized nor equal. But the lack of either can constitute a barrier within the circulation of industrial capital. While Marx does not make the point, we can also infer the possibility that, under conditions of easy credit and much surplus liquidity, both the supply of and demand for a crucial commodity (such as housing) can create an investment "bubble" precisely because the flows of interest-bearing capital can operate so freely to influence both supply and demand conditions: "The two spheres of circulation have an inner connection, since on the one hand the amount of revenue to be spent expresses the scale of consumption, while on the other the amount of capital circulating in production and trade expresses the scale and speed of the reproduction process" of capital (C3, 578).

A number of ancillary features here come into focus, such as the velocity of circulation of money and the role of the credit system in accommodating these demands. That movements in availability can produce cyclical fluctuations of seeming prosperity followed by actual droughts is obvious, and Marx gives brief indications as to how the monetary and credit aspects of such movements typically behave. What we saw in the housing markets of many countries, from the US to Ireland and Spain in 2005–12, was the production of an asset bubble followed by a savage collapse of financial flows, as housing prices got way out of line with incomes.

ON CHAPTER 29 OF VOLUME III: THE PROBLEM OF BANKING AND FICTITIOUS CAPITAL

What is bank capital really about, and how does it circulate? This is the question that animates chapter 29, and it leads into a discussion of a very important category that Marx dubs "fictitious capital."

Banking capital itself consists of "(1) cash in the form of gold or notes; (2) securities." The securities are of two sorts: "commercial paper, current bills of exchange that fall due on specified dates, their discounting being the specific business of the banker; and public securities, such as government bonds, treasury bills and stocks of all kinds," including mortgages (C3, 594). The capital held by the bank can be divided between that of the banker himself and other people's money—i.e. deposits and savings, along with any notes that the bank has the right to issue.

Marx examines what happens when this banking capital is lent out in return for interest. Interest, he points out, can be viewed as equivalent to any flow of revenue. If the rate of interest is 5 percent, any "annual income of £25 is seen as the interest on a capital of £500." But this is, Marx comments, a "purely illusory notion." There does not have to be any actual money capital behind the flow of revenues. Many US citizens receive monthly social security checks, for example, but it is illusory to believe that this flow of money is the interest on some mass of capital held by the state. But, by promising to turn over the $25,000 a year that the social security recipient receives to the bank, the former can acquire money capital of $500,000 to buy a house. The annual flow of $25,000 is capitalized into $500,000 even though there is no original amount of money capital behind the social security payments (just a promise of the state to furnish the monthly income that it funds by placing a tax on wages). This brings us to consider one of Marx's most important concepts, that of fictitious capital.

"The state has to pay its creditors a certain sum of interest each year for the capital it borrows. In this case the creditor cannot recall his capital from the debtor but can only sell the claim, his title of ownership. The capital itself has been consumed, spent by the state. It no longer exists." It has, for example, been spent on waging a war in Iraq and Afghanistan.

> What the state's creditor possesses is (1) the state's promissory note for, say, £100; while (2) this note gives him a claim on the state's annual revenue, i.e. the proceeds of the year's taxation, to a certain amount, say £5 or 5 per cent; (3) he is free to sell this promissory note to anyone he likes. If the rate of interest is 5 per cent, and assuming the state's security is good [which is not the case now with Greek state debt] owner A can generally sell the note for £100 to B: since it is the same thing for B whether he lends out £100 at 5 per cent per year or assures himself of an annual tribute of £5 from the state by paying out £100. *But in all these cases, the capital from which the state's payment is taken as deriving, as interest, is illusory and fictitious*. (C3, 595; emphasis added)

So this is Marx's initial definition of fictitious capital. "It is not only," Marx goes on to explain, "that the sum that was lent to the state no longer has any kind of existence" because it has been spent. "It was never designed to be spent as capital, to be invested, and yet only by being invested as capital could it have been made into a self-maintaining value." In other words, no surplus-value is being produced through the state's actions, yet it appears as if extra value is being produced since the state is paying out interest (supposedly a portion of a surplus-value being produced somewhere) on the money it borrows. Furthermore, the trade in the buying and selling of the state's promissory notes make it seem as if an original capital can be recovered (sometimes even at an extra profit, if the demand for promissory notes exceeds the supply). But "no matter how these transactions are multiplied, the capital of the national debt remains purely fictitious, and the moment these promissory notes become unsaleable, the illusion of this capital disappears. Yet this fictitious capital has its characteristic movement for all that, as we shall see soon" (C3, 596). The "characteristic movement" to which Marx refers is of the sort that we see in the daily and even hourly fluctuations in values on the stock and bond markets.

Interest-bearing capital thus appears as "the mother of every insane form" (C3, 595). This insanity is even more dramatically registered when bourgeois theorists take the flow of wages accruing to the laborer and create out of it the fiction of capital embodied in the worker. The value of the worker is then calculated as the capitalized value of the annual wages earned. Human capital value can then be enhanced, so this theory goes, by the worker investing in education and the acquisition of skills, all of which should then pay off in the form of higher wages. Workers are, according to human capital theory, capitalists! "Here the absurdity of the capitalist's way of conceiving things reaches its climax, in so far as instead of deriving the valorization of capital from the exploitation of labour-power, they explain the productivity of labour-power by declaring that labour-power itself is this mystical thing, interest-bearing capital."

This very convenient view of labor has become hegemonic in our perverted neoliberal times. If workers command low wages, then it is their own fault, it is said, for not taking the trouble to invest in their own human capital. If they all invested properly, then everyone would have much higher wages. Why, then, do we see taxi drivers these days with doctoral degrees? In any case, if workers truly were capitalists they would have the choice, as regular capitalists do, of actually working for a wage or lolling in a hammock and living off the interest on their capital.

Behind all of this lies a simple but crucial principle—that of capitalization: "The formation of fictitious capital is known as capitalization. Any regular periodic income can be capitalized by reckoning it up, on the basis of the average rate of interest, as the sum that a capital lent out at this interest rate would yield." The legal title to this flow of revenue can be traded at this capitalized price. "In this way, all connection with the actual process of capital's valorization is lost right down to the last trace, *confirming the* *notion that capital is automatically valorized by its own powers*" (C3, 597; emphasis added).

I cannot overemphasize the significance of this argument. In Volume I, Marx had commented on the conception of capital that made it seem as if it was "the goose that laid its own golden eggs," and here we see how the fetish appearance of self-valorization takes on a very specific form called fictitious capital, wrapping itself in mystery even as it becomes all too real in the bond, security and other markets in which property rights over different income and revenue streams become capitalized and sold as capital

Even when the promissory note—the security—does not represent a purely illusory capital, as it does in the case of national debts, the capital value of this security is still pure illusion. We have already seen how the credit system produces joint-stock capital. Securities purport to be ownership titles representing this capital. The shares in railway, mining, shipping companies, etc. represent real capital, i.e. capital invested and functioning in these enterprises, or the sum of money that was advanced by the shareholders to be spent in these enterprises as capital. It is in no way ruled out here that these shares may be simply a fraud. But the capital does not exist twice over, once as the capital value of the ownership titles, the shares, and then again as the capital actually invested or to be invested in the enterprises in question. It exists only in the latter form, and the share is nothing but an ownership title, *pro rata*, to the surplus-value which this capital is to realize. (C3, 597)

It is, in effect, a claim on the future labor that will supposedly produce the surplus-value of which interest (a return to pure ownership) will be a part.

The markets for these bonds, stocks and shares are, of course, fluctuating: "The independent movement of these ownership titles' values … strengthens the illusion that they constitute real capital besides the capital or claim to which they may give title. … The market value of these securities is partly speculative, since it is determined not just by the actual revenue but rather by the anticipated revenue as reckoned in advance." Prices can move up or down, depending upon the prospects for future surplus-value production. Falling prices and crises bring devaluations of asset values, but "once the storm is over, these securities rise again to their former level" (assuming they were viable and not fraudulent). The loss of housing asset values in the United States after 2007 was huge, and there is little sign of recovery five years later. But, Marx presciently notes, the depreciation of these asset values in a crisis "is a powerful means of centralizing money wealth." Or, as the banker Andrew Mellon put it long ago, "in a crisis, assets return to their rightful owners" i.e. to him. Increasing centralization of wealth and power in the course of a crisis is an important historical fact (borne out in the financial crisis of 2007–12).

Speculative movements are not necessarily harmful. "As long as their depreciation was not the expression of any standstill in production and in railway and canal traffic, or an abandonment of undertakings already begun, or a squandering of capital in positively worthless enterprises, the nation was not a penny poorer by the bursting of these soap bubbles of nominal money capital" (C3, 599). This is so because all these securities actually represent nothing but accumulated claims, legal titles, to future production. … In all countries of capitalist production, there is a tremendous amount of so-called interest-bearing capital or “moneyed capital” in this form. And an accumulation of money capital means for the most part nothing more than an accumulation of these claims to production, and an accumulation of the market price of these claims, of their illusory capital value. (C3, 599)

If there was a “tremendous amount” of this kind of capital floating around in Marx’s time, what kind of adjective would we need now to deploy?

“With the development of interest-bearing capital and the credit system, all capital seems to be duplicated, and at some points triplicated, by which the various ways in which the same capital, or even the same claim, appears in various hands in different guises. The greater part of this ‘money capital’ is purely fictitious” (C3, 601). This is nowhere more apparent than within the banking system itself:

The greater part of banker’s capital is therefore purely fictitious and consists of claims (bills of exchange) and shares (drafts on future revenues). It should not be forgotten here that this capital’s money value, as represented by these papers in the banker’s safe, is completely fictitious even in so far as they are drafts on certain assured revenues (as with government securities) or ownership titles to real capital (as with shares), their money value being determined differently from the value of the actual capital that they at least partially represent; or, where they represent only a claim to revenue and not capital at all, the claim to the same revenue is expressed in a constantly changing fictitious money capital. Added to this is the fact that this fictitious capital of the banker represents to a large extent not his own capital but rather that of the public who deposit with him, whether with interest or without. (C3, 600)

A Synthetic View of the Credit System According to Marx

Is there some way to synthesize Marx’s general conception of the role of the credit system within the capitalist mode of production? Let us imagine a vast pot of money held by bankers, brokers, money dealers and so on, within some bounded entity called the credit system. At the base of the credit system lies the central bank, and beneath that lie commodity moneys, gold and silver in particular. These commodity moneys represent value, which is in turn based upon the sociality of human labor on the world market. Marx postulates a vertical hierarchical structure of this sort to the monetary system.

To what degree is each layer in the structure disciplined by the operations of the others? In a tightly coupled system, the behavior of the credit system would be very closely controlled by value requirements through the mediating layers of money commodities and the central bank. Clearly, Marx envisages a loosely coupled system. Credit operations are autonomous and independent from value production. Operations within the credit system likewise escape the controls of the central bank no matter how hard the latter struggles to discipline them. The design and actions of the central bank can be at odds (as Marx shows with respect to the 1844 Bank Act) with what would be required to preserve “real values” as represented by the money commodities.

But, in Volume I, Marx also identified several deep contradictions in the way money commodities represent value (for example, a particular concrete use-value like gold is used to measure abstract, universal, socially necessary labor time). To the degree that the sociality of labor is perpetually undergoing changes, so value relations are unstable. The disciplinary impulses imposed from one layer to another within this hierarchically organized monetary system are omnipresent but weakly articulated. By this, I mean that strong influences are perpetually percolating through the different layers, but that the signals they create are often confusing and contradictory.

This, I think, is the reason that Marx construed the credit system as “autonomous” and “independent” but still subsumed under the general laws of motion of capital. We have encountered this formulation of “autonomous and independent but subsumed under” before and plainly in the instance of the pivots structured into the money and credit system it requires some sort of interpretation. My favorite analogy is to say it is a bit like teenagers: on the one hand they are perpetually demanding and claiming their right to independence and autonomy, while on the other their financial and legal security is anchored in the household so that when things go wrong they come running home to mommy and daddy. In some ways this seems an apt analogy with the whole way in which the money and credit system works, with each layer within the pivots populated by ever more rambunctious teenagers with the most rambunctious operating at the very top as the so-called “masters of the universe.” When the system crashes they all rush back to the parental state hoping they will get bailed out, which the state, being an indulgent and loving parent, invariably does.

The flow of disciplinary influences within this hierarchy of pivots is certainly not one-way. The deep base in the sociality of human labor does not exercise some determining if shadowy power over events within the “crazy” superstructures of credit. Commodity moneys (which Marx construed as being an ultimate and insuperable barrier that could “never” be transcended) have now been abolished in favor of an uninhibited credit system to accommodate endless compound growth. Periodically, events both within the credit system and in the dynamics of value production create pressures for a radical reform and repositioning of the central banks and other regulatory powers within the monetary system. (Is this what we are now experiencing?) While each layer “pivots” (to use Marx’s term) on the conditions prevalent in the layer below it, there is no necessary presumption that these are mechanical pivots that have a permanent and unchanging form.

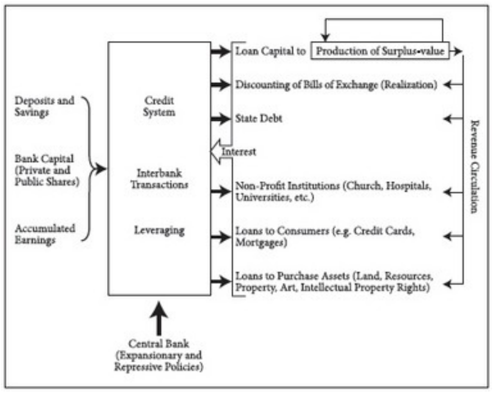
But, particularly in times of crisis, there seems to be some sort of disciplinary power, located in the world of value relations, that restores order to the system. Marx also concedes, however, that crises of confidence and of expectations within the credit system can wreak havoc on value and surplus-value production.

This is, roughly, the hierarchical structure of the money and credit system as Marx reconstructs it. Marx seems to be deeply ambivalent as to how best to understand its functioning. There is no clear theory to guide us here. The problem is to figure out, in a given conjuncture, what is actually happening where. Each layer seems to be constructed like a double-edged sword. On the one hand, commodity moneys constituted a restrictive barrier to endless accumulation. On the other hand, they exercised a strong disciplinary power over the craziness of speculation and fictitious capital flows. The abolition of commodity moneys (a move that would not, I think, have surprised Marx at all if he had held it to be technically possible) liberates endless capital accumulation from monetary chains, but it shifts the burden of credit discipline to fallible and sometimes whimsical human institutions such as the central banks. The problem for the central bank (and other facets of the state regulatory apparatus) is then to restore order within the credit system without destroying the conditions for surplus-value production, which is seemingly impossible to do (though Keynesians continue to fantasize its possibility). The hierarchical structure is by no means stable.

But we also need to look more closely at how interest-bearing capital circulates horizontally. The flows of interest-bearing capital come from somewhere and get dispersed down all manner of different channels, only some of which have to do with surplus-value production.

The money capitalists that populate the credit system operate to some minor degree with their own funds. But their main source of money power comes from assembling the money surpluses of others who use the services of the bank either as an intermediary to transfer funds to others or as a safe place to deposit their idle cash balances (which would otherwise be hoarded)—either temporarily or in the longer term—in return for a rate of interest. These money surpluses come from consumers of all sorts, as well as from capitalists who, as we saw in Volume II, need to hoard money to cover differential turnover times and fixed-capital investments and replacements. The banks make their money by offering, say, a 3 percent rate of interest on the money they borrow while lending out at, say, 5 percent. In this way, money is flowing into and constantly augmenting the pool of credit available. But where does the money so assembled flow to?

Figure 5



Lending out takes a variety of forms:

1) Loan capital

Money is lent out to producers who use it to buy the constant and variable capital required to engage in surplus-value production. Suppose the production capitalist borrows money to buy machinery. The money is then repaid, along with interest, over the lifetime of the machine. The loan capital is thereby consumed, and returns to the original owner as it is consumed. This is money lent for real value and surplus-value production. There is nothing fictitious about it (although, of course, all investment of this sort is by definition speculative). Things look different, however, when the money is procured by offering shares. The share is in fact a property right attached to pure money ownership. It is a legal claim to a share of future surplus-value production without any terminal date, even as the money is used up in productive consumption. The share can be bought and sold long after the machinery purchased with it has been amortized or become worn out (see C3, 608). The price of the share depends upon future expectations of surplus-value production. The movement of its value is open to all manner of speculative influences and is capable of all manner of manipulations, all the way to downright fraud. Stocks and shares are, therefore, a form of fictitious capital, but their fictitious character is mitigated by the fact that they retain a loose connection to value and surplus-value production (in money terms, the earnings of the company underpin the value of the shares). However, in the case of a company like Enron, it turned out that no surplus-value was actually being produced, even though the shares were trading high. The earnings posted were fraudulent.

2) Loans for realization

Money can be lent to realize the value of commodities already produced (or even before, as with crops not yet harvested or houses yet to be built). The discount rate is equivalent to the rate of interest on bills of exchange which are due at some later date. The banker provides the money for realization of commodity values (at a discount), and takes over the bill of exchange in the hope of realizing its full value when it falls due. This operation is paralleled by the activities of merchants who also operate as money dealers. As Marx points out, however necessary this activity may be in smoothing out and shortening turnover times for the producer capitalists, there are all sorts of opportunities for chicanery and cheating. The piling up of bills of exchange drawn upon bills of exchange can in itself presage a collapse and a commercial crisis in its own right, which may or may not spill over to have profound effects on the conditions for the circulation and realization of capital. Loans for realization (means of purchase) can be integrated with loans to production (means of payment) such that the credit system can manage both the supply of and demand for a given commodity (such as housing), and it is easy to see how this can produce asset bubbles from time to time, such as that which arose in housing markets in the United States after 2000 or so.

3) Loans to the state and the national debt

The state can borrow capital sums against its power to raise revenues (through taxes and fees). It promises a share of anticipated future revenues in return for a capital sum. Titles to state debt can be traded long after the money borrowed has been used up. Much of what the state spends the money on has little or nothing to do directly with the production of surplus-value (although it often develops indirect relations by forming a viable market for, say, military hardware). This is fictitious capital par excellence. The state generally produces no value or surplus-value (it maintains a monarchy and fights wars, for example). Taxation of revenues is converted into a flow of interest payments that can be capitalized into a lump sum, and then traded as a claim on future revenues. Some categories of state expenditures do relate to surplus-value production. There are state-run enterprises (these were important in many parts of the world until the wave of neoliberal privatizations began after 1980 or so, and they continue to be important in China). While these enterprises do not necessarily have to earn a profit, they provide inputs to other firms at lower cost, which affects overall profit rates. The state also invests in physical infrastructures necessary for production (highways, public utilities, sewage and water provision, and the like). It can provide these constant capital inputs in return for interest only, and so help mitigate any tendency for the rate of profit to fall. The category of debt-financed "productive state expenditures" became very important early in the physical reconstruction of Second Empire Paris under Haussmann, for example. But most state debt is purely fictitious.

4) Loans to non-profit institutions

Here would be included private hospitals, universities, churches, museums and all manner of cultural institutions. Loans to them would also fall into the category of fictitious capital, since for the most part they produce no value or surplus-value (although some branches of universities and hospitals may be directly involved in surplus-value production through innovation and research). The revenues to pay the interest on loans can come from a variety of sources, but mainly depend in our times on user fees and donations.

5) Consumer loans

By far the most important form of consumer loan in the United States is the housing mortgage, which Marx explicitly lists as a form of fictitious capital. The mortgage market in the US at its peak, in 2007, amounted to $14 trillion (as compared to the total GDP for that year of around $15 trillion). In this case the revenue stream to pay the interest comes from wages, salaries and government redistributions. The house is not generally used for value or surplus-value production, hence the designation of mortgage finance as a form of fictitious capital. Of course, if I turned my house into a sweatshop it would then qualify as a form of fixed capital in production. And, while there is no direct value or surplus-value production taking place in the home, the role of household labor in fixing the value of labor-power clearly affects surplus-value production. Consumer debt is now huge business, and it plays a crucial role in the management of aggregate demand in an economy as well as providing abundant opportunities for the secondary forms of exploitation that Marx occasionally acknowledges but generally excludes as peripheral to his interests.

6) Loans to acquire and purchase assets and other paper claims to revenues (such as royalties on natural resources, patents, and rents on land and property)

The proliferation of asset markets (everything from art investments to land and resource grabs) has been a marked feature of recent capitalist history, and a great deal of surplus money-dealing capital flows into these markets.

Bankers do not generally discriminate (though they may specialize) between these different loan options. Their capital can flow to wherever the demand, the rate of return and the security of the loan are strongest, and wherever future prospects look brightest. Expectations—faith in the future—play a prominent role in the movement of these markets. The possibility also exists for a “crowding out” of some investment possibilities by the high demand (and expectations) for others. (This is a frequent criticism of strong government borrowing or asset bubbles: that they crowd out investment in productive activities and raise interest costs for others.) The credit system does not typically discriminate between different forms of investment, and certainly not between those that are purely fictitious; those that are partially fictitious, because at least loosely connected to the production of surplus-value; and those directly engaged with the circuit of industrial capital as loan (money) capital. Imbalances in the flows of interest-bearing money capital will frequently occur. Precisely because these flows are independent and autonomous, they can affect the overall laws of motion of capitalist development while periodically precipitating a crisis on their own account. If, for example, a great deal of surplus money-dealing capital flows into the land and property markets (as happened in Japan in the late 1980s and in the United States, Spain, Ireland, and so on after 2000), then huge distortions in flows of credit and speculative booms in those asset values can result until the crash materializes to force a correction.

If we take a kaleidoscopic view of all these flows of credit, it becomes readily apparent that the banking and credit factions (or “classes” as Marx occasionally calls them) have a strong vested interest in sustaining, and if possible expanding, the different markets for the flows of fictitious capital, particularly if the channels are relatively easy to manipulate and exploit. For example, a vast amount of activity is taken up in the United States in extending credit to homeownership, even when bubble conditions are not in evidence. This is a primary way in which wealth can be recaptured by capital from consumers in general, and from labor in particular.

Extractive as opposed to productive activities have long predominated within these credit markets. There is no firewall within the banking system between the activities of lending to produce surplus-value, lending to realize surplus-value, and lending to fictitious capital markets. The money capitalists, working in their own interest in markets where signals are detached from the need to promote surplus-value production, make individual decisions that in aggregate may make absolutely no sense. Hence the instabilities and periodic crises emanating from within the credit system.

Money Capital, Real Capital and the Industrial Cycle

I shall not attempt any close reading or interpretation of the remaining chapters on money and credit. But there are some issues posed that command our attention, particularly in chapters 30 and 31.

Marx, while plainly perplexed by the volatility and speculative insecurity that characterized the world of money, banking and credit, sought to understand the logic (if any) behind the cyclical booms and crashes going on around him. These clearly posed a major threat to the reproduction of capital, and forced periodic devaluations of much of the capital in circulation. The continuity of the circulation process of capital emphasized in Volume II is plainly subject to disruption in ways that were posited as possible in that volume but not elaborated upon.

The question that hovers over these chapters in Volume III is: Why might this be inevitable and necessary, given the nature of the contradictions to which the circulation of industrial capital is prone? And what might be the overall impacts of the “crazy” and “insane” aspects of this financial system upon the laws of motion of capital? To what degree, for example, is the accumulation of money capital

> an index of genuine capital accumulation, i.e. of reproduction on an expanded scale? Is the phenomenon of a “plethora” of capital, an expression used only of interest-bearing capital, i.e. money capital, simply a particular expression of industrial overproduction, or does it form a separate phenomenon alongside this? Does such a plethora and over-supply of money capital, coincide with the presence of stagnant sums of money … so that this excess of actual money is an expression and form of appearance of this plethora of loan capital?

In contemporary parlance, when the world is “awash in surplus liquidity” (as the IMF regularly claimed before the collapse of 2008), does this signal an overaccumulation of real capital or simply an excess of money as potential loan capital? Conversely, “to what extent does monetary scarcity, i.e. a shortage of loan capital, express a lack of real capital (commodity capital and productive capital)”? Or does it simply indicate “a lack of means of circulation?” (C3, 607).

Again, in contemporary parlance, is the contraction of the money supply and the freezing of interbank credit flows a sign of financial repression imposed by central banks and state authorities, or does it signal a lack of profitable investment opportunities?

Underlying this is a more general question: To what degree is there an association between the accumulation of debts and the accumulation of wealth? This is the question that the proliferation of forms of fictitious capital poses. “Accumulation of capital in the form of the national debt,” for example, “means nothing more than the growth of a class of state creditors with a preferential claim to certain sums from the overall proceeds of taxation.” Hence, “even an accumulation of debts can appear as an accumulation of capital” (C3, 608). As always, however, the word “appears” signals that something else is probably going on behind the fetish mask. But what? The problem is that an accumulation of promissory notes (fictitious capital) can be transformed into actual money capital, thus making fictitious capital real. This presumes, however, that the promissory notes can be traded. This in turn implies that fictitious capital continues to circulate as before. The same is true of stocks and shares, which are “nominal representatives of non-existent capitals”:

> In so far as the accumulation of these securities expresses an accumulation of railways, mines, steamships, etc., it expresses an expansion of the actual reproduction process, just as the expansion of a tax list on personal property, for example, indicates an expansion of this property itself. But as duplicates that can themselves be exchanged as commodities, and hence circulate as capital values, they are illusory, and their values can rise and fall quite independently of the movement in value of the actual capital to which they are titles. (C3, 608)

We have many examples of exactly this process in recent times: in order to get sufficient capital to start a business many individuals refinanced the mortgage on their homes during the housing boom, only to find after the crash that the fictitious capital they had extracted and turned into investment capital no longer existed, and that they now owed more on the house than its current market price. But if in the meantime their business had been successful, then they might have recouped enough to compensate for their earlier conversion of fictitious capital, now exposed as such, into real money capital. Many people who engaged in the fraudulent trading of fictitious capitals in housing mortgage markets became enormously rich, having transformed the fraudulent claims into real money power.

This highlights something about how Marx uses categories in a relational and fluid manner. In the same way that a particular use-value can shift from being fixed capital to being circulating capital or part of the consumption fund overnight, through a change of use, so what is fictitious capital at one moment can instantaneously be transformed into real money power (for capital or consumption) at another moment. When mortgages were packaged into collateralized debt obligations they existed, as it were, in a doubly fictitious state; but when a hedge fund manager traded them to unsuspecting and gullible investors and made a cool billion, he acquired real money power that was not, unfortunately, in any way fictitious.

Marx has some very acute and acerbic observations on the class consequences of such forms of wealth accumulation:

> Profits and losses that result from fluctuations in the price of these ownership titles, and also their centralization in the hands of railway magnates etc., are by the nature of the case more and more the result of gambling, which now appears in place of labour as the original source of capital ownership. … This kind of imaginary money wealth makes up a very considerable part not only of the money wealth of private individuals but also of banking capital.
>
> … The entire immense extension of the credit system, and credit as a whole, is exploited by the bankers as their private capital. These fellows have their capital and revenue permanently in the money form or in the form of direct claims to money. The accumulation of wealth by this class may proceed in a very different way from that of actual accumulation, but it proves in any case that they put away a good proportion of the latter. (C3, 609)

The behavior of this "class" of capitalists—the fraudulent and speculative swindling that goes on using "other people's money," and even the exploitation of the industrial capitalists—comes in for some severe pummeling in these chapters. But while the class consequences of this are plain enough to see, the question of what is happening to aggregate wealth creation and the laws of motion of capital through surplus-value production is much harder to elucidate.

In the passages that follow, Marx attempts to uncover the limits that might exist, both internal and external, to the functioning of the credit system, particularly with respect to commercial credits that capitalists extend to each other. The limits are set by "the wealth of the industrialists and merchants," and how quickly loans return to their point of origin. As "markets expand and become further removed from the point of production," so "credit must be prolonged," which in turn means that "the speculative element must come more and more to dominate transactions." "Large-scale production for distant markets" makes credit "indispensable." Indeed, credit "grows in volume with the growing value of production and grows in duration with the increasing distance of the markets" (C3, 612). Marx posits this as a reciprocal relation. The growth of credit facilitates the creation of the world market, while the expansion of the geographical range of commerce requires an expansion of the credit system. In this way, the production and revolutionizing of global spatial relations is intimately tied to the growth of the credit system. In the language of the *Grundrisse*, the credit system is the primary means producing capital's "annihilation of space through time."

But the central issue with which Marx attempts to come to grips in these chapters is the role of credit in fueling the booms and busts of industrial (or business) cycles. These were obvious features of capital's development in Marx's times, and were roughly ten years long (1836–37, 1847–48 and 1857 were all dramatic peak/crash years). Marx nowhere provides a coherent theory of these fluctuations from within his understanding of the general laws of motion of capital, though he does associate the periodic "plethora" of money capital with the theory of the overaccumulation of capital laid out in earlier chapters of Volume III. But he does provide a general description of the typical course of an industrial cycle, showing how the demand for and supply of money capital, and the distinctive activities and agendas of the moneyed capitalists (the bankers and other intermediaries), affect the course of that cycle. He also pays some attention to how the various "pivots" within the system of money and credit (the role of central bank policy and of commodity moneys) come into play. We end up with a somewhat different perspective on crisis theory, because the details he uncovers shed a brighter light on underlying contradictions.

Marx makes several attempts to describe the cycle. The best of them, in my view, occurs on pages 614–15, and I can do no better than replicate it here:

> As long as the reproduction process is fluid, so that returns remain assured … credit persists and extends, and its extension is based on the extension of the reproduction process itself. As soon as any stagnation occurs, as a result of delayed returns, overstocked markets or fallen prices, there is a surplus of industrial capital, but in a form in which it cannot accomplish its function. A great deal of commodity capital; but unsaleable. A great deal of fixed capital; but in large measure unemployed as a result of the stagnation in reproduction.

This faithfully replicates the points of potential disruption identified in the opening chapters of Volume II. The question is then posed of what happens within the money circuit. The general pattern goes something like this: "as the new crisis breaks out, credit suddenly dries up, payments congeal, the reproduction process is paralysed and … there is an almost absolute lack of loan capital alongside a surplus of unoccupied industrial capital." All of which is a pretty exact description of the conditions that pertained in the wake of the Lehman Brothers bankruptcy of September 2008.

An accumulation of loan capital can "precipitate out" of normal capital accumulation. "With genuine accumulation constantly expanding, this expanded accumulation of money capital can be in part its result, in part the result of elements that accompany it but are quite different from it"—for example, rising stock and share values in productive companies—"and in part also the result even of blockages in genuine accumulation"—commodity surpluses not sold but whose discounted value is realized through bills of exchange. But "this accumulation can also express elements that are very different from genuine accumulation"—for example, through rising asset values from capitalization, and fictitious capital formation of state or consumer debt. The aggregate result is "a plethora of money-capital at certain phases of the cycle" (C3, 639–40).

Credit then subsequently contracts, “(1) because this capital is unoccupied[;] (2) because confidence in the fluidity of the reproduction process is broken; (3) because the demand for this commercial credit declines.” The lack of credit makes it

> more difficult to obtain goods on credit. … In the crisis itself, since everyone has goods to sell and cannot sell, even though they have to sell in order to pay, the quantity of capital blocked in its reproduction process, though not of unoccupied capital to be invested, is precisely at its greatest, even if the lack of credit is also most acute. … Capital already invested is in fact massively unemployed, since the reproduction process is stagnant. Factories stand idle, raw materials pile up, finished products flood the market as commodities. Nothing could be more wrong, therefore, than to ascribe such a situation to a lack of productive capital. It is precisely then that there is a surplus of productive capital, partly in relation to the normal though temporarily contracted scale of reproduction and partly in relation to crippled consumption. (C3, 614)

The role of the capital surplus, and the problems that attach to finding profitable means to absorb such capital surpluses, are here strongly posed. In raising the issue of “crippled consumption,” Marx is echoing a theme that gradually emerges as critical in Volume II. Here he builds a very simple model of dynamic relations between classes across the cyclical movement.

“Let us conceive the whole society as composed simply of industrial capitalists and wage labourers”—let us ignore all other features such as price fluctuations and

> the fraudulent businesses and the speculative dealings that the credit system fosters. In this case a crisis would be explicable only in terms of a disproportion in production between different branches and a disproportion between the consumption of the capitalists themselves and their accumulation. But as things actually are, the replacement of the capitals invested in production depends to a large extent on the consumption capacity of the non-productive classes; while the consumption capacity of the workers is restricted partly by the laws governing wages and partly by the fact that they are employed only as long as they can be employed at a profit for the capitalist class. *The ultimate reason for all real crises always remains the poverty and restricted consumption of the masses*, in the face of the drive of capitalist production to develop the productive forces as if only the absolute consumption capacity of society set a limit to them. (C3, 615; emphasis added)

This is, of course, one of those famous declarations (see also Volume II, 391), on a par with his assertion that the falling rate of profit is “the most important law of modern political economy,” which needs to be contextualized in order to be understood. What the study of the industrial cycle reveals is that there is no necessary opposition between these two statements. Profit rates may fall in the short run because of the restricted consumption of the masses. This is very different from the mechanism usually deployed in explaining falling profit rates earlier in Volume III. But laying workers off reduces market demand, which leaves commodities unsold and productive capacity idle, and so induces capital to reduce wages and lay even more workers off. Marx clearly sees the possibility of such a downward spiral during the industrial cycle. Whether this constitutes a long-run secular trend is another matter entirely. The credit system permits capital to exceed such direct consumption constraints, at least for a time. “The maximum of credit is the same thing here as the fullest employment of industrial capital … irrespective of the limits of consumption” (C3, 613). Personal consumption was largely sustained during the neoliberal years of wage repression after 1980 or so by extending consumer credit.

Marx also sees how the downward spiral might be reversed with the aid of credit. The massive pool of idle loan and money capital—along with low rates of interest—that forms in the wake of a crisis, becomes critical to the revival. “In the period when business revives after the crisis … loan capital is demanded in order to buy, and to transform the money capital into productive or commercial capital. And then it is demanded either by the industrial capitalist or by the merchant. The industrial capitalist invests it in means of production and labour-power” (C3, 645). The low rates of interest make long-term investments in fixed capital and entirely new undertakings more attractive than usual (C3, 619–20). Interest rates typically remain low in the initial phases of expansion, when easy credit plays its most constructive role—and this facilitates, as we have seen, the further extension and integration of the world market.

Marx then focuses upon what is, in many respects, the culminating form of his argument, which rests on a depiction of the cyclical, temporal form that inevitably arises out of the mediations of the credit system in relation to a permanent tendency towards overaccumulation and overextension. I can do no better here than quote him at length. In his first attempt to explain how the cyclical movement might unfold, he writes as follows:

> If the reproduction process has reached the flourishing stage that precedes that of over-exertion, commercial credit undergoes a very great expansion, this in turn actually forming the “healthy” basis for a ready flow of returns and an expansion of production. In this situation, the rate of interest is still low. … The ease and regularity of returns, combined with an expanded commercial credit, ensures the supply of loan capital despite the increasing demand and prevents the interest level from rising. This is also the point when jobbers first enter the picture on a notable scale, operating without reserve capital or even without capital at all, i.e. completely on money credit. Added to this too is a great expansion of fixed capital in all forms and the opening of large numbers of new and far-reaching undertakings. Interest now rises to its average level. It reaches its maximum again as soon as the new crisis breaks out, credit suddenly dries up, payments congeal, the reproduction process is paralysed and … there is an almost absolute lack of loan capital alongside a surplus of unoccupied industrial capital. … This industrial cycle is such that the same circuit must periodically reproduce itself, once the first impulse has been given. (C3, 620)

Marx assumes here, of course, that there is no attempt to modify this sequence by state interventions in monetary and fiscal policies, though he does opine that “no bank legislation can abolish crises themselves.” This whole process is then summarized in a passage that is of great importance because it acknowledges how the tension between credit and its monetary base is played out in relation to a tendency towards overaccumulation:

> In a system of production where the entire interconnection of the reproduction process rests on credit, a crisis must evidently break out if credit is suddenly withdrawn and only cash payment is accepted, in the form of a violent scramble for means of payment. At first glance, therefore, the entire crisis presents itself as simply a credit and monetary crisis. And in fact all it does involve is simply the convertibility of bills of exchange into money. The majority of these bills represent actual purchases and sales, *the ultimate basis of the entire crisis being the expansion of these far beyond the social need*. On top of this, however, a tremendous number of these bills represent purely fraudulent deals, which now come to light and explode; as well as unsuccessful speculations conducted with borrowed capital, and finally commodity capitals that are either devalued or unsaleable, or returns that are never going to come in. It is clear that this entire artificial system of forced expansion of the reproduction process cannot be cured by now allowing one bank, e.g. the Bank of England, to give all the swindlers the capital they lack in paper money and to buy all the depreciated commodities at their old nominal values. Moreover, everything here appears upside down, since in this paper world the real price and its elements are nowhere to be seen, but simply bullion, metal coin, notes, bills and securities. This distortion is particularly evident in centres such as London, where the monetary business of an entire country is concentrated; here the whole process becomes incomprehensible. (C3, 621–2; emphasis added)

Marx finally turns to consider how these cyclical impulses take geographical form. As regards imports and exports, for example,

> all countries are successively caught up in the crisis, and … it is then apparent that they have all, with few exceptions, both exported and imported too much; i.e. the balance of payments is against them all, so that the root of the problem is actually not the balance of payments at all. England, for example, suffers from a drain of gold. It has imported too much. But at the same time every other country is overburdened with English goods. They too have imported too much.

Credit changes this picture, but not the underlying problem:

> The crisis may break out in England, the country that gives the most credit and takes the least because the balance of payments … is against it, even though the overall balance of trade is in its favour. … The crash in England, introduced and accompanied by a drain of gold, settles England’s balance of payments, partly by bankrupting its importers … partly by driving part of its commodity capital abroad at low prices, and partly by the sale of foreign securities, the purchase of English ones, etc. The sequence now reaches another country. … In 1857 the crisis broke out in the United States. This led to a drain of gold from England to America. But as soon as the American bubble burst, the crisis reached England, with a drain of gold from America to England. Similarly between England and the Continent. In times of general crisis the balance of payments is against every country, at least against every commercially developed country, but always against each of these in succession—like volley firing—as soon as the sequence of payments reaches it. (C3, 623–4; cf. 650)

Geographical movements of this sort were all too clear in the wake of the crisis that broke out in the US in 2007–08, and which then spread to different parts of the world. This has indeed been “like volley firing”—though it is not always easy to predict where the crisis will next be registered. Capital, I have argued elsewhere, never solves its crisis tendencies: it merely moves them around, from one sector to another as well as from one part of the world to another.

In Marx's view, this all goes to show "by its very universality: (1) that the drain of gold is simply a phenomenon of the crisis and not its basis; (2) that the sequence in which this drain of gold affects the different countries simply indicates when the series reaches them, for a final settlement of accounts; when their own day of crisis comes …" (C3, 624). Despite Marx's claim to universality, this sequence with its focus on "drains of gold" is but one possible scenario by means of which the crisis these days takes geographical form. In our times, it was the burgeoning sovereign debt of, for example, Greece—produced partly by excessive Greek borrowing from German and French banks to pay for goods produced in Germany, in particular. All of this was facilitated through the creation of the euro, which benefited the more efficient producers (Germany) and undermined production in the less efficient economies of southern Europe. The result is that the value of the fictitious capital held by the German and French banks is threatened, which in turn may threaten the sovereign debt of France, and even ultimately Germany, unless there is concerted action across the whole eurozone. This turns out to be particularly difficult, given the "mistaken" constitution of the European Central Bank. Volley-firing, indeed.

The movement associated with credit markets in all this is palpable. But Marx does not believe that these movements lie at the root of the crisis. The root lies in a combination of a basic tendency towards overac-cumulation of capital and the independent and autonomous production of a plethora of money capital that piles up on its own account. Recall that

> the very fact that the accumulation of loan capital is augmented by these elements that are independent of genuine accumulation, even if they accompany it, must lead to a regular plethora of money-capital at certain phases of the cycle, and this plethora develops as the credit system improves. At the same time as this, there develops the need to pursue the production process beyond its capitalist barriers: too much trade, too much production, too much credit. This must also happen always in forms that bring about a reaction. (C3, 640)

This combination is what I generally refer to as "the capital surplus disposal problem." The thesis that this tendency to produce surpluses of capital, and particularly surpluses in the money form, lies at the root of all crises is surely worthy of exploration. The fact that these surpluses are so easily sucked into channels of fictitious capital formation and circulation then becomes a central problem that can be neither evaded nor repressed given the positive role that capital in money form, backed by the sheer power of the moneyed capitalists, has to play in overcoming the necessity for hoarding.

From Volumes Two to Three and Back Again: A Concluding Comment

It would have been ridiculous for Marx to pursue the holy grail of a complete specification of the laws of motion of capital in its pure state without finding a way to use a knowledge of those laws to dissect the two major crises he experienced in his lifetime as an active scholar of and participant in events. The financial and commercial crises of 1847–48 and 1857 cried out for adequate interpretation (as did the crash of 1873, though by then much of Marx's theoretical production lay behind him). It is tempting, therefore, to interpret the materials in Volume III as following on sequentially from the Volume II analysis, since it is only in these chapters on finance that the crises of these years are actively addressed. This forced Marx to leave behind the rigorous (and to no small degree rigid) self-constraints so evident in Volume II in order to evoke the fetishisms and the fictions, the insanity and the craziness, that so evidently bedeviled the world of finance and commerce in those crisis years. The language of much of Volume III is, as a consequence, radically different from the restrained and technical language of Volume II. From the casual reader's perspective, it seems as if Marx has liberated himself from the boring scientistic constraints that dominate Volume II. By reanimating the concept of fetishism, for example, he places himself far closer to the seething turbulence of capital's surface appearances and the multiple potentialities they hold for future transformations, both negative and positive.

The trouble with this interpretation is that it does not conform to the chronology of the writing. Most of Volume II was written after Volume III was drafted. So why was it that Marx went back to the dry and technocratic accounting style of argument in Volume II after writing the more dramatic and viscerally engaging (though frustratingly incomplete and occasionally incoherent) materials on merchants' capital and finance?

I have no definitive answer to that question, nor any special claim to privileged insights. But I do have a theory that I favor. Marx certainly knew that he needed to get to the bottom of what happened in 1847–48 and 1857 (in much the same way that we need to get to the bottom of 2007–12). Marx's studies of these crises showed how much the events themselves, as well as the interpretations of them by contemporary commentators, were riddled with fetishistic understandings. This poses the problem of understanding the obvious insanity of speculative dealings, particularly with fictitious capitals, against the background of Marx's emerging understandings of the laws of motion of capital. Marx was in no way deterred by his encounters with fetishisms of theory and practice. On the contrary, he relished the prospect of unmasking what they concealed. His typical response was to dig deeper to unearth the necessities and contradictions that underpinned them. He believed it would thus be possible to make more sense of all the surface turbulence and all the manifest contradictions that characterized the world of finance and credit, and the crises with which they were associated.

It is in this context that his return to the question of capital's inner nature in Volume II makes sense. What Marx is seeking is a kind of x-ray of that inner nature that will elucidate how and why the contradictory craziness of the credit system must necessarily come about. Why is it that the fundamental, underlying contradictions of capital always take the form of financial and commercial crises? To uncover all of this, he excludes the credit system and the circulation of interest-bearing capital from the study of capital accumulation and circulation in Volume II in order to understand what it is about the circulation and accumulation of capital that makes credit and the “autonomous and independent” functioning of money capital so necessary. From Volume II, in short, we get to understand why it is that capital cannot exist without a credit system, why it is that an accumulation of wealth is necessarily paralleled by an accumulation of debts, and why the central contradiction between value and its monetary representation internalizes the never-ending and necessary nonequivalence between supply and demand within a capitalist system of surplus-value production. This, it seems to me, is what the lengthy passage cited above from page 621 of Volume III fully acknowledges.

Adam Smith held that banking and finance were unproductive activities. From the Volume III account it is tempting to believe that Marx concurs in this judgment, that the parasitical excrescences of money capital, and the height of insanity exhibited within the financial system, stand self-condemned as a monumental distraction from (if not a pernicious tax upon) real wealth and value production. Popular opinion in our times is inclined towards such a view. This immediately poses the question: Why does capitalism tolerate this? What Volume II shows, however, is the crucial necessity of credit not only in facilitating value production, but also in expanding the capacity to create and capture surplus-value directly. The analogy with the role of machinery in Volume I is helpful here. Machinery is constant (usually fixed) capital, and hence unproductive of value. Marx then goes on to show how it can be a source of relative surplus-value both for the individual capitalist (my superior technology yields me excess profits) and for the whole capitalist class (rising productivity in the production of wage goods diminishes the value of labor-power and expands the surplus-value for the capitalist). Credit is likewise in itself unproductive of value; but it can facilitate a vast expansion in the production and realization of surplus-value by, for example, reducing the necessity of hoarding.

The hoarding question is, in fact, crucial. What becomes obvious from a study of Volume II is that, in the absence of a credit system, so much capital would need to be hoarded to cover everything from fixed-capital circulation to disparate circulation times, that capital accumulation would at best be tightly confined and at worst become so gummed up as to grind to a halt. Whether or not the money released from hoards can be converted into money capital to produce surplus-value depends, of course, on the availability of labor-power and means of production, as well as on the conditions prevailing within all the other circuits of capital (including the vitality of effective demand). But without the release of hoarded money there would be little potential money capital available. This is what Marx clearly shows us in Volume II.

Whether Marx successfully situated the role of credit and finance (as well as commercial capital) in relation to the laws of motion of capital is a matter of opinion, and can surely be debated (I feel he was only partially successful, and that he unnecessarily constrained himself out of some sort of vision of scientism to which he felt he had to conform in order to maintain credibility). But, if I am right that one of the key aims of Volume II is to get beneath the fetishisms so virulently on display in the finance chapters of Volume III, then this repositions Volume II in Marx's oeuvre in a way that mandates far more careful study than it usually receives. Marx clearly understood that he needed to construct from the standpoint of circulation an equally powerful model of the laws of motion of capital to that which he constructs in Volume I from the standpoint of production. The tragedy is that he did not complete the work, and that he never lived to synthesize the two perspectives of production and circulation into a working whole.

CHAPTER EIGHT

The Time and Space of Capital (Chapters 12–14 of Volume II)

Chapters 12 through 14 of Volume II are, thankfully, fairly simple and lucidly written. They pose no particular difficulties, and in any case are somewhat repetitive of themes on turnover time presented in chapters 5 and 6. So this provides an easy point of reentry into the world of Volume II, after suffering the turmoil and confusions of financial speculation in Volume III.

Marx here takes up some obvious material facts of production and circulation that affect the overall turnover times of capital. The overall turnover time is made up of production time plus circulation time, but production time divides into a working period—when value-producing labor is actually applied to the production of commodities—and time needed for the production process to be completed without any labor input (as in much of agricultural production, for example). Chapter 12 is about "the working period," which is defined as "the succession of more or less numerous interrelated working days" required to congeal value and surplus-value into a given commodity, such as a locomotive or cotton. Chapter 13 is about "production time," which is defined as the working time plus whatever extra time is needed to finish the commodity without expending labor (for example, time for fermenting, ripening, maturing, and so on). Chapter 14 deals with "circulation time," which is the time taken to get the commodity to its final destination for consumption. This chapter is of particular interest to me, since circulation time is much affected by the time and cost of transportation (a topic we have also encountered before), and by location decisions (such as the tendency for suppliers of inputs to cluster around major production sites in order to minimize the time and cost of transportation). It opens up the question of the role of space relations, of agglomeration economies, and of the production of space in capital circulation and accumulation.

The heterogeneity of temporalities of working periods, production times and circulation times is, Marx notes, "infinite." This poses potential problems of coordination between different branches of production within the overall division of labor. While cotton spinning can take place continuously over the year, the cotton harvest occurs only once a year. This generates complex issues of how much capital comes to be tied up (hoarded as either commodities or money) to cover disjunctions between different turnover times. Hoarded capital is inactive, and therefore unproductive of surplus-value. Large stocks and inventories of raw cotton, for example, keep much of that commodity capital inactive. Such capital is, Marx points out, technically "devalued" or "fallow" capital. This, we have seen, is a critical problem that needs to be addressed either by the credit system or by other means.

A rising pressure therefore exists to find ways to reduce the amount of capital held in an idle state. This is where techniques such as accelerating turnover times and inventory management, and institutional arrangements such as the credit system, come into play. The competitive drive to shorten working periods and production times has had far-reaching effects. For example, technological and organizational innovations (such as the "just-in-time" system pioneered by the Japanese in the 1980s) have helped reduce inventories of commodity capital (and hence idle capital) to a minimum. While a cotton harvest occurs only once a year, different harvest times in different parts of the world help smooth out the availability of cotton throughout the year, and thus reduce the need for large inventories. There has also been a perpetual drive throughout the history of capitalism to economize on costs and times of movement.

ON CHAPTER 12 OF VOLUME II: THE WORKING PERIOD

Take two forms of production, cotton spinning and the manufacture of locomotives, each of which have the same ten-hour working day. In the first case, a certain quantity of finished product is "turned out every day and every week; in the other, the labour process must be repeated for perhaps three months in order to produce … one locomotive." There is therefore an initial contrast between continuous and discrete production processes. Significant differences also exist in the time taken for different discrete production processes to come to completion. "These differences in the duration of the act of production do not just occur between different branches of production, but also within the same branch." The examples Marx gives are instructive. "An ordinary dwelling-house is built in a shorter time than a large factory. … If the building of a locomotive takes three months, that of a battleship takes a year if not several. … A road can be built in a few months, while a railway requires years," and so on. "The differences in length of the act of production are thus of infinite variety," he concludes (306–7).

These differences affect turnover times. The longer the turnover time, the more circulating capital is required up front before the commodity is finished. The "speed of turnover" affects profitability (307).

Marx defines the "working period" as "the succession of more or less numerous interrelated working days" required to create a finished product (308). A hundred working days of ten hours each amounts to a working period of 1,000 hours. "Interruptions and disturbances of the social production process, as a result of crises," he points out "have a very different effect on those products of labour that are discrete in nature, and those whose production requires a longer connected period" (308). In the case of continuous production, the process shuts down, and not much circulating capital is lost; but in the case of a locomotive all the circulating capital already embodied in the product is either put on hold or lost, and this implies that a much greater risk attaches to undertaking such forms of production.

Of course, fixed capital is also involved in these different turnover processes, but the turnover of the fixed capital itself (for example, a steam engine) is unaffected by the differential turnover times of the products it helps to produce. But the expenditure on circulating capital is differentially affected. Wages have to be advanced on, say, a weekly basis, and means of production likewise purchased often on a continuing basis over the weeks or months that it might take to create a finished product. The longer the working period, the more circulating capital has to be advanced before the capital can be recuperated and the surplus-value realized through the sale of the final product. This can place a considerable burden on the individual capitalist. “At the less developed stages of capitalist production,” Marx notes,

> enterprises that require a long working period, and thus a large capital outlay for a longer time, particularly if they can be conducted only on a large scale, are often not pursued capitalistically at all. Roads, canals, etc., for example, were built at the cost of the municipality or state (in earlier periods mostly by forced labour ...). Alternatively, products which require a long working period for their fabrication are manufactured only to a very minor extent with the financial means of the capitalist himself. (310–11)

In other words, they are built with the aid of credit. Marx goes on to cite the case of housing, in which

> the private individual for whom the house is being built pays advances to the builder in successive portions. He thus pays for the house bit by bit. … In the era of developed capitalism, however, where on the one hand massive capitals are concentrated in the hands of individuals, and on the other hand the associated capitalist (joint-stock companies) steps onto the scene alongside the individual capitalist—where credit, too, is developed—it is only in exceptional cases that a capitalist builder still builds houses to order for individual clients. He makes a business out of building rows of houses and whole districts of towns for the market, just as individual capitalists make a business out of building railways as contractors. (311)

Marx cites a Bank Act Committee Report of 1857 on the strategies of speculative house building, in which mortgage finance, land acquisition and leveraging of borrowed funds all feature: “It is impossible nowadays for any contractor to get along without speculative building and on a large scale at that. The profit on the actual construction is extremely slight; the main source of profit comes from raising the ground rent, and from the clever selection of exploitation of the building land” (and he cites the upscale neighborhood of Belgravia in London as an example). I think this process is far more important than is generally recognized, but since it involves the extraction and appropriation of rents Marx does not go into it further here, and I will also refrain from elaborating. But it is interesting to note how many of the examples Marx cites here involve investment in the built environment (a topic that comes up at odd moments like this, but which he does not isolate out for special consideration).

As we have seen so conspicuously in recent times, processes of this sort are ever crisis-prone:[1]

> Today the contractor no longer works directly for a client, but rather for the market. … Whereas previously a contractor might have built three or four houses at a time on speculation, he now has to buy an extensive piece of land … erect on it up to 100 or 200 houses, and thus involve himself in an undertaking that exceeds his own means some twenty to fifty times over. Funds are procured by taking out a mortgage, and this money is put at the contractor's disposal bit by bit as the building of the houses progresses. If a crisis breaks out, bringing the payment of these installments to a halt, then the whole undertaking generally collapses; in the best case, the houses remain uncompleted until better times, while in the worst they are auctioned off at half price. (311–12)

In much of the United States, Spain and Ireland, the worst-case scenario unfolded with a vengeance after 2008. Housing speculation in this last instance created an asset bubble that actually sparked the crisis when it burst, whereas Marx here sees the housing crash as resulting from a commercial and financial crisis that had its roots elsewhere.

"Large-scale jobs needing particularly long working periods are fully suitable for capitalist production only when the concentration of capital is already well advanced, and when the development of the credit system offers the capitalist the convenient expedient of advancing and thus risking other people's capital instead of his own" (312). The shift from individual entrepreneurial activity to one in which, as we saw in the chapters on finance and credit, business becomes "other people's money" has major consequences for how capital works, and I think it is no accident that Marx's prime example is of large-scale urban and infrastructural investments. While he does not say so here, it is plain also that the involvement of fictitious capital is not far away.

Marx's main concern, however, is with the "circumstances that increase the product of the individual working day," and "shorten the working period," such as "cooperation, division of labour, application of machinery" (312). "Thus machinery shortens the building time of houses, bridges, etc.," while "improved ship-building techniques, resulting in greater speed, shorten the turnover time of the capital invested" in ship construction. Many of these improvements depend, however, on the deployment of more fixed capital. This, in itself, generates a significant tension (contradiction?), since the turnover of a portion of the capital has to be slowed down in order to facilitate the accelerated turnover of the rest. The latent tension between stasis and motion is omnipresent throughout much of Volume II.

Cooperation can be mobilized for the same purpose: "The completion of a railway is hastened by setting afoot great armies of workers and tackling the job from many different points in space" (312). Some of the most spectacular examples of the mobilization of both technologies and masses of labor for such purposes in recent years have come from China. In the lectures on which this book is based, I showed an astonishing video of the construction of a fifteen-story hotel in China in ninety hours to illustrate the point that Marx is making here. It can be seen on YouTube under "Build a Hotel 15 Floors in China in 90 Hours." There is now another video titled "China Puts Up a 30-Floor Building in 15 Days." In both instances, of course, the parts are prefabricated, but it is also interesting to watch and think about the nature of the labor process. The emphasis is not only upon cooperation, mechanization and coordination of divisions of labor, but also upon intensity, which in Volume I of *Capital* gradually emerges as a key contributor to surplus-value production. And, of course, labor has to be paid only for the 90 hours (of shift work).

The background to this is that capital has to be sufficiently concentrated and immediately available to set in motion such processes:

> It comes down to a question of the extent to which the means of production and subsistence … are fragmented, or united in the hands of individual capitalists, i.e. the extent reached by the concentration of capital. In so far as credit mediates, accelerates and intensifies the concentration of capital in a single hand, it contributes to shortening the working period, and with this also the turnover time. (313)

The association of accelerating turnover times with the centralization of capital, state activities, and the rise of the credit system is important to note. My casual observations on the topic through the study of the history of urbanization would suggest that Marx is quite correct to point to these tightening associations in pursuing ever-shorter turnover times.

The extent of this drive to shorten turnover times is illustrated most dramatically, in Marx's view, by the case of sheep breeding. "British sheep, just like French sheep as late as 1855, were not ready for slaughter before the fourth or fifth year." As a result most people ate mutton and not lamb (feasting on mutton chops is a recurrent habit in Dickens's novels). But along came Bakewell and his "New Leicester" breed of sheep, in which "one-year-old sheep can already be fattened, and in any case they are fully grown before the second year has elapsed," thereby cutting production time by more than half (315). So we now eat lamb, and not mutton chops. And spring lamb can be had in less than a year. Such interventions in so-called "natural" lifecycles are everywhere in evidence in agriculture. It has proved possible even to speed up the maturation of lobsters by judiciously moving lobster pots from one water temperature regime to another. "Natural" reproduction cycles are by no means sacrosanct in the world of capitalist production.

ON CHAPTER 13 OF VOLUME II: PRODUCTION TIME

Production processes often involve interruptions in production "independent of the length of the labour process." Marx provides a number of examples such as wine that has to go through a maturing process, pottery that has to dry, time-consuming chemical processes such as bleaching—and of course, in many arenas of agricultural production, there are long periods when no labor is applied at all (most conspicuously in forestry, where it may take a century for the tree to grow to maturity).

I spend some time each year on the land in Argentina, and on a given day in January a huge machine appears along with a truck and three operatives to harvest 20 hectares of wheat in one day. The next day another machine appears with three people to plant 20 hectares of soy beans in one day. Two months later, another machine arrives to spray the soy beans with horrible insecticide and, three months later, a machine appears to harvest all the soy beans; a couple of months later yet another machine comes to fertilize the land, and then another to plant the wheat. The fixed capital involved is considerable, but the labor input and the working periods very brief compared to the production time. "In all these cases, additional labour is added only occasionally for a large part of the production time" (317).

Plainly, there are strong incentives to reduce production times to the degree that this is physically possible. Marx thus cites the gains made in the history of iron production "from the invention of puddling in 1780 to the modern Bessemer process and the latest procedures introduced since then." While "the production time has been enormously curtailed … the application of fixed capital has also increased to the same extent," once again emphasizing a potential contradiction between slowing down and speeding up.

Agriculture is the sphere where, as might be expected, it is hardest of all to reduce production times, and this has implications for capital, and even more importantly for labor. Marx quotes extensively from the work of Kirchhof, who emphasizes the differential impacts of these distinctions upon capital and labor. For the latter, the seasonality of work possibilities in agriculture constitutes a major problem. In Russia, for example, agricultural labor is possible for only 130 to 150 days of the year, which would pose very serious problems were it not for village-organized production, as "weavers, tanners, shoemakers, locksmiths, cutlers, etc." The "unification of agriculture with rural subsidiary industries" was an effective way to deal with this naturally imposed seasonal structure of employment. "In so far as capitalist production later manages to complete the separation between manufacture and agriculture, the rural worker becomes ever more dependent on merely accidental subsidiary employments and his condition thereby worsens. As far as capital is concerned, as we shall see later on, all these differences in the turnover balance out. Not so for the worker" (319).

The problem of seasonal labor in agriculture does not go away. In the United States migrant workers pass up both the East and West Coast agricultural regions harvesting seasonal crops such as fruits and vegetables in migrant gangs, living for the most part under appalling conditions and exposed to a wide range of toxic pesticides, before returning in the dead season to Mexico or the Caribbean.

While Marx acknowledges that there are many industries in which such seasonality problems or large gaps between working periods and production times do not occur (except under conditions of crisis), there are several forms of investment that are plagued with such problems. The result is “great unevenness in the outlay of circulating capital in the course of the different periods of the year” (319). The fixed capital deployed is not used for part of the year and so its circulation is also interrupted, and this gives rise to “a certain depreciation.” The most interesting case is forestry, where the production time and the working time are so hugely different as to make “forest culture a line of business unsuited to private and hence to capitalist production. … The development of civilization and industry in general has always shown itself so active in the destruction of forests that everything that has been done for their conservation and production is completely insignificant in comparison” (322). If this was true for Marx’s day, then it is an even more widespread problem today, as the depletion of the tropical rain forests throughout Latin America, Southeast Asia and Africa continues apace—but now with documented impacts upon global warming and loss of biodiversity, as well as the loss of the forests themselves.

In closing, Marx returns to the question broached in chapter 6 on the formation of stocks and inventories as a circulatory cost, but, in this instance, as a problem of temporality. For any production system “a quantity of means of production … has to be held in reserve … in order to go into the production process bit by bit.” How large does this stock have to be? Its size, Marx argues, “depends on the greater or lesser difficulty of its replacement, its relative proximity to the supplying markets, the development of means of transport and communications, etc.” (323). But it is also sensitive to changing conditions in “the circulation sphere.” While Marx does not say what these might be, the most obvious recent example available to us would be the so-called “just-in-time” production systems and their variants, first introduced in Japanese industry in the late 1970s. Optimal scheduling of deliveries, facilitated by a networked information system (subsequently computerized) and a reliable transport system, reduced to a minimum the need to keep stocks of inputs on hand, thus releasing a vast wave of “dead” or “fallow” capital for active use. These systems quickly became widespread in all spheres of capitalist economic activity.

The “wide range of possibilities” that exist in the relation between working times and production times, Marx ends by observing, arise partly out of the nature of the production process itself and partly reflect the changing conditions within the circulation sphere (such as ease of access to supplies and markets). It is therefore to this latter part of the problem that we now turn.

ON CHAPTER 14: CIRCULATION TIME

This is the chapter where Marx is most explicit about the role that spatial structures and dynamics play in the laws of motion of capital. This topic often crops up in Marx’s writings, but usually in a highly condensed and more often than not cryptic way. While its fundamental importance is never denied, and sometimes even stressed, there is little attempt, except here in this chapter and then in only a few pages, at a systematic presentation. We have to rely, then, on this chapter in *Capital*, where the commentary is mainly technical (and thereby consistent with the overall tenor of Volume II) and various other occasional commentaries if we wish to reconstruct Marx's views on the spatial and geographical dynamics of capital accumulation and their inner contradictions. This I sought to do in a paper published back in 1975 in *Antipode*, which was the leading radical geography journal of that time. Nobody took much notice, of course, even when I incorporated many of these findings into the last part of *The Limits to Capital* in order to emphasize how important the production of space and of spatial (and territorial) relations had been in the historical geography of capitalism.[2] Unfortunately, until recently, the question of the production of space, of spatial relations and of territorial forms ("places") has largely been ignored in expositions of Marx's thought. Either that or it is viewed as transparently obvious, and therefore not worth examining. Only recently has this aspect of capital accumulation and the changing dynamics of daily life come to be more accepted as fundamental, rather than peripheral. When Marx does mention it, he does so with remarkable vigor.

Consider, for example, the presentation in the *Communist Manifesto* which constitutes a neat description of what we now call globalization:

> The need for a constantly expanding market for its products chases the bourgeoisie over the entire surface of the globe. It must nestle everywhere, settle everywhere, establish connections everywhere. The bourgeoisie has through its exploitation of the world market given a cosmopolitan character to production and consumption in every country. To the great chagrin of the Reactionists, it has drawn from under the feet of industry the ground on which it stood. All old-established national industries have been destroyed or are daily being destroyed. They are dislodged by new industries, whose introduction becomes a life and death question for all civilised nations, by industries that no longer work up indigenous raw material, but raw material drawn from the remotest zones; industries whose products are consumed not only at home, but in every quarter of the globe. In place of the old wants, satisfied by the productions of the country, we find new wants, requiring for their satisfaction the products of distant lands and climes. In place of the old local and national seclusion and self-sufficiency, we have intercourse in every direction, universal inter-dependence of nations. And as in material, so also in intellectual production. The intellectual creations of individual nations become common property. National one-sidedness and narrow-mindedness become more and more impossible, and from numerous national and local literatures, there arises a world literature.
>
> The bourgeoisie, by the rapid improvement of all instruments of production, by the immensely facilitated means of communication, draws all, even the most barbarian, nations into civilisation. The cheap prices of its commodities are the heavy artillery with which it batters down all Chinese walls, with which it forces the barbarians' intensely obstinate hatred of foreigners to capitulate. It compels all nations, on pain of extinction, to adopt the bourgeois mode of production; it compels them to introduce what it calls civilisation into their midst, i.e., to become bourgeois themselves. In one word, it creates a world after its own image. (*The Communist Manifesto*, 38–9)

Small wonder, then, that the motto of CNN, the international news channel oriented to the business elite, is that it "goes beyond borders" (without, of course, ever mentioning class!). The “cosmopolitanism” that capitalism produces—that of the “frequent flyer,” is abundantly on show.

Or consider this, just one of many similar passages from the *Grundrisse*:

> Whether I extract metals from mines or take commodities to the site of their consumption, both movements are equally spatial. The improvement of the means of transport and communication likewise falls into the category of the development of the productive forces generally.
>
> …
>
> The more production comes to rest on exchange value, hence on exchange, the more important do the physical conditions of exchange—the means of communication and transport—become for the costs of circulation. Capital by its nature drives beyond every spatial barrier. Thus the creation of the physical conditions of exchange—of the means of communication and transport—the annihilation of space by time—becomes an extraordinary necessity for it. (*Grundrisse*, 523–4)
>
> …
>
> Circulation time therefore determines value only in so far as it appears as a natural barrier to the realization of labour time. It thus appears as a barrier to the productivity of labour. … Thus while capital must on one side strive to tear down every spatial barrier to intercourse, i.e. to exchange, and conquer the whole earth for its market, it strives on the other hand to annihilate this space with time, i.e. to reduce to a minimum the time spent in motion from one place to another. The more developed the capital, therefore, the more extensive the market over which it circulates, which forms the spatial orbit of its circulation, the more does it strive simultaneously for an even greater extension of the market and for greater annihilation of space by time. (*Grundrisse*, 539)

This is so because “the constant continuity of the process, the unobstructed and fluid transition of value from one form into the other, or from one phase of the process into the next, appears as a fundamental condition for production based on capital to a much greater degree than for all earlier forms of production” (*Grundrisse*, 535).

It is important to preface the discussion of chapter 14 on circulation time with these commentaries from elsewhere, partly to emphasize that the materials rather cursorily put together in this chapter are far from being a minor, one-off set of observations. They set out some principles for understanding the spatial dynamics of a capitalist mode of production, and thus call for study and, where necessary, elaboration. The principle that focuses Marx’s attention is that “with the development of the means of transport, the speed of movement in space is accelerated and spatial distance is thus shortened in time” (327).

Marx begins chapter 14, however, with a simple statement: “A permanently effective cause of differentiation in the selling time, and hence in the turnover time in general, is the distance of the market where the commodities are sold from their place of production. For the whole period of its journey to the market, capital is confined to the state of commodity capital” (327). Capital cannot, therefore, make the transition into the money form, unless, as we have seen in the discussion of the credit system, a money capitalist is prepared to discount the bill of exchange attached to the movement of the commodity (hence the strong historical relation between long-distance trade and the credit system). What Marx calls the "selling time" is the most important component of circulation time. Clearly there is a strong competitive incentive to try to reduce this selling time to a minimum (as we saw in the analysis of commercial capital from Volume III, but which is here examined as if the producer acts as his own selling agent). "A permanently effective cause of differentiation in the selling time, and hence in the turnover time in general, is the distance of the market where the commodities are sold from their place of production" (327).

How long it takes to get to the market depends on the nature of the commodity (its weight and perishability, for example), and upon the means of transport and communications available. Differences in selling time occur not only between different commodities, but also between producers of similar commodities. However,

> improvement in the means of communication and transport shortens absolutely the period in which commodities migrate in this way, but it does not abolish the relative difference in the circulation time of different commodity capitals. … Improved sailing ships and steamships, for instance, which shorten the journey, shorten it just as much for nearby ports as for distant ones. [The relative differences, however, may] be displaced by the development of the means of communication and transport in a way that does not correspond to the natural distances. For instance, a railway leading from the place of production to a major inland centre of population may lengthen the distance to a nearer inland point which is not served by a railway, absolutely or relatively, in comparison to the one naturally more distant; similarly the relative distances of places of production from the major market outlets may be altered as a result of the same circumstances, which explains the demise of old centres of production and the emergence of new ones … (327)

On the following page Marx elaborates further:

> A place of production which possessed a particularly advantageous position through being situated on a main road or canal now finds itself on a single railway branch line that operates only at relatively long intervals, while another point, which previously lay completely off the major traffic routes, now lies at the intersection of several lines. The second place rises, the first declines. (328)

The implications for capital (for example, the devaluation of capital locked into the first place) and for labor (for example, the shift in employment opportunities from the first to the second place) are wide-ranging. Local crises of devaluation of both capital and labor-power are omnipresent. The competitive churning within the geographical landscape of capitalism comes sharply into focus. But Marx attempts no deep analysis of the processes and consequences of such uneven geographical developments.

Innovations and investments in the means of communication and transportation are perpetually revolutionizing the geographical landscape that capital creates. The relative spaces of the space-economy are perpetually changing. Whole cities of capitalist activity are created only to decline as relative locational advantages change within the overall landscape of capitalist competition. Vast amounts of fixed capital are embedded in the land, the value of which is either enhanced or threatened with the building of new communication links and transport facilities that encourage activities elsewhere. Marx does not go into such matters in any detail, but the perpetual threat of revaluation and devaluation of these fixed capital asset values is a considerable source of instability within the history of capitalism: witness the incredibly difficult processes of deindustrialization in many of the core areas of capitalist development—the older manufacturing cities such as Detroit, Baltimore, Manchester, Sheffield, Essen, Lille, and many others—after 1980 or so, as the dynamics of a long-standing process of globalization underwent a radical change of direction, with production moving on a large scale, mainly but not exclusively to East Asia. Geographical shifts within countries—from the Midwest and Northeast to the South and Southwest of the United States—are just as important as international shifts in creating the unstable and uneven geographical developments of capitalism.

None of this is explicitly taken up in Marx's analysis here. What is presented, in a way that is consistent with the overall concerns of Volume II, is a simple theoretical and purely technical basis for developing such an analysis. This basis is constituted simply by the circulation time (and cost of movement) of commodity capitals, and the dependence of that circulation time and cost on the spatial conditions of production and realization of surplus-value.

The principles are simple. When the "time in which capital is confined to the form of commodity capital is prolonged, by the greater the distance to the market, this directly gives rise to a delayed reflux of money, and thus also delays the transformation of capital from money capital into productive capital" (331). "With the development of the means of transport, the speed of movement in space is accelerated, and spatial distance is thus shortened in time." The reference to the idea of the "annihilation of space through time," as set out in the *Grundrisse*, is clear. The scale and frequency of service reduces costs. "The relatively cheaper cost of transport for longer distances as compared to shorter" is important in stretching out the geographical space of commodity circulation. The main reason for this, which Marx fails to mention, is the high cost of loading and unloading cargo relative to the cost of movement. This high cost of transshipment was radically reduced after the 1960s by containerization. This was a key innovation that redirected the form and paths of globalization in commodity movements.

Frequency and reliability of service reduce the stocks of commodity capital that need to be kept on hand by producers (Marx spots here the tendency to create what later became known as the "just-in-time" systems of supply of inputs into production, which gave Japanese industry such a powerful competitive edge in the 1980s, until the rest of the world caught up). Marx also recognizes the importance of what are called agglomeration economies —the benefit to be had in the reduction of circulation times by gathering together many producers of the same goods along with all their suppliers in the same location.

> At first the greater or lesser frequency with which the means of transport function, e.g. the number of trains on a railway, develops with the degree to which a place of production produces more, and becomes a major centre of production, and this is a development in the direction of the already existing market, i.e. towards the major centres of production and populations, towards export ports, etc. On the other hand, however, and conversely, this particular ease of commerce and the consequent acceleration in the turnover of capital (in as much as this is determined by the circulation time) gives rise to an accelerated concentration of both the centre of production and its market. With this accelerated concentration of people and capital at given points, the concentration of these masses of capital in a few hands makes rapid progress. (328)

What Marx is articulating here is a theory of what we geographers call relative space relations.[3] This space is fixed not by physical distance but by the friction of distances, which is measured by the changing costs and times of movement across physical space. Physical space in itself does not matter for capital. All that capital cares about is the cost and time of movement, and it will do everything in its power to seek to minimize these costs and times, and to reduce spatial barriers to movement. To do this, it must radically and continuously revolutionize space relations. This is what Marx means in the *Grundrisse* when he writes of the "annihilation of space through time." The history of innovations under capitalism that contribute to this goal of reducing spatial barriers and the friction of distance is simply stunning. But the barriers are not only physical: they are also social and political. The reduction of tariff barriers and other political obstacles to the movement of capital (not necessarily of people) has become part of the holy grail of the emergent international capitalist order (a process that is not without contradictions and which is frequently a focus of political conflict and social struggles). But it is hard to imagine how much capital accumulation would have been curbed had the gradual removal of barriers to trade across the European space after 1950 or so had not taken place. By the mid-1970s, the long lines of trucks stuck at border customs inspection points across Europe were becoming intolerable.

There is thus a distinction between absolute and relative space. The territorial units that emerge in the organization of capitalist space (everything from bounded individual and collective property rights on the land to the state itself) tend to fix things in space, which contrasts with the fluid movement across space of capital in all of its forms (as money, as commodities, and as production activity). These, at least, are my glosses on the arguments that Marx briefly advances.

Marx takes up this question a bit later in the chapter from the angle of productive consumption—the supply of inputs into production:

> The time of purchase, and the greater or lesser distance from the major sources of raw materials makes it necessary to buy raw materials for longer periods and keep them available in the form of productive stock, latent or potential productive capital … this increases the mass of capital that must be advanced at one stroke, and the time for which it must be advanced. (331)

Reduction in the necessity to hold stocks of raw materials and other inputs on hand reduces the amount of capital that has to be advanced relative to that employed.

Locational shifts of producers to take advantage of proximity to means of production, labor supplies, and final markets make only a brief appearance in this text, but they are nonetheless of considerable importance. Since Marx mentions breweries in large cities, let me elaborate on that. In the eighteenth century in Britain, beer was very much a local, often home-brewed drink, and it was only in big cities, as Marx notes, that large breweries could be found. There they tended to configure into local monopolies protected from competition by high transport costs. But the introduction of preservative ingredients, most notably hops, into brewing allowed beer to be transported over much longer distanc-es.[4] The time beer as a commodity could spend on the market was increased by hop flavoring. One consequence was the rise in the nineteenth century of hop production as a distinctive form of agriculture, mainly located in my home county of Kent—and this, you should know, provided me with the subject of my doctoral dissertation. Most people I tell this to stare in astonishment: How could you spend all that time on such a trivial topic? Actually it turned out to be fascinating, as well as a great learning experience that I still draw upon. Hop cultivation was a capital-intensive form of agriculture, and was connected to London's financial and credit markets by way of merchant capital and the brewing companies. The hop-acreage fluctuated with credit availability and the business cycle. It needed lots of fertilizer, and London night-soil was shipped down into Kent along with rags and other wastes, giving employment to recyclers in London. At certain times of year massive amounts of labor were also required. The annual migrations of the impoverished working classes from London's East End at hop-picking time was an astonishing scene. I still remember it from my early days. Imagine my pleasure when I took a cab in London just last year and the elderly driver told me of his many happy memories of hop-picking in his youth (it is all done mechanically now).

By the mid-nineteenth century, certain heavily hopped beers were even being exported to British expatriates in India (the so-called "India pale ales" that are still produced by certain brewers, such as Bass, located along the River Trent in the English Midlands). But, in the 1950s, most beers still did not travel far. It was too expensive to transport, and monopolies still prevailed in local markets. So I drank local draft beer (I had to go to the next town to sample draft Guinness when I was a kid). My move from Kent to Cambridge, where I was a student, meant I had to change my beer from Courage to Flowers! The same was true in the United States in the 1960s. If you lived in Baltimore you drank National Bohemian, and if you lived in Pittsburgh it was Iron City. Falling transport costs from the mid-1960s then led to beer coming from all over, while the containerization of ocean transport along with the emergence of keg (rather than barreled) beers that began in the 1960s meant that imported beers could compete in national markets. Beer production consolidated through mergers into mega-companies—though an antidote later arrived in the form of local brews. But now you can drink beer from almost anywhere; there is a bar in New York where you can drink local brews from all over the world.

The introduction of refrigeration, as well as falling transport costs, made all sorts of new locational configurations of food supply possible. The implications of refrigeration for the supply of fresh vegetables from California and of frozen meat from the US Midwest to the East Coast cities of the US and well beyond is beautifully set out in William Cronon's book about nineteenth-century Chicago, *Nature's Metropolis*.[5] The telegraph also made it possible to communicate commodity prices worldwide, and so to coordinate global markets in increasingly efficient ways. The patterns of urbanization that arose after 1945 would not have been possible without assurance of a steady supply of perishable food products, courtesy of both refrigeration and a transport delivery system that is efficient, fast and relatively cheap. None of this would have occurred had it not been for the colonization of space and the transformation of space relations under the influence of intercapitalist competition. Even when transport and communication innovations have had their origin in military imperatives (as has often been the case), their immediate adoption by capital has played a crucial role in the reconfiguration of urbanization, and the production of space and daily life. It has also been a mainstay of my own argument that the absorption of surplus-value and of surplus product through the production of space in general and urbanization in particular has been crucial to sustaining capital accumulation. These are, for me, some of the exciting projections that arise out Marx's brief notes on the development of transport and communications in Volume II.

But Marx does note some burgeoning potential contradictions in the drive to reduce circulation times:

> If the progress of capitalist production and the consequent development of the means of transport and communication shortens the circulation time for a given quantity of commodities, the same progress and the opportunity provided by the development of the means of transport and communications conversely introduces the necessity of working for ever more distant markets, in a word, for the world market. The mass of commodities in transit grows enormously, and hence so does the part of social capital that stays for long periods in the stage of commodity capital, in circulation time—both absolutely and relatively.

Traffic planners have long noticed a tendency for traffic to increase up to the capacity of the network, thus making attempts to relieve congestion in any traffic network self-defeating in the long run (some studies suggest that traffic moved at an average speed of 11 miles per hour in the London of the horse-and-buggy era, and that in the automobile era the average speed is not much different).

The second contradiction we have encountered before: "A simultaneous and associated growth occurs in the portion of social wealth that, instead of serving as direct means of production, is laid out on means of transport and communication, and on the fixed and circulating capital required to keep these in operation” (329).

Other complications arise out of the system of money flows that does not necessarily correspond with the commodity flows due to various mechanisms for discounting. Variations in turnover “form one of the material bases for differing periods of credit, just as overseas trade in general, in Venice and Genoa, for instance, formed one of the original sources of the credit system in its true sense” (329). In the chapters on the credit system in Volume III, Marx paid considerable attention to these phenomena but here he merely notes them without much additional commentary.

While much of this chapter is given over to looking at the circulation process from the standpoint of the transformation of the commodity into the money form, Marx closes with some brief remarks on the problems that arise in the transformation of money into commodities to be used in production. He had shown in chapter 6

> how the time of purchase, and the greater or lesser distance from the major sources of raw material, makes it necessary to buy raw materials for longer periods and keep them available in the form of productive stock, latent or potential productive capital; how this increases the mass of capital that must be advanced at one stroke, and the time for which it must be advanced, the scale of production being otherwise the same. (331–2)

This plunges Marx back into the seasonality of supply, and the particular times at which certain commodities are thrown upon the market.

Marx ends by reminding us that all of these considerations have to be inserted into a circulatory world in which capital in its money, commodity and productive forms continues to interpenetrate, and that capital cannot exist without taking on these specific forms in a continuity of movement that occurs in space and time. Plainly, these different forms of capital are spatially mobile in different ways, and the relations between these movements of money, productive activity and commodities are never entirely consistent with each other. Some of these inconsistencies are taken up in the next chapters of Volume II.

CHAPTER NINE

Circulation and Turnover Times (Chapters 15–17 of Volume II)

These three chapters are hard to understand and assess. I am still not sure how best to read them. The problem, as is too often the case with Marx, is to untangle the perpetual disputatious dialogue he is having with the political economists of the time from the advances he may be making in his own theoretical exposition. Marx also, as we know, often gets lost in numerical trivia—and here, as even Engels editorializes, Marx is at his very worst. To add to the confusion, Marx at certain points abandons the usual political reticence that characterizes Volume II and takes to speculating both on where capital in general is headed and what communism might entail (much as he does in Volume III). This either leaves us with quite a lot of work to do on our own account or invites us to skim over the trivia and the disputes and seek to identify and dwell upon the moments where he broaches more important business.

ON CHAPTER 15 OF VOLUME II: CIRCULATION TIME AND THE MAGNITUDE OF CAPITAL ADVANCED

This chapter may qualify as perhaps the most tedious of all in Volume II—though, as usual, there are some important problems posed and a key insight or two to be gained. Matters could, by Engels's account, have been much worse, because Marx left behind "a thick sheaf of notebooks in which he worked through all the various kinds of commercial calculation." Engels spared us from going over these, cryptically noting that Marx "was never at ease in reckoning with figures … and in his turnover calculations Marx became confused, with the result that, apart from being incomplete, they contain many errors and contradictions." The "uncertain results of this tiresome calculation business," Engels suggests, led Marx to attribute unwarranted significance to rather trivial matters.

So what is going on here? To begin with, Marx complains that "the economists, who have never produced a clear account of the turnover mechanism, constantly overlook this basic aspect, i.e. the fact that only a part of the industrial capital can be actually engaged in the production process, if production is to proceed *without interruption*" (emphasis added). Marx then adds, significantly, that "since this is overlooked, so also is the importance and role of money capital in general" (342). This is at least one of the key insights, which, as I have noted in the case of the circulation of interest-bearing capital, has vital implications for understanding the laws of motion of capital in general.

"Continuity," Marx reiterates, "is a productive force of labour" (356). It is crucial that it be maintained. Any interruption or delay in capital flow is costly and to be avoided like the plague. The difficulties of maintaining continuity as a productive force open up an important role for the money market and the credit system (as we saw in the study of finance capital and the credit system in Volume III). By the way, in the discussions on the nature of productive forces in the general Marxist literature, it is rather rare for "continuity" to be mentioned, and its extensive implications are usually ignored.

Smoothing out turnover processes reduces the capital that has to be advanced:

> This money capital that is set free by the mechanism of the turnover movement (together with the money capital set free by the successive reflux of the fixed capital and that needed for variable capital in every labour process) must play a significant role, as soon as the credit system has developed, *and must also form one of the foundations for this*. (357; emphasis added)

Note that Marx does not say that this turnover movement gives rise to the circulation of interest-bearing capital and the credit system. The implication (which is explicit in the historical chapter on credit in Volume III) is that credit that had long been in existence had to be disciplined, redesigned and redirected to meet this compelling need.

If this is a foundational statement (which I believe it is) and not merely a casual, offhand remark of the type that can sometimes be found in Marx's incomplete writings, then it is by far the most important observation to be taken from this chapter. It has huge significance for the whole architecture of Marx's project. His studies of the laws of motion of capital have in effect brought him (rather late in the day) to the point of concluding that these laws dictate (and I use that word advisedly) the existence of a money market and a credit system that functions in a particular way. If such a functioning money market and credit system did not already exist, it would have to be created. Furthermore, as we saw in Volume III, the money market and the credit system, far from being constituted as mere speculative froth (though there is plenty of that) on the top of basic surplus-value production, move center stage in explicating how the generality and continuity of sustained capital accumulation actually work. This forces Marx out of the strict framework defined in the *Grundrisse*: the particularities of distribution here have powerful internal effects within the laws of motion of capital.

Engels's objections that the numerical examples to which Marx appeals offer relatively insignificant support for this thesis do not constitute a denial of the thesis. The process of "freeing up" capital in money form is far more general and extensive (and we only have to go back over the chapter on fixed capital, as Marx himself notes, to recognize this). "The main thing in the text," says Engels, "is the proof that a considerable part of industrial capital is always present in the money form, while a still more considerable part must assume this form from time to time" (360).

So what is Marx's argument about the necessary "freeing up" of money capital within the logic of turnover time? In effect, it goes like this:

The capitalist produces a commodity in a working period of nine weeks and lays out £900 at the beginning, so she is spending £100 a week on labor and means of production (the problem of fixed capital is mentioned but mostly assumed away). We also assume the working period is the same as the production time. The circulation time when the commodity capital is on the market is three weeks, and for that period the capitalist has no money to continue production. The continuity of value production is broken. How can the three-week gap be filled? There are two solutions. The first is to cut back on weekly outlays and use the money saved to keep production going in the three-week circulation time (but this may be impossible if the capitalist has to operate at a certain scale in order to produce effectively). The second option is to find another £300 to cover the dead period when the commodity is on the market. I really cannot see why Marx makes such a fuss of the difference between these two strategies, since essentially they amount to the same thing, and he thereafter refers solely to the latter case. After the three weeks taken up by circulation time, the commodity will be converted into money and the capitalist will have the whole £900 in her pocket. But she only needs £600 to complete the next working period because she has already laid out the £300 to cover the dead circulation time. This frees up £300, which sits idle until the next circulation period occurs. The general point, as Engels points out, is that more money is always needed in a production process than is actually used up, and that the amount needed or available fluctuates depending on the phasing of production and circulation. So why not take the surplus money and put it on the money market until it is needed? Or why not borrow the £300 needed to cover the three weeks of circulation time and then pay it off when the whole £900 comes back to the capitalist after the circulation time is over? There is, of course, yet another option that Marx does not consider here (except incidentally): the capitalist sells immediately to a merchant at a discount (say, of less than £300), and so reduces her effective circulation time to zero.

Marx works through three different detailed examples in which the circulation time is shorter, equal to, and longer than the working period. He does so in excruciating detail and, of course, discovers some oddities (provided the credit system does not intervene). In particular, he shows that there are instances—as when the circulation time and working period are equal or when one is a simple multiple of the other—when no capital is freed up at all. But these are clearly special cases. In all other instances, the amount of capital freed up varies according to the turnover time and the ratio between working period and circulation time. The amount of free money capital created will also fluctuate according to the overlapping turnover processes that ensure the continuity of production.

But the main point is prefigured and somewhat obvious already (even though conventional economists had failed to spot it): “If we consider the total social capital, then a more or less significant part of this additional capital exists for a prolonged time in the state of money capital.” For the individual capital, the

> intervention of the additional capital required for the conversion of … circulation time into production time thus not only increases the size of the capital advanced and the length of time for which the total capital has to be advanced, but it also specifically increases that part of the capital advanced that exists as a money reserve, i.e. exists in the state of money capital and possesses the form of potential money capital. (341)

As usual, Marx uses this insight to go after the economists

> who have never produced a clear account of the turnover mechanism, [and who] constantly overlook this basic aspect, i.e. the fact that only a part of the industrial capital can be actually engaged in the production process, if production is to proceed without interruption. In other words, one part can function as productive capital only on condition that another part is withdrawn from production proper in the form of commodity or money capital. Since this is overlooked, so also is the importance and role of money capital in general. (342)

By extension, this must surely apply also to money markets and credit, although this is an issue that is not directly taken up here.

Plainly, if there is some reduction in circulation time (due, for example, to improvements in transportation and marketing) in relation to production time, then this too will release excess money capital for use elsewhere. Under such conditions, some of the

> value originally advanced is precipitated out in the form of money capital. As such it enters the money market and forms an additional part of the capital functioning there. We can see from this how a surfeit of money capital can arise—and not only in the sense that the supply of money capital is greater than the demand for it; the latter is never more than a relative surplus, which is found for instance in the depressed period that opens the new business cycle after the crisis is over. It is rather in the sense that a definite part of the capital advanced is superfluous for the overall process of social reproduction (which includes the circulation process) and is therefore precipitated out in the form of money capital; it is thus a surplus which has arisen … simply by a contraction in the turnover period. (358)

We can thus imagine a scenario in which the reductions in the time of transport outlined in the previous chapter may dramatically reduce circulation times, and so release a flood of surplus money capital onto the money markets, which will bring interest rates down. Conversely, if the circulation time is for some reason extended (for example, the Suez Canal gets blocked), then “additional capital will have to be obtained … from the money market”; and if this is widespread then it may “exert pressure on the money market,” by which Marx presumably means that the extra demand for money capital will, other things being equal, drive up interest rates (358–9). This will have a definite impact upon the supply and demand for money capital which, as we saw earlier, is the key determinant of interest rates.

I think this is about all there is to say on the constructive aspects of this chapter. I really think the details do not matter too much. But the inner connectivity that here begins to emerge, on the one hand, between turnover time and its components of working period, production time and circulation time, and, on the other, the functioning of money capital both internal to production and externally through a viable money market and credit system, is of great significance in how we understand the unfolding of Marx’s project. And that project is, of course, to uncover the general laws of motion of capital.

ON CHAPTER 16 OF VOLUME II: THE TURNOVER OF VARIABLE CAPITAL

This is likewise a frustrating chapter. But it also has some substantial insights. “The variable circulating capital expended in the course of production can serve again in the circulation process only to the extent that the product in which its value is reproduced is sold, transformed from commodity capital into money capital, so that it can be laid out anew in payment for labour-power.” The same is also true for constant circulating capital. So, in order to take up the question of how variable capital circulates and how it produces surplus-value, Marx separates it off from constant capital and treats “the variable part of the circulating capital as if it alone formed the circulating capital” (370). This is a pretty dramatic abstraction: variable capital is the only form of capital there is.

Marx then defines the annual rate of surplus-value. Suppose £500 of variable capital is advanced on a turnover time of every five weeks, producing £100 surplus-value per week; then, by the end of the year (which is by assumption only fifty weeks long) the repeated advance of £500 every five weeks produces an annual surplus-value of £5,000, or 1,000 percent. This is case A. The result looks completely different when the whole £5,000 has to be advanced for the whole year, rather than in ten £500 installments. Presuming the same weekly rate of exploitation, the annual rate of surplus-value is only 100 percent. This is case B. The annual rate of surplus-value (and hence the profit rate) is dramatically influenced by turnover time. The significance of this finding cannot be overestimated. The advantages that accrue to capital from shorter turnover times are manifold. The sooner the variable capital advanced is turned into a commodity and then back into the money form, the shorter the “time for which the capitalist has to advance money from his own funds.” From this, it also follows that “the smaller the total capital he needs to work at a given scale of production” and “the relatively greater … is the mass of surplus-value that the capitalist extracts in the course of the year” (389).

So why is this significant? We have first to refer to Marx’s ongoing critique of classical political economy. Such differences in the annual rate of surplus-value make it seem as if the rate of surplus-value (and hence, profitability) depends on “influences deriving from the circulation process” rather than from the exploitation of living labor in production. “Since the beginning of the 1820s, this phenomenon” (which might best be described as a fetishistic attribution of surplus-value to circulatory conditions rather than to production) “has led to the complete destruction of the Ricardian school” (373).

Surplus-value, in Marx's view, cannot arise from circulation, and any theory that makes it seems so, such as that propounded by the Ricardi-ans, is profoundly in error. But the "strangeness" of Marx's finding does pose a problem. To defend against the Ricardian position, Marx has somehow to reconcile his own theory of surplus-value production with the fact that the annual rates of exploitation plainly differ as a result of different turnover times, and that shortening turnover time does indeed increase the annual rate of surplus-value. Marx's answer is to draw a distinction between capital advanced and capital applied. Both capitals, A and B, apply variable capital at the same weekly rate, and produce the same surplus-value per week. The difference lies in the capital that has to be advanced. Capital A can get back the £500 capital advanced in five weeks and apply the capital again, while capital B has gradually to draw down the £5,000 initially advanced over the whole year. At the end of the first five weeks, capital B still has £4,500 in reserve, hoarded in effect, to pay laborers over the rest of the year. The point made much of in the previous chapter is again apparent—a good deal of surplus money has to exist within production to accommodate differences in turnover time.

The difference between cases A and B is not that faster turnover times generate higher rates of surplus-value, but that faster turnover times tie up less hoarded and inactive money capital over the course of a turnover period. If labor is paid £100 on a weekly basis, then capital A needs to advance five times that, while capital B needs to advance fifty times the weekly wage. This creates yet another reason to bring credit to the rescue, although Marx for some reason does not mention that here. Plainly, the idle money capital in case B could be sitting on the money market up until the point when it is actively needed. But

> the variable capital advanced functions as variable capital only to the extent that it is actually applied, and during the time for which it is applied; not during the time in which it remains advanced in reserve without being applied. But all circumstances that differentiate the ratio between advanced and applied variable capital can be summed up in the difference in turnover periods. ... The law of surplus-value production is that, with the same rate of surplus-value, equal amounts of functioning variable capital create equal masses of surplus-value.

The equal amounts of variable capital applied by A and B produce equal amounts of surplus-value no matter what the differences are in the ratios of capital advanced and capital applied. The variation in "the ratio between the mass of the surplus-value produced and the total variable capital advanced, rather than actually applied," is simply "an inescapable consequence" of the "laws put forward for the production of surplus-value" (375). Everything boils down to the difference between capital advanced and capital applied.

After excavation of some tedious arithmetic examples, Marx produces a formula for the annual rate of surplus-value as "s'n, i.e. the real rate of surplus-value produced in a turnover period by the variable capital consumed during this period, multiplied by the number of turnovers."

Marx's overall point is not that the differences in the annual rates of surplus-value are illusory or "merely subjective," but that they are "produced by the actual movement of capital itself" (381). Marx does not, therefore, dismiss the annual rate of surplus-value as illusory or insignificant, but he does show how it can be reconciled with the underlying laws of surplus-value production. Once we understand how the different annual rates are produced, then we can clearly see that the differences have nothing to do with purely circulatory phenomena but rest, as always, on the conditions of production and realization of surplus-value.

The significance of the annual rate of turnover remains to be emphasized, since it clearly has an impact on profit rates, and therefore must be taken into account in any discussion of the tendency for the rate of profit to fall. Marx intended a chapter on this in Volume III but did not write it. So Engels felt compelled to insert his own interpretation (based on the Volume II materials) in a separate chapter. He there clearly states that "the profit rates of two [similar] capitals vary inversely as their turnover times," and that the "direct effect of the abbreviated turnover time"—most spectacularly associated in his time with a revolution in transport and communications—"on the production of surplus-value, and therefore also on profit, consists in the increased effectiveness which this gives to the variable portion of capital," as articulated in the chapter we are here considering (C3, 165).

The implications for Marx's own arguments are potentially far-reaching. As is well known, Marx is often identified with a theory of a tendency for the rate of profit to fall. But we here see two direct and one indirect forces that may lead the profit rate to rise. The issue here is whether the profit rate is calculated on the basis of the capital applied or the capital advanced. For the capitalist, it is plainly the latter that matters. From the arguments set out in this and the preceding chapter, we can see that any reductions in circulation times relative to the working period will reduce the excess money capital needed to support the continuous production of surplus-value. Less money will need to be advanced, and profit rates (assuming a constant rate of exploitation in production) will rise. The same result will occur with any reduction in turnover times due to either shorter working periods and/or shorter circulation times. Engels plainly states in his Volume III chapter that shorter turnovers (other things held constant) mean higher profits. He also notes the astonishing reductions in turnover times then occurring through revolutions in transport and communications, which, by radically cutting back on the capital advanced, would surely be having a major impact on increasing the profit rate. We forget how dramatic some of these innovations were. The telegraph, for example, reduced the transmission time of information flow by a factor of 2,500 relative to sending letters in the mail (the internet decreased transmission times by a factor of only five relative to the fax). The coming of the railroads and of steamships had a far greater relative impact in the nineteenth century than did jet air transport in the twentieth.

We see here an added incentive, of which individual capitalists are all too aware, to find ways to further annihilate space with time, and to engage in the active pursuit of time-space compression in their business strategies. Capitalists who find ways to shorten working periods and/or circulation times (by finding quicker ways to get their commodities to market, for example) gain a higher profit on the capital they advance (even though the profit on capital applied is identical), provided that the costs associated with new production and circulation strategies do not offset their higher profits.

But the indirect way of dealing with these problems of circulation and turnover times, which hovers in the background of this chapter, is located in the development of the money market and the credit system. The industrial capitalist can cut down on the capital advanced to cover disparate circulation times by resort either to the services of the merchant capitalist and the banker, who will discount bills of exchange, or, more directly, by entering and exiting the money market with short-term borrowings and deposits of surplus capital. The former has the effect of reducing circulation time to zero, while the latter obviates the problem of advancing capital to cover the whole turnover time. What Marx clearly establishes here in Volume II is that a lot of surplus money capital has to be freely available to support the continuity of production activities. And he suggests, more or less in passing, that it is this that makes a money market and a credit system so necessary for the proper functioning of capitalism. In Volume III, as we saw earlier, he takes the argument further. The industrial circulation system is disaggregated into a duality of money and interest-bearing capital, on the one hand, and the extraction of surplus-value from production, on the other. How all of this impacts profit rates is unclear. Much depends on the relationship between the rate of interest and the rate of profit—and that, as is argued in Volume III, depends on the particularities of supply and demand conditions and competition. It is in this direction that these chapters help to advance Marx's own theoretical understandings, but unfortunately he fails to take up the full implications. This leaves a lot of unresolved problems for the general theory.

Towards the end of chapter 16, however, Marx does take up some of the more general social and political implications by looking at the market impacts of the circulation of variable capital. The £500 initially laid out as variable capital in his example ceases to be capital once workers receive it as wages. The workers "pay it out again in purchasing their means of subsistence … to the value of £500. A mass of commodities amounting altogether to this value is thereby annihilated. … It is consumed unproductively, as far as the worker is concerned, except in as much as he thereby maintains his labour-power, which is an indispensable instrument for the capitalist, in working condition" (384). Once again we encounter a concept of "unproductive" activity that seems strange, given that the reproduction of workers is fundamental for the sustenance of capital. But the logic is impeccable when we go back to Marx's stipulation that, for capital, the only form of production that matters is that of surplus-value, and that is not happening when the worker spends money on commodities and eats and sleeps at home. When the worker returns to the workplace, production of surplus-value is renewed. The £500 the capitalist gets back at the end of the first turnover period has been produced by the worker. So the £500 advanced by the capitalist as variable capital for the second period is in fact the equivalent of the worker's own product. Marx is here reiterating a claim made in Volume I, that in truth that product should belong to the direct producer (the laborer), and that it is only according to bourgeois right that it can be said to belong to the capitalist. The aim here, as in Volume I, is to delegitimize the general theory of bourgeois property rights and point up the contradiction within the Lockean view maintaining that rights to private property accrue to those who fruitfully mix their labor with the land while also asserting the right to exploit labor-power under the rule of capital.

The broader effects within the market also need to be considered. The capitalist A, who turns over the variable capital in five weeks, puts a weekly demand of £100 for wage goods into the market, and supplies an equivalent product of £500 value after five weeks. Capitalist B places the same weekly demand for wage goods, but does not supply the equivalent commodity value for £5,000 until the end of the year. The monetary imbalances in supply and demand conditions can become problematic, and we will take up the full consequences of this shortly.

Marx does offer a somewhat unusual commentary on this situation that warrants some consideration:

> If we were to consider a communist society in place of a capitalist one, then money capital would immediately be done away with, and so too the disguises that transactions acquire through it. The matter would simply be reduced to the fact that the society must reckon in advance how much labour, means of production and means of subsistence it can spend, without dislocation, on branches of industry which, like the building of railways, for instance, supply neither means of production nor means of subsistence, nor any kind of useful effect, for a long period, a year or more, though they certainly do withdraw labour, means of production and means of subsistence from the total annual product. (390)

Up until this point, the idea of communism has been largely confined to that of associated laborers freely managing and organizing their own labor for a social purpose. But here there looms a larger problem of coordination in the production of long-term improvements and infrastructures that will absorb large amounts of labor and means of production for a considerable period of time without providing immediate benefits. Notice that Marx appeals not to the state, but to some unspecified way in which "society must reckon" and presumably decide on the prosecution of such large-scale infrastructural projects. Notice, also, that he also asserts that, under communism, "money capital will immediately be done away with," which presumes the existence of some other form of value determination (such as social use-values), which remains unspecified. This commentary also suggests (and there are other passages that support this view) that a central problem within a capitalist mode of production lies in the monetization of circulation and the profit-oriented circulation of money capital.

While Engels may have been correct to complain of Volume II that "it does not contain much material for agitation," this passage signals a significant development in Marx's political vision of communism. It will become even more compelling (though largely unstated) in Part 3 of Volume II. It raises questions of how "society" might rationally coordinate and "reckon" aggregate divisions of labor and manage long-term developmental projects in the absence of market signals in a way that enhances rather than hinders the freedom of associated laborers to pursue their collective interests. What the analysis here shows, for the first but not the last time in *Capital*, is the existence of a central contradiction at the heart of the communist project. For in the same way that individual bourgeois liberty and freedom only became possible in the context of the draconian private-property-based disciplinary apparatus that underpins a capitalist mode of production, so communism has to find a way to redefine and protect the liberty and freedom of associated labor within an overall framework of calculation, coordination and reckoning that circumscribes and disciplines the production of necessary social and physical infrastructures even as it enhances prospects for human emancipation.

In capitalist society, on the other hand, where any kind of social rationality asserts itself only *post festum*, major disturbances can and must occur constantly. On the one hand there is pressure on the money market, while conversely the absence of this pressure itself calls into being a mass of such undertakings, and therefore the precise circumstances that later provoke a pressure on the money market. The money market is under pressure because large-scale advances of money capital for long periods of time are always needed here. This is quite apart from the fact that industrialists and merchants throw the money capital they need for the carrying on of their business into railway speculations, etc. and replace it with loans from the money market. (390)

This process provides a technical basis for all of the "insane forms" and "crazy" behaviors identified in the Volume III investigations of finance capital and the credit system:

Since elements of productive capital are constantly being withdrawn from the market and all that is put into the market is an equivalent in money, the effective demand rises, without this in itself providing any element of supply. Hence prices rise, both for the means of subsistence and for the material elements of production, during this time, too, there are regular business swindles, and great transfers of capital. A band of speculators, contractors, engineers, lawyers, etc. enrich themselves. These exert a strong consumer demand on the market, and wages rise as well. As far as foodstuffs are concerned, agriculture is given a boost by this process. But since these foodstuffs cannot be suddenly increased within the year, imports grow, as well as the import of exotic foods (coffee sugar, wine, etc.) and objects of luxury. Hence over-supply and speculation in this part of the import trade. On the other hand, in those branches of industry in which production can be increased more quickly (manufacture proper, mining, etc.) the price rise leads to sudden expansion, soon followed by collapse. (390–1)

This is a radical departure from the usual language of Volume II and links up directly, and rather marvelously, with the chapters on finance and credit in Volume III, confirming the underlying unity between the two volumes. But Marx goes even further when he examines the effect on labor:

The same effect occurs on the labour market, drawing great numbers of the latent relative surplus population, and even workers already employed, into the new lines of business. Undertakings of this kind, such as railways, generally withdraw from the labour market on a large scale a certain quantity of force, which can derive only from branches such as agriculture, etc. where only strong lads are needed. This still occurs even after the new undertakings have already become an established branch of industry and the migrant working class needed for them has already been formed e.g. when railway construction is temporarily pursued on a scale greater than the average. A part of the reserve army of workers whose pressure keeps wages down is absorbed. Wages generally rise, even in the formerly well-employed sections of the labour market. This lasts until, with the inevitable crash, the reserve army of workers is again released and wages are pressed down once more to their minimum and below it. (391)

The unity expressed with the theses of chapter 25 of Volume I is clear. But to this Marx adds an even more pertinent and potentially explosive theoretical observation in a footnote:

Contradiction in the capitalist mode of production. The workers are important for the market as buyers of commodities. But as sellers of their commodity—labour-power—capitalist society has the tendency to restrict them to their minimum price. Further contradiction: the periods in which capitalist production exerts all its forces regularly show themselves to be periods of over-production; because the limit to the application of the productive powers is not simply the production of value, but also its realization. However, the sale of commodities, the realization of commodity capital, and thus of surplus-value as well, is restricted not by the consumer needs of society in general, but by the consumer needs of a society in which the great majority are always poor and must always remain poor. (391)

That wage repression in the interest of surplus-value extraction for capital poses such a difficulty of sustained effective demand has long been one of the central contradictions within the laws of motion of capital. It is here explicitly recognized as such. The significance of workers as consumers, and hence as agents for the realization of the value of commodity capital in the market, is in fact an important emergent theme throughout the whole of Volume II. In Volume I, this issue was ignored simply by assuming that all commodities trade at their value. This is one of those moments in *Capital* where wages—an aspect of distribution largely ruled out as a particularity—are reintroduced into the heart of the circulation process of industrial capital in general, with major impacts upon the contradictions within the laws of motion of capital.

In bringing this chapter to a close, Marx extends his thinking beyond his normal assumption of a closed system of trade. The distance of the market has to be considered “as a specific material basis” for longer circulation, and hence turnover times. The example is that of cotton cloth and yarn sold to India. The producer sells to the merchant, who resorts to the money market for means of payment. The exporter later sells on the Indian market. Only then can the equivalent value flow back to Britain (either in money or commodity form) to provide means of payment equivalent to that required for new production (the money, of course, flows back into the money market). The gaps between supply and effective demand are similar to those already outlined in the case of the annual turnover of capital B. The gap between supply and demand has to be covered by resort to the money market or credit. But there is much that can go wrong here:

> It is also possible that the yarn is sold on credit in India itself. With this credit, products are bought in India and sent as a return shipment to England, or else drafts are remitted to this amount. If this process is delayed, the pressure builds up on the Indian money market, which may react on England to produce a crisis here. This crisis, in its turn, even if it is combined with the export of precious metals to India, provokes a new crisis in that country, on account of the bankruptcy of English firms and their Indian branches, who were given credit by Indian banks. Thus a simultaneous crisis arises both on the market for which the trade balance is unfavourable, and on that for which it is favourable. The phenomenon can be still more complicated. England may have sent silver bullion to India, but India's creditors now press their demands here, and in a short while India will have to send its silver back to England.

The point, of course, is that "what appears as a crisis on the money market in actual fact expresses anomalies in the production and reproduction process itself" (393). This is the true insight that comes from the study of differential turnover times, particularly those involved in the long-distance trade.

I cite this instance to show two things. Firstly, that there is nothing new about monetary crises rumbling around contagiously from one place and one moment in the circulatory process to another. It is, so to speak, very much in capital's nature to perform in such a way. But, secondly, and internally to Marx's own theorizing, there are plainly strong underlying connectivities between all three often seemingly disparate volumes of capital. There are innumerable threads through which "the whole is joined together" into that "organic totality" envisaged in the introduction to the *Grundrisse*. These relations are only tentatively, and in this chapter rather tenuously, established. But that Marx perpetually managed to keep them constantly in mind over more than a quarter-century of relentless study, I find simply amazing.

ON CHAPTER 17 OF VOLUME II: THE CIRCULATION OF SURPLUS-VALUE

In this chapter Marx isolates the circulation of surplus-value for close inspection. The chapter generates high expectations but does not really deliver, leaving a critical aspect of theory in a somewhat ambiguous but tantalizing state. The central question it poses, articulated well into the chapter, "is not: where does surplus-value come from? But rather: where does the money come from which it is turned into?" (404). Does the production of gold as the preeminent money commodity provide the extra money needed to realize the surplus-value? If not (and it is fairly clear that

Marx rejects this possibility, though without denying the peculiar role of the gold producers), then this leaves us with the awkward question: Where does the effective demand come from to realize the surplus-value that is perpetually being thrown upon the market?

Marx begins the chapter by going back to the case of the two capitalists, A and B, the second of whom does not realize the total value of £5,000 until the end of the year. In this latter case, “the surplus-value is not realized and can therefore be consumed neither individually nor productively. So far as individual consumption is concerned surplus-value is anticipated. Funds for this must be advanced” (394). The funds advanced have to cover not only the capitalist’s consumption but also all the repairs and maintenance of fixed capital. For the capitalist operating on a very short turnover time, these funds come out of already realized surplus-value, and do not have to be advanced. When the surplus-value is realized as capital—“capitalized,” as Marx puts it—is therefore a crucial question. The longer the capitalist has to wait before putting the commodity on the market, the more that capitalist has to have money in reserve to cover his consumption and incidental expenses (such as repairs and maintenance).

The “relation between the capital originally advanced and the capitalized surplus-value becomes still more intricate” when the credit system intervenes, but Marx, as usual in Volume II, does not explore that question in any great detail here. The main issue is what happens to the surplus-value when it is capitalized. Marx refers back to chapter 24 of Volume I to remind us of the necessity for capital to be reproduced on an expanding scale (the rule of “accumulation for accumulation’s sake,” as he put it there). So part of the surplus-value must be put to expansion either “extensively in the form of the addition of new factories to old ones, or intensively in the enlargement of the former scale of operations” (395).

Marx describes the various forms this expansion can take. But, in each case, the relation between the amount of surplus-value capitalized and the amount required to expand production places limits on the capacity to expand immediately. Hoarding capitalized surplus-value over several turnover periods may be required, until sufficient funds are built up to invest in expansion at a given scale of operations (building an additional new factory and equipping it with machinery, for example). During this period “the money capital that the capitalist cannot yet apply in his own business is employed by others from whom he receives interest. It functions for him as money capital,” but “in someone else’s hands … it actually operates as capital.” Over time, the amount of money available on the money market tends to increase, so that a large part of the surplus-value produced “is absorbed again from the money market for the expansion of production.” While Marx does not mention it, the increasing supply of money into the money market increases the supply of loanable capital, and therefore presumably leads to lower rates of interest.

After a brief return to what happens under conditions of hoarding, Marx offers us two pages of long quotations from the political philosopher William Thompson, who published his *An Inquiry into the Principles of the Distribution of Wealth* in 1824. I will not go over these, but I think it is very useful to read what Thompson has to say, because it is clear that there were bourgeois analysts who held very perceptive and deeply critical views of the capitalist development going on around them. It is significant that Marx does not offer any critical commentary on Thompson's account here (nor does he elsewhere, to my knowledge, when he cites Thompson's work).

Throughout *Capital*, Marx typically adopts the tactic of examining the reproduction of capital first as if it is engaged in simple reproduction, and secondly under the far more realistic conditions of continuous expanded reproduction. He did so in Volume I and will do so again in Part 3 of Volume II, which I will shortly consider. The reason for this separation is that it is far easier to determine basic relations in the case of simple reproduction.

So the circulation of surplus-value is first looked at through the lens of simple reproduction. The surplus-value produced and realized over several turnovers "is consumed individually, i.e. unproductively, by its owners, the capitalists" (399). Some of the surplus-value has to take on money form, otherwise there would not be the money to buy the commodities needed for workers and capitalists to consume. When we look back at the chapter on money in Volume I, we see that the "mass of metallic money existing in a country cannot just be enough to circulate commodities" because it has "to cope with fluctuations in the circulation of money" which arise for a number of different reasons (fluctuations in commodity outputs and prices, and so on). Growth in the economy in general calls for growth in the annual production of gold and silver, unless the growth can be accommodated by increasing the velocity of circulation or using money more and more as a means of payment. Hence, "a part of the social labour-power and a part of the social means of production must therefore be spent each year in the production of gold and silver." This leads Marx to a detailed analysis of what happens in the case of the production of gold. I will not consider the details of this case here, because I think it is irrelevant to the general conditions of money creation and use in contemporary capitalism and, in any case, does not help answer the real question that is then posed: Where does the money come from into which surplus-value is turned?

The problem is "that the capitalist … casts into circulation an excess over and above his capital and withdraws this excess from it again. The commodity capital that the capitalist casts into circulation is of greater value … than the productive capital he has withdrawn in labour-power and means of production from the circulation sphere" (404). "But before the commodity capital is transformed back into productive capital and the surplus-value contained in it is spent, it must be turned into money. Where does the money for this come from?" This was, Marx claimed, a problem for which no one in classical political economy had an adequate answer.

Let me give a simple explanation of the structure of this problem. Throughout *Capital*, Marx assumes (at least up until the chapters on money capital and finance) that demand and supply are in equilibrium. But we here encounter a situation not only where that is not the case, but where the capitalist strives mightily to widen the gap between supply and demand as far as possible. Put simply, the capitalist's demand is for means of production (c) and for labor-power (v), but he supplies to the market commodity values that are equivalent to c + v + s, so that the supply of commodity values systematically exceeds the demand. Furthermore, the desire to maximize surplus-value pushes this discrepancy to a maximum. Where does the extra effective demand equivalent to the surplus-value come from? If it does not materialize, then capital circulation ceases to be.

The extra surplus-value "is cast into circulation in the commodity form. … But the extra money needed for the circulation of this additional commodity value is not provided by the same operation." This difficulty, Marx warns, "should not be circumvented by plausible subterfuges."

Marx then goes through some of these "plausible subterfuges." Most of these rest on the timing through which different capitals enter the market at different moments, on the flows of constant and fixed capitals in relation to each other, or upon the time-structure of how the revenues of workers and of capitalists are expended. But "the general answer has already been given." Now this is one of those moments where we have to be sure whether this is Marx's general answer or the general answer of the political economists which merely constitutes a "plausible subterfuge": "if a mass of commodities of *x* times £1000 is to circulate, it in no way affects the quantity of money needed for this circulation whether the value of this commodity mass contains surplus-value or not, or whether the mass of commodities is produced under capitalist conditions or not. *Thus the problem itself does not exist*" (407). The problem is then reduced to that of regulating the supply of money in a country sufficient to lubricate all commodity exchanges. This, I think Marx is saying, is the greatest and most plausible subterfuge of all: it is equivalent to the "childish babble" of Say's law criticized so savagely in Volume I.

But it does leave behind "the *semblance* of a special problem. For here it is the capitalist, the man who casts the money into circulation, who appears as the point of departure." The capitalist lays out variable capital (v) and money for constant fixed and fluid capital (c):

> Beyond this, however, the capitalist no longer appears as the point of departure for the quantity of money that exists in circulation. All that exist now are two starting points, the capitalist and the worker. All third parties either must receive money from these two classes for the performance of services, or, in so far as they receive money without providing services in return, they are co-proprietors of surplus-value in the forms of rent, interest, etc. (408)

What Marx is boldly doing here, is proposing a simple two-class model—constituted by workers and capitalists—of a capitalist mode of production, and then posing the question of who furnishes the extra demand to realize the surplus-value in such a world. “As far as the workers are concerned, it has already been said that they are only a secondary point of departure, whereas the capitalist is the primary point of departure for the money cast into circulation by the workers.” So the solution to the problem must lie with the capitalists: “How can the capitalist class continue to extract £600 from circulation if it only ever puts £500 in? Out of nothing, nothing comes. The entire class cannot extract anything from the circulation sphere that was not put into it already” (408). The answer is simply stunning:

> In point of fact, paradoxical as it may seem at the first glance, the capitalist class itself casts into circulation the money that serves towards the realization of the surplus-value contained in its commodities. But note well: it does not cast this in as money advanced, and therefore not as capital. It spends it as a means of purchase for its individual consumption. Thus the money is not advanced by the capitalist class, even though this class is the starting point of its circulation. (409)

Marx illustrates this with the case of a capitalist who advances money capital of £5,000 with £1,000 for variable capital, producing £1,000 surplus-value over the course of a whole year. The capitalist “has to cover his individual consumption for the first year out of his own pocket, instead of using the product produced for nothing by his workers. He does not advance this money as capital. He spends it” on commodities whose value he consumes away until he gets his surplus-value at the end of the year (409). Marx assumes here

> that the sum of money that the capitalist casts into circulation to cover his individual consumption until the first reflux of his capital is exactly equal to the surplus-value that he produces and hence has to convert into money. This is obviously an arbitrary assumption in relation to the individual capitalist. But it must be correct for the capitalist class as a whole, on the assumption of simple reproduction. (410)

This is a beautiful example of Marx using drastic powers of simplification and abstraction to identify a vitally important feature of a capitalist mode of production. He invokes this result elsewhere—as we have seen, for example, in Volume III, though there he concedes the importance of an autonomous class of nonproductive consumers. But the implications are far-reaching. For one thing, this result punches a hole in the theory of the rise of capitalism as a result of the abstinence of a capitalist class who virtuously scraped and saved to get capital to invest. Historically, if this happened (as may have been the case with the early Quaker capitalists in Britain), then it would indeed require a parallel class of non-virtuous consumers whose only role was to consume to the hilt without producing anything. The existence of such a class in Britain in the eighteenth century was not only patently obvious (read a Jane Austen novel), but was justified by Malthus in his own efforts to answer the question of where the aggregate demand might come from to absorb the ever-expanding surplus product (the other solution was expanding foreign trade, which Rosa Luxemburg, in *The Accumulation of Capital*, converted into imperial and colonial domination of foreign markets). The result also has implications for how we might interpret the reproduction schemas of Part 3 of Volume II, which we will shortly be considering—though, in the extensive and controversial Marxist literature that has accumulated around the interpretation of these, I rarely if ever see this very important result mentioned.

After the first turnover period, during which the capitalist pays for his own consumption, the capitalist can then utilize the surplus-value produced by the workers and realized through his own expenditures on consumption to circulate as revenues over all successive turnover periods (assuming simple reproduction). This corresponds to Marx's argument that the capitalist may indeed advance his own money capital for production and use his own money reserves for consumption. But, over time, those money reserves increasingly represent products of the laborer, who has produced not only the variable capital needed to reproduce himself but also the surplus-value that the capitalist appropriates as revenues for purposes of consumption. How this all works under conditions of expanded reproduction has yet to be determined.

Instead of developing these insights, however, Marx returns to the question of the gold producers and the complicating fact that the surplus-value produced in gold production is itself already in money commodity form, so the question of how it is to be turned into money cannot arise. In fact "the gold-producing group constantly pump more money in than they withdraw from it in means of production" (411). This has implications for trade relations between countries, some of which produce gold while others do not. But, even though they inject more money value into circulation than they withdraw from it for purposes of production, that excess cannot possibly match the vast amount of surplus-value needing to be realized in the market.

Marx then considers the more interesting question of how the circulation of variable capital intersects, as it must, with the circulation of surplus-value. Plainly, a significant part of aggregate effective demand in a capitalist mode of production is constituted by workers' consumption, and this depends on wage rates and employment: "A greater outlay of variable money capital means a correspondingly greater quantity of monetary means in the hands of the workers. … This gives rise to a greater demand on the part of the workers. A further consequence is a rise in the price of commodities" (414). There has been a long-standing tendency on the part of bourgeois analysts to attribute inflation to wage pressures and relatively full employment, but Marx appears here to be somewhat critical of this line of reasoning. It is certainly the case that, "as a result of rising wages the demand of the workers for necessary means of subsistence will grow. Their demand for luxury articles will increase to a smaller degree, or else a demand will arise for articles that previously did not enter the area of their consumption" (414). There will undoubtedly be "temporary oscillations" in prices and outputs, along with adaptations in the market to these new conditions, but Marx is very skeptical of any long-term trend toward inflation: "If it were within the capacity of the capitalist producers to increase the prices of their commodities at will, then they could and would do so even without any rise in wages. Nor would wages rise with a fall in commodity prices.” Deflation is, in short, just as likely as inflation: “The capitalist class would never oppose trade unions, since they would always and in all circumstances be able to do what they now do exceptionally under certain particular and so to speak, local conditions—i.e. use any increase in wages to raise commodity prices to a far higher degree, and thus tuck away a greater profit” (414). These were, of course, precisely the “exceptional conditions” that prevailed in the post-1945 period in the US and much of Europe, when capital was forced by political circumstances to accept some greater degree of trade-union and working-class power, and responded with inflationary tactics that allowed corporations to “tuck away” immense profits in spite of rising wages and relatively full employment.

When it comes to expanded reproduction, Marx fails to pursue an obvious line of enquiry that derives from the simple fact that part of the surplus-value now has to be invested in productive consumption (new means of production and augmentation of labor-power) that diminishes the capacity for bourgeois consumption. If the capitalist has to abstain on personal consumption in order to launch capital into further productive consumption, then he cannot possibly mop up the extra surplus-value then produced without again delving even deeper into his own monetary reserves. The idea that those reserves are bottomless is patently absurd. The problem of where the expanded aggregate demand can come from needs to be addressed, but Marx fails to do so adequately.

The clearest answer I can find is that capitalists solve the difficulty by the simple and long-standing practice of buying now (thus realizing the surplus-value) and paying later (after the surplus-value has been monetized). In other words, they deficit-finance the expansion. This involves the money market and the credit system with which, as we have seen, Marx is reluctant to engage (even as he concedes its absolute necessity) throughout Volume II. Hints that this might be the solution can be found, as we have seen, in the Volume III exploration of the role of the money markets, finance capital and the credit system. Pursued to its ultimate point, this line of argument would suggest that that accumulation of capital through the production of surplus-value would have to be paralleled by an accumulation of debt in the realization of that surplus-value in the market.

Marx comes close to tentatively admitting as much. A part of the surplus-value is invested in expansion, which diminishes the amount available to circulate as revenue for realization. Extra surplus-value is produced. “The same question comes up again as before. Where does the extra money come from to realize the extra surplus-value that now exists in the commodity form?” (419). Marx, as before, goes through a variety of solutions proposed in classical political economy that attempt to solve the problem through an examination of monetary circulation, and ultimately through the activities of the gold producers. He seems skeptical of all such solutions apart from the resort to credit, which has at least some technical possibilities: “in as much as the auxiliary means that develop with credit have this effect [i.e. solve the problem of where the extra money might come from] they directly increase capitalist wealth. … This also disposes of the pointless question of whether capitalist production on its present scale would be possible without credit … i.e. with a merely metallic circulation. It would clearly not be possible. It would come up against the limited scale of precious-metal production. On the other hand, we should not get any mystical ideas about the productive power of the credit system, just because this makes money capital available or fluid.” Unfortunately, and frustratingly, he then adds: “but the further development of this point does not belong here” (420–1).

I think we can infer from this that the accumulation of wealth is accompanied by an accumulation of debts within the credit system. But this does not mean that the accumulation of such debts leads to the accumulation of wealth. The latter always depends upon the productive powers of labor.

The final section of the chapter considers how money for new investments is first built up into a hoard of latent capital, until there is enough to build a new factory or whatever, assuming the credit system “is nonexistent” (421). Under these circumstances, the capitalist who “stores money up” must have first “sold without buying.” Among many individual capitalists this poses no particular problem. “But difficulties start to arise” in the case of “general accumulation within the capitalist class. Outside this class, on our assumption—that of universal and exclusive domination of capitalist production—there is no other class except the working class. The total purchases of the working class are equal to the sum of their wages, i.e. the sum of the variable capital advanced by the entire capitalist class as a whole. This money flows back to the latter through the sale of their product to the working class.” But the working class can never “buy the part of the product which contains the constant capital let alone the surplus-value which belongs to the capitalists.” There has to be, as already argued, “a monetary fund” that functions as a “circulation fund,” as distinct from the “latent money capital” required for expanded reproduction (422–3). When Marx considers where the latent money capital might be found, he identifies bank deposits, government paper and shares. But where is the circulation fund to be used to realize the surplus-value? And what happens when money has to be used and even hoarded for this purpose? Marx unfortunately gives no answer.

CHAPTER TEN

The Reproduction of Capital (Chapters 18–20 of Volume II)

In Part 3 of Volume II, Marx imagines an economy divided into two grand departments. Department 1 produces means of production for other capitalists (everything from raw materials and partially finished products to machinery and other fixed-capital items including the built environment for production). Department 2 produces goods to be consumed individually by workers and capitalists (also including the built environment for consumption). The department producing consumer goods has to buy its means of production from department 1. The workers and capitalists operating in department 1 have to purchase their consumer goods from department 2. If such an economy is to work smoothly, then the exchanges between the two departments have to balance each other. Under conditions of simple reproduction (no expansion), the value of the means of production that flow to department 2 has to be equivalent to the value of the consumer goods that flow to workers and capitalists in department 1.

This is the basic model of the economy that is examined in these chapters. It is useful to describe the general character of the model at the outset. Once we have firmly grasped the general form of it, then it is much easier to deal with the detailed enquiry with which Marx surrounds it.

The so-called "reproduction schemas" are described on pages 471–4. While Marx uses an arithmetic example, it is easy to give it algebraic form. The total output of each department in a given year can be represented in value terms as constant capital (c) + variable capital (v) + surplus-value (s). Marx sets aside the question of fixed capital and different turnover times, and assumes that everything is produced and consumed on an annual basis. He then sets up a simple arithmetic example, calculated in units of value, in which the rate of surplus-value (s/v) and the value composition (the ratio of c/v) are equal in the two departments. So, on an annual basis, he postulates:

Department I 4,000c + 1,000v + 1,000s = 6,000 means of production

Department II 2,000c + 500v + 500s = 3,000 consumption goods

Algebraically, this can be represented as:

Department I $c1 + v1 + s\ 1 = w1$ (the total value output of means of production)

Department II $c2 + v2 + s2 = w2$ (the total value output of consumption goods)

The total demand for means of production is $c1 + c2$. The total demand for consumption goods is $v1 + v2 + s1 + s2$. If we assume that demand and supply are in equilibrium (474), then:

$$w2 = c2 + v2 + s2 = v1 + v2 + s1 + s2$$

which, after eliminating similar terms on both sides, reduces to

$c2 = v1 + s1$

The demand for means of production in department 2 must equal the demand for consumer goods emanating from department 1 if the necessary value proportionalities to assure continuous and balanced reproduction are to be achieved. In the arithmetic example, the 2,000c needed to produce consumer goods in department 2 is equivalent to the 1,000v + 1,000s personal consumption of the workers and capitalists operating in department 1. “The result of all this,” as Marx puts it, “is that, in the case of simple reproduction, the value component v + s of the commodity capital in department 1 (and therefore a corresponding proportionate part of department 1’s total commodity product) must be equal to the constant capital … precipitated out by department II as a proportionate part of its total commodity product” (478).

Plainly, there are all sorts of questions that then follow: How, for example, can the processes of capitalist production and realization be so arranged that the correct proportionalities are (at least roughly) achieved? What happens when fixed capital is unevenly deployed between departments and when a variety of turnover times are encountered? And, above all, in chapter 21 the all-important question is posed of how accumulation can proceed on an ever-expanding scale while keeping the proportionalities in line?

The schemas as Marx devised them incorporate all manner of assumptions—there are only two classes of workers and capitalists (as briefly laid out in chapter 17); only two sectors, producing means of production and means of consumption (though at one point he does divide means of consumption into necessities and luxuries); demand and supply are in equilibrium; everything turns over in one year; there is no technological change; and everything exchanges at its value—just to mention the main ones. While Marx initially recognizes that he ought to examine the processes of reproduction “both in value and in material” (use-value) terms (469), in practice he works out the proportionate relations between the two departments solely in values, thus assuming that the physical quantitative requirements for reproduction are automatically met. There are plenty of problems that derive from these assumptions. The complexities that arise from their relaxation are mind-boggling.

Part 3 of Volume II presents a working model of how a capitalist mode of production as a whole gets reproduced through the continuous circulation of capital. It is clearly meant as the culmination of the argument in Volume II. It therefore parallels how Part 7 of Volume I brings together the many insights earlier generated in that volume. Both volumes contain preparatory chapters on simple and then expanded reproduction. But there are some significant differences. In Volume I, the “General Law” synthesizes many of the findings earlier established, to produce a working model that explains the production of an expanding industrial reserve army of workers that is subject to unemployment and increasing impoverishment. While Volume II uses the distinctions between the different circuits of capital set out in the first four chapters to good effect, it abstracts from many of the other key findings—particularly regarding fixed-capital circulation and differential turnover times—to construct a tentative schema of the expanding reproduction of capital.

In these schemas, it should be noted, the consumption of workers takes a "relatively decisive share" (490). If the schemas point to anything in the way of a politics, therefore, it is to the necessity to stabilize worker incomes in order to harmonize the relationship between the total output of means of production and the total demand for consumer goods. This contradicts the findings of Volume I, where Marx envisages the increasing impoverishment of the working class as an inevitable outcome of free-market capitalism. Marx only hints at this contradiction, however, because the equivalent chapter to the "General Law" chapter is missing from Volume II. It is interesting to surmise how we might have read Volume I if the "General Law" chapter had not been written—and we therefore had only the chapters on simple and expanded reproduction.

Conversely, we need to imagine what the equivalent chapter in Volume II to the "General Law" chapter might have looked like. Would it, for example, have imagined a significant number of workers in a significant number of places being increasingly drawn into endless and increasingly mindless consumerism in order to stabilize the conditions for realization of values in the market? Would it have shown, furthermore, how uninterested such workers might become in socialist revolution given how wrapped up they were in seductive capitalist consumerism? What role would anti-consumerism (of the sort that indeed flourished in the 1960s in some parts of the world, and which is now central to much environmental politics) play in revolutionary movements? It is hard to imagine, of course, that Marx would ever have written such a chapter, and to most dedicated Marxists the very idea would almost certainly be denounced as scandalous.

But what is so interesting about Marx's reproduction schemas is that they in no way deny such possibilities (which is almost certainly why Rosa Luxemburg, for one, was so upset at their contents). And, to the degree that 70 percent of economic activity in the United States and other advanced capitalist countries is now driven by consumerism (as opposed to half that in contemporary China, which is probably closer to the conditions that prevailed in Marx's own time), and that many so-called "affluent" workers are indeed deeply enamored of the consumerism of the capitalist world they inhabit (with all its evident faults), so we have here at hand some tools to analyze a political-economic situation of this kind. Clearly, the contradiction with the thesis of increasing impoverishment of chapter 25 in Volume I poses serious problems. But good Marxists should surely never flee from the site of such a contradiction merely because it is serious as well as awkward.

But there are ways to finesse this central contradiction. Marx on a couple of occasions notes the existence of what we now refer to as a "middle class"

(407). The primary role of that class under contemporary conditions is to provide the backbone of consumption, as well as general political support for a functioning capitalist democracy. This layer in the population was even invoked in Volume I, when Marx noted how the regulation of the working day came to fruition as "capital's power of resistance gradually weakened, while at the same time the working class's power of attack grew with the number of its allies in those social layers not directly interested in the question" (C1, 408–9). Something similar is also suggested in one of the several study plans that Marx devised in the *Grundrisse* (264), where he promises studies on "Taxes or the existence of the unproductive classes." And in his seminal account of the political forces that produced the Paris Commune of 1871, Marx gives considerable prominence to the role of the debt-encumbered "nascent middle classes" (the "petite bourgeoisie" described also in *The Eighteenth Brumaire of Louis Bonaparte*, which analyzed the counterrevolutionary movement after 1848) in the political struggles of these times.[6]

The importance of such social layers in supplying the necessary effective demand was first set out by Malthus (though the class of consumers he had in mind were more purely aristocratic and parasitic than would now be politically feasible—except in, say, the Gulf states). Since it has long been accepted that the growth of a middle class, employed largely in managerial, administrative and service roles on steady and adequate salaries, has been critical to the economic, social and political stabilization of capitalism, it could then be argued that the contradiction we are here encountering derives more from Marx's assumption of a two-class model than from any real situation. The contradiction in a three-class situation could then play out as wage repression of the sort envisaged in Volume I for the lower working classes (for example, in China), and a flow of revenues to a middle class (incorporating a layer of affluent workers as well as unproductive classes) of consumers (for example, in the US, where some workers have achieved home ownership and a suburban lifestyle) adequate to supply the necessary effective demand as envisaged in Volume II. Middle-class revenues, in Marx's scheme of things, would ultimately have to derive, of course, from value and surplus-value production, though under contemporary conditions this would undoubtedly be supplemented by debt-fueled state expenditures on the consumption fund and expanding credit availability to boost middle-class consumerism (particularly with respect to housing demand). Interestingly, it is now generally acknowledged that the standard of living of this middle class is seriously under threat in North America and much of Europe—partly because of excessive indebtedness—and this is directly associated with the loud laments of deficiencies in aggregate effective demand to sustain the economy. The potential growth of internal consumer demand through the formation of a middle class in China and other developing countries is then hopefully postulated as a compensating movement. The current pressure, both internal and external, for the Chinese policymakers to take active steps to stimulate the internal market is very strong. Demands are also heard from influential policymakers that those countries with trade surpluses, such as Germany, relax their penchant for wage repression (Volume I) and boost their consumerism (Volume II) to aid overall economic growth (so far Germany has refused). Thinking about contemporary situations within the general framework of the reproduction schemas in mind is, I find, very helpful, provided we deploy them flexibly and expansively.

But the other way to finesse the problem flows directly from the fact that productive consumption derives from reinvestment in expansion. There is no golden rule to fix the relation between capitalist-class personal consumption and its incentives or needs to reinvest in expansion. In Volume I, this decision was depicted as a Faustian conflict in the breast of every capitalist between the desire for enjoyment and the need or urge to reinvest. But reinvestment depends not only on the power and intensity of the coercive laws of competition, but also on the expectations and prospects for high profits—which in turn depend on the capitalists' approach to future risk and uncertainty. Whatever the case, the expansion of aggregate demand is as sensitive to waves of expansion and reinvestment as it is to expansions in personal consumption of workers, capitalists, or some other layer of the population.

There are other significant differences to Volume I. Marx in Volume I seems much less interested in the technical details than in the reproduction of the class relation between capital and labor, and in "the historical mission" of a bourgeoisie that finds itself committed to endless accumulation ("accumulation for accumulation's sake"). He is more interested in the *why* than in the *how*. In Volume II, concern for the why largely disappears. Instead, he builds a technical model of *how* capital might accumulate in perpetuity. In reading these chapters, it is important to remember that the reproduction of the class relation, though rarely invoked, is still central.

Given the mathematical form of the reproduction schemas, it is not surprising to find that they have occasionally been elaborated upon using the high-powered mathematical tools available to contemporary economics. While, therefore, much of Volume II remains in the shadows of Marxist thinking and theorizing, the reproduction schemas are better known, and have been scrutinized and further developed by economists of both Marxist and non-Marxist persuasions. For this same reason, the schemas also seem to have played a subterranean role in the development of mainstream modern economic growth theory. So, while literary theorists, historians, theologians, philosophers and others of their ilk interested in Marx's writings rarely discuss the schemas and their interpretation, the economists have reveled in them. Some economists have even concluded that Marx was finally coming to his senses and abandoning his foolish dialectical and relational mode of enquiry in favor of embracing the methods of conventional economic science.

I disagree with this view. Certainly, the overt dialectical/relational content of Part 3 is muted, if not absent (the ghost of Hegel disappears). But we have seen all along that Marx is more than a little prepared to accept general (and non-dialectical) frameworks proposed in bourgeois political economy. He frequently embeds technical “modeling” exercises of a sort acceptable to conventional economics (such as that of the General Law of Capitalist Accumulation in Volume I) in a broader dialectical/relational and historical critique. That this broader critique is overtly lacking throughout much of Volume II proves nothing about any shift in method. As became clear when we connected the far more relational and historical analysis of merchants’ and interest-bearing capital from Volume III with the technical expositions of Volume II, the overall nature of Marx’s project in *Capital* entails a powerful dialectical, social and relational critique that emerges from the contradictions of bourgeois political-economic science. It is, I would argue, up to us either to uncover that critique or to inject it into the incomplete Part 3 of Volume II.

The obvious way to do this is to ask: Where are the hidden contradictions and antinomies in schemas that seem to describe the smooth and continuous expansion of capital accumulation? One obvious contradiction is the clash already identified between the tendency toward wage repression and increasing impoverishment laid out in Volume I and the “decisive” role of working-class consumption for the realization of values in Volume II. Another arises out of Marx’s analysis of the impossibility of reconciling fixed-capital replacement, repair and maintenance with the equilibrium conditions described in the schemas except by way of crises. There are, as we shall see, other possibilities.

It is useful to insert here one example of the later development within mainstream economics of the basic ideas incorporated in Marx’s schemas. I do so not only to indicate their subsequent importance, but also to give a clearer idea of what the schemas might be about, and to show their potentiality for practical application. Toward the end of the 1930s, Wassily Leontief, an economist of Russian origin who came first to Germany and then to the United States in the 1930s, elaborated on Marx’s models to create what became known as “input-output analysis.” Figure 6 illustrates a typical Leontief matrix, with data on inputs to different industries (the industries the inputs come to) inserted down the vertical columns and the data on outputs of those industries (where they go to) arranged horizontally. With such an input-output matrix, it is possible to estimate how much in the way of extra inputs (say of coal, energy and iron ore) will be required to raise the level of output in a given industry (such as steel), and to trace back iteratively the inputs into increasing the coal production (for example, the extra machinery and extra steel in that machinery) necessary to increase the steel production. Input-output analysis, for which Leontief received the Nobel Prize in economics in 1974, was widely deployed as a planning tool during the halcyon years of postwar boom conditions in the advanced capitalist economies, and to this day plays a crucial role in national accounting. This technique was also incorporated into the five- and ten-year plans typically devised by communist regimes, and was also used by many democratic and quasi-capitalist countries, such as India after independence. It became, in short, a key tool in centralized planning.

Figure 6

Output → / Input ↓	Agriculture	Mining	Energy	Manufacturing	Construction	Services	Government	Total Output
Agriculture	300	10	100	20	40	10	200	680
Mining	30							
Energy	50							
Manufacturing	150							
Construction	40							
Services	70							
Government	40							
Total Input	680							

A Leontief Style Matrix of Inputs and Outputs

Reading down the columns records where all the inputs of each sector are coming from (n.b. Agricultural supplies things to agriculture such as seed or fodder for animals). Reading across tells us where all the outputs from each sector, e.g. agriculture, are going to. In this table inputs are set equal to outputs, so the economy is in a state of simple reproduction.

Leontief mainly constructed models of material (use-value) flows (Marx for the most part used value flows). Armed with adequate data on inputs and outputs in different industries, it is possible to allocate investment and labor to different aspects of the social division of labor, so as to ensure balanced growth. Otherwise there is always a danger that bottlenecks in, for example, steel or energy production could block growth everywhere else. The rational social allocation of investments and of labor became a vital aspect of public policy in many parts of the world, and under very diverse political circumstances. While centralized planning using such techniques has acquired a bad name, more sophisticated versions are now used within corporations to define optimal efficiency in complex production systems.

The main problem here, however, is to interpret what Marx himself intended the schemas to mean. He assumes the outputs and inputs of the two sectors producing consumption goods and means of production respectively are in equilibrium in value flows (he does not actually use the word “equilibrium,” but refers to “necessary proportionalities”). Does this presume that harmonious and never-ending capital accumulation is actually possible within a capitalist mode of production? Engels, in his preface, worried that the materials provided no support for political agitation, while Rosa Luxemburg thought that accepting the validity of these schemas made political struggles pointless. Or does Marx mean to show that harmonious accumulation is impossible under capitalism because market allocations could not possibly converge on the correct proportionalities? Would it then follow that a rational proportionate allocation of labor to different aspects of the division of labor would be possible only under communism? “Later,” Marx writes hopefully, “we shall go on to investigate how different things would look if it were assumed that production was collective and did not have the form of commodity production" (527). Unfortunately, he never made good on the promise.

Even if, as Marx certainly does argue, individual capitalists working in their own self-interest in response to market signals were unlikely to hit the right proportionalities "except by accident," it could be that mini-crises of "disproportionality" might work to keep the system as a whole oscillating around a sustainable equilibrium growth path. After all, he had already argued in Volume I that the "constant tendency on the part of the various spheres of production towards equilibrium comes into play only as a reaction against the constant upsetting of this equilibrium" (C1, 478). The ultimate breakdown of the Volume I model of accumulation was not attributable to any technical unsustainability. It resulted from the increasing impoverishment of the growing masses, who would rise up and expropriate the ever-diminishing group of increasingly wealthy expropriators. Marx does not assert any parallel revolutionary imperative at the end of Volume II. To the degree that Volume II shows how the working class actively contribute to realization through their consumption, the Volume I politics is, as we have already seen, attenuated if not contradicted.

The ideas presented in Part 3 of Volume II were first conceived of in the early 1860s but only elaborated in the 1870s, culminating in 1878 when Marx devoted his very last theoretical work to elaborating on them further. These chapters were therefore written after most of Volume III had been drafted, and after Volume I had been published. They were also written at a time when wages in Britain had been steadily rising for nearly a quarter of a century, as workers shared some of the benefits to be had from rising productivity (a shift, as it were, from absolute to relative surplus-value production). The ideas are explored in a technical and largely non-dialectical way. They leave broader historical and social questions, as well as issues of crisis formation, largely unad-dressed (even as many possibilities for crises are revealed).

Subsequent studies have elaborated upon the technical qualities of the schemas in many different directions, and improved enormously upon the mathematical sophistication of the presentation. These elaborations have not resolved but, if anything, have instead deepened the mystery that Marx left behind. It has been said in a recent study by Andrew Trigg, for example, that, "in the absence of any clear statement of the purpose of the reproduction tables, there is no agreement as to what they are for, how they relate to the rest of *Capital Volume II*, and how they relate to *Capital* as a whole."[7] Interpreting Marx in Marx's own terms is, in short, close to impossible in this case.

Presenting these chapters to an audience largely unfamiliar with both Marxist and contemporary economic theory poses all manner of difficulties, far beyond the usual textual problems of incomplete and digressive argument and complex languages of critique and counter-critique, to say nothing of Marx's penchant for dabbling endlessly in accounting trivia and using tortuous arithmetic examples. The subsequent mathematical explorations of the schemas take us onto grounds upon which ordinary mortals rarely tread, while Marx's exposition is almost as rarefied. This problem is serious because the way in which we interpret these schemas affects the interpretation of foundational concepts like value and price, while, when treated on a par with Volume I, it creates an entirely different picture of the dynamics of capital's reproduction. The best I can do under these circumstances is to keep fairly close to the text and to the subject matter, while skimming over that which appears most redundant or trivial. I attach a short reading list for those who wish to go into matters further.[8] But, at some point, I and you, the reader, have to take a crack at the thorny problem of what the schemas might be about.

ON CHAPTER 18 OF VOLUME II: INTRODUCTION

Marx's main stated purpose in this introductory chapter (from which he very quickly deviates) is to consider how the economy as a social totality is constituted out of myriad individual activities, and how that totality is structured. He opens by reminding us of the importance of continuity in the flow of capital—of how the money circuit appears to mediate the productive circuit of capital (and vice versa) in a process of "constant repetition." The result is the "perpetual re-emergence" of the capital "as productive capital" conditioned by "its transformations in the circulation process." It is very important to keep in mind the idea of the constant metamorphoses in form (from money into production into a commodity back to money). This conception of capital as process and as flow is, after all, what makes Marx's concept of the economy and of capital so very special.

"But each individual capital," says Marx, "forms only a fraction of the total social capital, a fraction that has acquired independence and been endowed with individual life, so to speak, just as each individual capitalist is not more than an element of the capitalist class. The movement of the social capital is made up of the totality of movement of these autonomous fractions" (427).

The independence and autonomy of individual capital is vital to keep in mind as a foundational feature of a capitalist mode of production. Individuality and autonomy do not derive, we perpetually have to remind ourselves, from rights given by nature, but are a historical product of the rise of a market society, of bourgeois law, of monetization and commodification, all of which were necessary preconditions for the emergence of a capitalist mode of production. I find it odd that Marx is so often depicted as denying individuality and the possibility of autonomy when he is in fact perpetually citing its importance, while giving an account of how it came to be.

Productive consumption, furthermore, entails the "conversion of variable capital into labour-power." The worker enters the scene as bearer of the commodity labor-power (yet another precondition for the emergence of a capitalist mode of production). But the workers also purchase commodities for their individual consumption. "Here the working class appears as a buyer of commodities, and the capitalists as sellers of commodities to the workers" (428). The individuals within the two great classes relate to each other as buyers and sellers, which is a very different relation to that of producers and expropriators of surplus-value. The consumption of the working class (its consumerism) becomes an important moment in the realization of values in the market. And the worker, like everyone else, has autonomy and choice as a buyer.

The circuits of the individual capitals, therefore, when considered as combined into the social capital, i.e. considered in their totality, do not encompass just the circulation of capital, but also commodity circulations in general. In its fundamentals, the latter can consist of only two components: (1) the specific circuit of capital, and (2) the circuit of those commodities that go into individual consumption, i.e. the commodities on which the workers spend their wages and the capitalists their surplus-value (or part of it). (428)

Marx then explicitly reviews the relation between the presentation given here and that laid out in Volume I. The assumption that everything was exchanged at its value permitted him in Volume I to abstract from questions of circulation apart from the buying and selling of labor-power. Parts 1 and 2 of Volume II, however, focus on circulation rather than production processes, and introduce us to the complexities of circulation time. But the analysis mainly stayed at the level of "an individual capital, the movement of an autonomous part of the social capital" (429). "What we now have to consider, is the circulation process of the individual capitals as components of the total social capital, i.e. the circulation process of this total social capital. *Taken in its entirety, this circulation process is a form of the reproduction process*" (430; emphasis added). It should always be recalled that this is about the reproduction of class relations as well as the reproduction of commodities and capital through circulation.

So we now have arrived at the point of considering how the total social capital reproduces. But what immediately follows is a diversion (or perhaps we should better call it an "insertion") on the role of money capital in all of this. While Marx says he believes this should come later in the analysis, he decides to consider it here. The shift has some significance. With commodity flows, the question of the uses of the commodities is in the forefront. With money flows, it is possible to abstract from uses and concentrate on quantities and quantitative relations. I will come back to this difference later. If there is a serious problem with expanded reproduction, it seems it is somehow connected with the interventions of money capital. He certainly argues on more than one occasion that the social and rational use of the schemas to plan production would first require the abolition of the powers of money capital.

From the standpoint of the individual capital, money capital "appears as prime mover, giving the first impulse to the whole process." Note, once more, the significance of the word "appears." Capitalist commodity production, "whether we consider it socially or individually," presupposes money capital "both as the prime mover for each business when it first begins, and as a permanent driving force. Circulating capital, especially, presupposes the constantly repeated appearance, at short intervals, of the motor of money capital" (431). This is, on the surface, a rather different conception of money to that laid out at the beginning of Volume II, where money was not defined as capital because money can only perform the money functions of buying and selling. That it here appears as capital presumably rests on its fetish character (which is central to the analysis of money capital in Volume III). Furthermore, as was shown in Volume I, the amount of this money capital has no absolute or inherent limits.

The implications are legion. Money is a form of social power appropriable by private persons. From the standpoint of the individual there is no limit to the amount of that money power that a capitalist can accumulate. But there does seem to be a limit in society as a whole, particularly if we live in a world where gold is the "pivot" of the whole monetary system. There are various ways we can get around the limit posed by gold—increasing velocity, issuing paper moneys, using money as a means of payment, and creating a credit system. You should never approach an aggregate economy with the idea that there is some limit to the amount of money available. Since money has now lost its metallic base, it can be created without limit by the central banks. It is remarkable that the Federal Reserve can announce that it will inject another trillion dollars into the economy whenever it fancies. While there may in practice be political constraints (leading to financial repression), these can always be circumvented.

But Marx again switches tracks: "The elements of production that are incorporated into capital are independent in extent, within certain limits, of the magnitude of the money capital advanced." Marx is here referring back to that section of chapter 24 in Volume I entitled "The circumstances which independently of the division of surplus-value into capital and revenue, determine the extent of accumulation …" These means include working laborers harder; increasing the efficiency of production by all manner of ways, including through the application of scientific advances "which cost capital nothing"; extracting "free gifts" from nature as well as from past investments in the built environment which have long ago been amortized ("landed property has long since been redeemed by society, and redeemed time and again at that"); science and technology; the reorganization of cooperation; the reduction of turnover times (C1, 747–57).

All of these are in effect free goods out of which the capitalist can extract extra value without paying anything or advancing any extra money capital. "All this clearly has nothing to do with the specific question of money capital as such. It simply indicates that the capital advanced … contains, once it has been transformed into productive capital, productive powers whose limits are not given by the bounds of its own value, but, within a given field of action, can operate differently, both in extent and intensity" (433). Why Marx felt compelled to remind us of all this here is not at all clear. While money capital appears as the prime mover and as the self-sustaining motor of value and surplus-value production (and hence for the reproduction of capital), it is obviously not the only thing that matters. So on the one hand he seems to want to diminish its significance, but on the other, he also has to recognize that "extended operations of long duration require greater advances of money capital for a longer time. Production in these branches is therefore dependent on the extent of the money capital which the individual capitalist has at his disposal. This limit"—surprise, surprise!—"is overcome by the credit system and the forms of association related to it, e.g. joint stock companies. Disturbances in the money market therefore bring such businesses to a halt, while those same businesses, for their part, induce disturbances in the money market" (433–4).

This issue of long-term investments comes back again and again in Volume II as a serious question. If a case is being made here for a total breakdown in the dynamics of capital accumulation, then the main focus would be the problem of fixed capital investments of long duration. The trouble is that such investments are largely assumed away in the reproduction schemas, though not without our first being reminded of their potential disruptive effects for both capital and any alternative. "On the basis of social production"—I assume he means socialist or communist production, though he could also be referring to associated capitals—

> it would be necessary to determine to what extent it was possible to pursue these operations, which withdraw labour-power and means of production for a relatively long period without providing any product or useful effect during this time, without damaging those branches of production that not only withdraw labour-power and means of production continuously or several times in the course of a year, but also supply means of subsistence and means of production. With social production just as with capitalist production, workers in branches of industry with short working periods will withdraw products only for a short time without giving other products back in return, while branches of industry with long working periods will continue to withdraw products for a long time before they give anything back. This circumstance arises from the material conditions of the labour process in question, and not from its social form. With collective production, money capital is completely dispensed with. The society distributes labour-power and means of production between the various branches of industry. There is no reason why the producers should not receive paper tokens permitting them to withdraw an amount corresponding to their labour time from the social consumption stocks, but these tokens are not money; they do not circulate. (434)

Passages of this sort introduce us to an idea that recurs throughout these chapters: the potential role of these schemas in the construction of an alternative socialist or communist economy. I will not comment further on this point here except to say that this issue of how to deal with large-scale long-term projects is as foundational for the construction of any substantive anti-capitalist alternative mode of production as it is problematic within the laws of motion of capital. There is also an important hint of a potential contradiction between the material form balances and the flows of value balances—a topic to which I will also return. And how the power of money capital will be dispensed with is an open question. But, throughout these chapters, Marx frequently suggests that commodity circulation "can proceed quite well on the basis of non-capitalist production" (430). It did so before the rise of a capitalist mode of production, and presumably can continue to do so after its demise.

ON CHAPTER 19 OF VOLUME II: FORMER PRESENTATIONS ON THE SUBJECT

It is generally acknowledged that Marx based his schemas upon the *tableau économique* devised by the French surgeon and economist Francois Quesnay (first published in 1757–59). So who was Quesnay, and why was his formulation so special and so important? Quesnay (1694–1774) was a surgeon at the court of Louis XV. As a privileged medical practitioner and confidante of the king, Quesnay not only followed advances in medical knowledge but also thought a lot about the nature of the body politic. He was much impressed with William Harvey's discovery of the circulation of the blood that revolutionized medical knowledge, and saw parallels with the circulation of capital in the body politic.

I have always liked the parallel between the circulation of capital and the circulation of blood (perhaps because I happened to be born some forty miles away from William Harvey's birthplace!). I invoked the idea as foundational in the introduction to *The Enigma of Capital*, but I had forgotten, until rudely reminded when rereading Volume II for this book, that the parallel was first invoked by Quesnay.

William Harvey's theory of circulation of the blood displaced that of Galen, which had dominated for several centuries. In Galen's theory, the heart was the center for the production of blood, which flowed out to the various organs where it was consumed away. This is a one-way-street model of production flowing to consumption. William Harvey, by contrast, saw the heart as a pump that kept the blood in continuous circulation throughout the body while being replenished and cleansed by a metabolic transformation of matter from outside sources. Quesnay applied Harvey's conception to the field of political economy, and Marx, with his intense concern for fluidity, continuity and flows of value, was obviously drawn to Quesnay's way of thinking. The problem was that Quesnay insisted that value was produced in agriculture alone, and that industrial production was parasitic on agriculture. Quesnay dared not criticize the conspicuous consumption at Versailles or the consumerism of the aristocracy, so he pretended that both the peasantry and the landed aristocracy were engaging in value production, thus masking the extraction of surpluses from the peasantry. This "physiocratic" (predominantly French) vision contrasted with a "mercantilism" (predominantly British at that time) that saw the amassing of gold reserves through trade as the holy grail of economic policy.

Marx was antagonistic to both schools of thought. But, given the industrial structures that then prevailed in France, Quesnay's physiocratic notions had some plausibility, since it was the surplus extracted from agriculture that supported an artisanal industrial structure (very different from the factories that Marx saw) largely given over to producing luxury items (jewelry, fine raiments, pottery, carpets, and so on) for aristocratic consumption (take a visit to Versailles, where Quesnay lived, to see what was typically produced by the so-called industry of the times).

While Marx obviously rejected Quesnay's physiocratic theories, the flow model of the economy was of interest. It seemed to offer a scientific way to break out of the "weak syllogistic" model of classical political economy in which, Galen-like, the centrality of production dominated over the particularities of distribution, until being totally consumed through the singular activities of consumption. As Piero Sraffa, a close colleague of Keynes and editor of all of Ricardo's work, put it in a text of great significance to the argument being developed here: "It is of course in Quesnay's Tableau Économique that is found the original picture of the system of production and consumption as a circular process, and it stands in striking contrast to the view presented by modern theory, of a one-way avenue that leads from 'Factors of Production' to 'Consumption Goods'."[9] The latter, I think it is important to note, is pure Galen, and still dominates conventional economic thinking.

I know I am departing from Marx's text at this point. But I do so because I think the argument here is of vital import. If it is still the case, as Sraffa suggests, that contemporary economic theory is stuck in the Galen-model mode, and if Marx moved to embrace the Quesnay/William Harvey model, then there is still a radical disjunction in the field of political economy between bourgeois economic theory and Marx. I used this radical disjunction in *The Enigma of Capital* to explain not only why bourgeois political economy failed to notice the threat of systemic risk and possible failure, but how Marx's theory of disruptions in the continuity of capital flow and the potential emergence of serious blockages (everything from labor supplies to natural resources or the absence of effective demand) revealed whence crises might come. Failure to circumvent or transcend the barriers, or to relieve the blockages, would lead to the collapse of capital movement and the death of the capitalist body politic as surely as arterial blockages end the lives of persons. While the metaphor is undoubtedly over-dramatized, it has some interesting corollaries. Under the Galen theory, remedies were typically of the bloodletting sort (read: austerity), or later accompanied by transfusions (read: quantitative easing and release of liquidity by the world's central banks), neither of which make any sense from the standpoint of Marx's theory. The policies of stabilization in the face of crises that emerge from Marx's theory would require an analysis of the main barriers and blockage points to the continuity of capital flow; and a simultaneous attack upon all of them to try to bring the system back closer to that equilibrium which the reproduction schemas do show might be possible—and I emphasize "might," since it is by no means a certainty.

But Marx's basic proposition remains: interrupt the flow of capital for very long, and capital dies. We need a flow model to understand these dynamics, and it was Marx, building on Quesnay, who first showed how this might be constructed. So it is hardly surprising that those bourgeois thinkers who have moved in this direction (for example, some of the macroeconomic theorists) would to some degree take inspiration, if they dared to confess it, from Marx's key innovations, even as they in turn pose difficult questions regarding the status of these reproduction schemas in Marx's general theory of the laws of motion of capital.

There is one other important point about Quesnay's formulation. Precisely because he was interested in the continuity of flow, Quesnay became a strong advocate for freedom of circulation and movement. This was much hindered in France at that time, not only by physical barriers to transportation, but also because of the innumerable tolls and tariffs on the roads and bridges imposed by local powers. Quesnay advocated for the reduction and abolition of all such social and political barriers to movement. He was the first to use the term "laisser-faire"—a term rendered all too familiar by Adam Smith and subsequently the whole Ricardian school of free traders.

Marx actually pays scant attention to Quesnay in chapter 19. The chapter is dominated by a critique of what Marx elsewhere calls Adam Smith's "incredible blunder" in interpreting Quesnay. Smith rightly corrected Quesnay's erroneous view that value could only be created in agricultural production. But, in so doing, he erroneously proposed a theory of value that amounted to adding up the revenues attached to each of the so-called basic factors of production—land, labor and capital—that Quesnay had identified. This is, of course, a radically different theory of value than that given in both traditional and Marxist versions of the labor theory of value. This was, says Marx, an "absurd idea" that dominated political economy right down to Ricardo (461–7). Smith's additive theory of value was later modified by the neoclassical move to establish prices by combining the marginal costs (rather than the absolute values) of these basic factors of production, land, labor and capital (this is the Galen model in action). The relative scarcities of the different factors of production moved into the center of bourgeois economic thinking. Smith's "absurd formula" is thus perpetuated until this day.

Marx will have none of this. He was obsessed throughout his works with countering Adam Smith's "incredible blunder," and one of his aims in developing the reproduction schemas certainly was to discredit Smith's interpretation and its subsequent influences.[10] If value was equated with revenues on land, labor and capital, there was no place in the theory for the replacement of the constant capital used up. Under those conditions, the reproduction of capital would be impossible:

> The narrowness of this conception lies in Smith's failure to see what Quesnay had already seen namely the reappearance of the value of constant capital in a renewed form. Instead, he saw here only a further illustration, and moreover a false one, of his distinction between fixed and circulating capital; hence he missed an important aspect of the reproduction process. (438)

There is a connection here, therefore, with Marx's critique of Smith's categories of fixed and circulating capital, outlined above (in chapter 4 of this book). Marx concludes that "Smith's confusion persists to this day, and his dogma forms an article of orthodox belief in political economy" (467).

ON CHAPTER 20 OF VOLUME II: SIMPLE REPRODUCTION

Chapter 20 parallels chapter 23 of Volume I, which has the same title. Recall that, in Volume I, Marx subordinated the technical issues of how capital gets reproduced to the reproduction of the class relation between capital and labor. While the Volume II analysis foregrounds the technical aspects to the problem of how capital gets reproduced, it is helpful to read these materials against the background of the need to reproduce the capital-labor relation as emphasized in Volume I.

Marx's aim is to look at the circulation of the total social capital. He wants to know "what characteristics distinguish the reproduction process" of the total social capital "from the reproduction process of an individual capital and what characteristics are common to both." He starts from the Volume I position:

> The annual product includes both the parts of the social product that replace capital, social reproduction, and the parts that accrue to the consumption fund and are consumed by workers and capitalists: i.e. both productive and unproductive consumption. This consumption thus includes the reproduction (i.e. maintenance) of the capitalist class and the working class, and hence too the reproduction of the capitalist character of the entire production process. (468)

The focus, as noted earlier, is on capital in its commodity form: "the process of reproduction has to be considered from the standpoint of the replacement of the individual component of C' both in value and in material" (469). This is so because we need to focus on what commodities are used for what purpose (individual consumption of workers and capitalists versus productive consumption), and because we can no longer assume, as happens in the case of the circulation of individual capitals, that there is an untroubled passage from the conversion of C' into money form and then back into the purchase of means of production and labor-power. We need to know how it is that both the means of production and the labor-power are going to be available on the market in the right quantities and at the right times. Furthermore,

> the movement of the part of the social commodity product that is consumed by the worker in spending his wage, and by the capitalist in spending surplus-value, not only forms an integral link in the movement of the total product, but is also interwoven with the movements of the individual capitals, so that its course too, cannot be explained by being simply presupposed. (469)

The general assumptions that prevailed in the Volume I analysis can no longer hold. In particular, working-class and capitalist consumption, as pure consumption, here enter into the picture in ways that were excluded from the purview of Volume I, but have been articulated as important at various points earlier in Volume II: "The immediate form in which the problem presents itself is this. How is the *capital* consumed in production replaced in its value out of the annual product, and how is the movement of this replacement intertwined with the consumption of surplus-value by the capitalists and of wages by the workers?” (469).

But, in order to probe this question, some assumptions are required. We begin with the general presumptions of much of the Volume II analysis: “we assume not only that products are exchanged at their values, but also that no revolution in values takes place in the components of productive capital” (i.e. there is no technological change). The fact that prices may diverge systematically from values (a proposition that derives from the Volume III analysis) and that there are continuous value revolutions because of technological and organizational changes (a Volume I argument) “in no way affects” (470), he boldly claims, the general outlines of his argument. There are also some tacit assumptions that run throughout most of Volume II which have a prominent role to play in the reproduction schemas. We deal exclusively, for example, with a two-class model of capitalism in which capitalists and workers provide all of the aggregate demand and supply within a closed system (only occasionally are other classes or global trade with noncapitalist formations mentioned). In what follows, we will also specifically assume that both capitalists and workers spend all of their available revenues on consumption, that everything turns over on an annual basis (the fixed capital problem is briefly taken up but does not really enter into the argument), and that there are no unproductive activities (such as those that Marx calls the *faux frais* of capitalist circulation). Marx plainly hoped to use this “stripped down” model of capitalist production and circulation to explore theoretically the conditions that might make for balanced growth.

> The transformation of one portion of the product’s value back into capital, the entry of another part into the individual consumption of the capitalist and working classes, forms a movement within the value of the product in which the total capital has resulted; and this movement is not only a replacement of values, but a replacement of materials, and is therefore conditioned not just by the mutual relations of the value components of the social product but equally by their use-value, their material shape. (470)

But there is a difficulty here. What have to be replaced in this process of reproduction are not only values, but use-values. For example, the specific use-values that enter into the value of labor-power have to be produced in the right quantities if the working class is to be reproduced. The specific use-values needed for productive consumption also need to be reproduced. It has to be assumed that these physical requirements match the necessary reproduction of value relations. But this is not automatically the case. In a typical Leontief model of an input-output system, the amounts of iron ore and coal needed to produce the steel that is used to make the engines that go into cars can all be modeled as a physical process within a matrix of inputs and outputs. The modeling is materially and use-value based. The financial flows that accompany these use-value relations are an entirely different matter. While one may work smoothly, the other may not. Which basis do we choose? Marx seems to want it both ways. In what follows, however, use-values and the material modeling of the process of social reproduction either gradually drop out of the picture or are presumed to so shape the prices and the money and the value flows as to be unproblematic. What we get, after an initial broad distinction between departments of production defined in use-value terms, is a pure value/monetary analysis of the movement of the total social capital reflective of use-value distinctions and requirements. Potential contradictions between the value and monetary analysis and the material use-value flows are not examined.

Given Marx's habit, from the very outset of *Capital*, of emphasizing the contradictions between use- and exchange-values, the burying of this tension would suggest that here is one point from whence crises will arise, and that this is where we should look for breakdowns within the reproduction schemas. This disjunction has in fact given rise to a conflict between those who interpret the schemas in material, use-value terms (generally referred to as neo-Ricardians, including Piero Sraffa) and those who view them in monetary terms (closer to Keynesians). The fact that Marx thought the rational use of the schemas for social coordination would require the prior abolition of the role of money capital suggests that this is where the primary contradiction within the schemas might lie—while the fact that the material requirements of fixed capital formation also throw a monkey wrench into the smoothness and continuity of things from the standpoint of monetary flows also suggests a form of contradiction arising from the material side in relation to monetary movements. In a certain sense, I suspect that Marx might have seen the subsequent schism between the neo-Ricardian and the Keynesian reading of the schemas as a classic case of the internal contradictions of capital becoming externalized in the realms of thought. None of this is, of course, even hinted at in the text.

This would, however, be my bet for the site of fundamental contradiction within the schemas. But given that much of the work of exploring these schemas has been done by those trained in mathematical economics, and that such experts exhibit at best a weak appreciation of, if not downright aversion to, dialectics and contradiction, it is hardly surprising that this potential point for crisis formation has remained largely unexplored. The rest of us, partly intimidated by the mathematical prowess of our economist colleagues, have largely failed to press the issue. But back to the text …

Sections 2 and 3: Exchanges Within and Between Departments

In the following pages Marx works out the necessary proportionalities in the production of means of production and of means of consumption, as outlined above. But there are some wrinkles that need to be ironed out:

> This mutual exchange [between the departments] is brought about by a money circulation, which both mediates it and makes it harder to comprehend, even though it is of decisive importance, since the component of variable capital must always reappear in the money form, as money capital which is converted from the money form into labour-power. Variable capital must be advanced in the money form in all the branches of production simultaneously pursued

alongside one another across the entire surface of the society, irrespective of whether these belong to departments I or II. (474)

Thus, the workers in department 1 use their wages to purchase means of consumption from department 2, and in so doing transform half of department 2's constant capital into a money form that can flow back to department 1, where it can again function as money capital to purchase labor-power. If the capitalists delay payment to their laborers, then they delay the monetary flow that will convert into money the constant capital they have already produced and marketed to department 2. For this reason, "certain reserves of money—whether for capital advance or for expenditure of revenue—must always be taken as present in the hands of the capitalists alongside their productive capital" (476). As in the case of differential turnover times and circulation times, more money has to be in circulation than the amount that matches actual production. Capital has to be advanced by some capitalists and anticipated by others in the exchanges between the two departments. So, while "ultimately, the two departments pay one another fully by the exchange of their respective commodity equivalents," and while "the money that they cast into circulation over and above the total value of their commodities, as a means for exchanging these commodities, returns to each of them from the circulation sphere to the exact amount that each of the two cast into it. … neither has become a farthing richer from all this." Furthermore, embedded in "all this" is the necessity that workers do their part in consuming their wages in ways that match production in department 2, while the bourgeoisie must likewise do its duty by capital and completely consume the equivalent of its revenues in appropriate ways.

Section 4: Necessities and Luxuries

This last point leads Marx to open up the question of a distinction between the consumption of necessary means of subsistence, on the one hand, and of luxury goods on the other. The workers in department 2 in effect buy back part of the value of the goods they produce, and thereby furnish the capitalists with some of the money they need to continue production. The "company store" relation between capital and labor in the realm of consumption has been a frequent motif in *Capital* (including in Volume I, where Marx depicts the laborers as an "appendage" of capital not only in production, but also with respect to consumption). But there is an important shift, because the working class here "appears as buyer and the capitalist class as seller" (479).

Department 2 in effect divides into two. One part produces "those means of consumption that enter the consumption of the working class, and, in so far as they are necessary means of subsistence, also form part of the consumption of the capitalist class." Marx notes, however—almost certainly with his own consumption habits in mind—that it is "quite immaterial whether a product such as tobacco, for example, is from the physiological point of view a necessary means of consumption or not; it suffices that it is such a means of consumption by custom" (479). Luxury means of consumption, however, "enter into the consumption of the capitalist class only." Though produced by workers, these items are unavailable for workers to consume.

The luxury goods industries have some special characteristics. In Volume I, for example, Marx pointed out that revolutions in productivity in such industries have no role in changing the value of labor-power, and therefore are not a source of permanent relative surplus-value. Here, however, Marx enjoys himself going over—in the usual intricate detail, and with the familiar abundant arithmetic examples—the forms of circulation that link workers and capitalists operating in the luxury goods industries vis-à-vis those engaged in the production of necessities, given that the capitalists themselves split their allocation of revenues in some proportion between necessities and luxuries. Intricate circulation processes are set up in which capitalists pay for luxuries, and in so doing realize the value of luxury goods such that the capitalists producing them take part of their surplus-value to purchase more luxury goods, along with whatever necessities they need. Meanwhile, the workers in the luxury goods industries in department 2b spend their freshly monetized variable capital on the necessities produced in department 2a. Much depends, of course, on how the capitalist class splits its revenues between demand for necessities and luxuries.

Clearly, the "quota of labour-power … absorbed in luxury production … is conditioned by the prodigality of the capitalist class, the conversion of a significant part of their surplus-value into luxury items." But this is sensitive to economic conditions. Crises temporarily decrease luxury consumption, which then diminishes outlays on variable capital—and this in turn diminishes the general demand for non-luxury wage goods. "The reverse is the case in periods of prosperity, and particularly during the phase of hyper-activity" when a fully employed working class with higher wages may in fact purchase some marginal luxury goods.

This leads Marx to make the following very important general observation (which I cited earlier):

> It is a pure tautology to say that crises are provoked by a lack of effective demand or effective consumption. The capitalist system does not recognize any forms of consumer other than those who can pay, if we exclude the consumption of paupers and swindlers. The fact that commodities are unsaleable means no more than that no effective buyers have been found for them, i.e. no consumers (no matter whether the commodities are ultimately sold to meet the needs of productive or individual consumption). If the attempt is made to give this tautology the semblance of greater profundity, by the statement that the working class receives too small a portion of its own product, and that the evil would be remedied if it received a bigger share, i.e. if its wages rose, we need only note that crises are always prepared by a period in which wages generally rise, and the working class actually does receive a great share of the annual product destined for consumption. From the standpoint of these advocates of sound and "simple"(!) common sense, such periods should rather avert the crisis. It thus appears that capitalist production involves certain conditions independent of people's good or bad intentions, which

permit the relative prosperity of the working class only temporarily, and moreover always as a harbinger of crisis. (486–7)

At first blush, it seems difficult to reconcile this statement with the footnote on page 391, where the "realization of commodity capital and thus of surplus-value as well, is restricted not by the consumer needs of society in general, but by the consumer needs of a society in which the great majority are always poor and must always remain poor." In fact, the "tautology" of which Marx speaks does not deny the importance of effective demand, but merely insists that the only demand that counts is that which is backed by ability to pay. This once more directs our attention to how money (exchange-values) circulates without regard for the real need for use-values. It is clear, from the context, that the purchasing power of the working classes is dependent on such factors as the prodigality of the capitalist class and the rise and fall of employment over the course of business cycles whose movement is dictated by, among other things, waves of fixed capital investment. System-wide changes in the productivity of labor will likewise reduce the number of laborers engaged in value and surplus-value production. The "underconsumption" that appears as an immediate barrier to the realization of surplus-value cannot therefore be construed as the unique cause of crises. This is why lack of effective demand appears in this chapter as a tautology. It is for this reason that I prefer to move away from the idea of any one unique source of crises to that of multiple potential blockage points, all of which can appear as the proximate cause of crises at any historical moment. Capital does not resolve its crisis tendencies but, as I argue in *The Enigma of Capital*, moves them around. The effective demand problem, which I think Marx correctly depicts as one possible barrier to further accumulation, can be removed, but that cannot stabilize capital accumulation. It merely moves the contradictions elsewhere.

I do not think Marx is empirically correct, however, to argue that rising working-class incomes precede the onset of crises. While this was the case in, say, the crises of the 1970s, it would be hard to make that argument for the crisis that broke out in 2007–08. So I would propose to modify Marx's general statement that effective demand has nothing to do with the real inner contradictions of capital, and argue that the lack of effective demand can be a form of appearance of those inner contradictions under certain circumstances. But this is my own personal opinion, with which many will surely disagree.

Section 5: Monetary Circulation and the Schemas

In the section on "the mediation of the exchanges by monetary circulation," Marx explains why more money has to be advanced within the system than would strictly be necessary for the volume of value exchanges, because of the differences in timing of purchases throughout the year. An immediate problem arises, however, when capital is organized through the financial system into the "common capital of the class," as described in Volume III:

> Wherever there is a money capitalist behind the commodity producers, and it is he who first advances the money capital to the industrial capitalist … the actual point of return of this money is the pocket of the money capitalist. In this way, even if the money circulates through the hands of more or less all concerned, the mass of the circulating money belongs to the department of money capital organized and concentrated in the form of banks, etc. (488–9)

The main problem lies, however, with the way money circulates "through the hands of more or less all concerned." The sequences and the timing problems involved are intricately described, as wages paid in the sector producing means of production flow first to the sector producing means of consumption, only to flow back to the sector producing means of production as the capitalists producing consumption goods spend their money on procuring the means of production they need. As usual, Marx goes to considerable length to document the various sequences that are possible in order to indicate complicated timing issues in the flows. But the upshot is that the

> money capital transformed into variable capital, i.e. the money advanced as wages, plays a major role in actual monetary circulation. Since the working class has to live from hand to mouth, i.e. since it cannot give the industrial capitalists any long-term credit, variable capital has to be advanced at the same time in money at countless different points in society, and at definite and short intervals, such as a week, etc.

—no matter what the turnover time of the capitals involved. "In every country of capitalist production, the money capital advanced in this way *forms a relatively decisive share* in the total circulation" (490; emphasis added). But the timing problems (for example, the frequency with which wages are paid) are of consequence because enough spare money has to be in the system to deal with the gaps that arise. "On the other hand, the natural form into which the variable capital existing in the money form has to be converted—i.e. labour-power—has to be maintained, reproduced by consumption, and be present once again as the only article of trade of its proprietors, who have to sell this if they want to live. *In this way the relationship between wage labourers and capitalists is also reproduced*" (492; emphasis added). I emphasize this passage because it is one of the few points where the reproduction of the class relation, so vital in the Volume I presentation, is brought back into the argument. Marx may have viewed it as so obvious as to require no further elaboration or emphasis.

Marx then turns his attention to the role of capitalist personal consumption. "Once a capitalist spends his money on means of consumption, he is then done with it, it has gone the way of all flesh." If the money returns to him it is because the commodity capital he produces is thrown into circulation for realization in money form. "It is therefore literally correct, in the present case, that the capitalist himself cast into circulation the money into which he converts his surplus-value … by spending this on means of consumption. … In practice this occurs in two ways. If the business was started only within the current year, then it takes a good while, at best a few months, before the capitalist can spend money for his personal consumption out of his income from this actual business. He does not on this account suspend his consumption for a moment. He advances himself money against the surplus-value that he still has to hunt out." If, on the other hand, the business is long-established, then the capitalist merely anticipates receipts from sales yet to be made, though "if our capitalist goes bankrupt, then his creditors and the courts" may question his consumption habits (496–7). Notice, however, the role of anticipations and monetary advances relative to real production in all of this.

> In relation to the capitalist class as a whole, however, the proposition that it must itself cast into circulation the money needed to realize its surplus-value (and also to circulate its capital, constant and variable) is not only far from paradoxical, it is in fact a necessary condition of the overall mechanism. For here there are just two classes: the working class, which only disposes of its labour-power, and the capitalist class, which has the monopoly of the means of social production, and of money.

The individual capitalist does so, however, "by acting as buyer, *spending* money on the purchase of means of consumption or *advancing* money on the purchase of elements of his productive capital. … He advances money to circulation only in the same way that he advances commodities to it. In both cases, he acts as the starting point of their circulation" (497). We encountered much of this argument before, in chapter 17.

But this "real course of events" is obscured by the interventions of "a special kind of capitalist" (commercial and money capital) and the claims of government, of merchant capital, and of landlords extracting taxes, profits and rents, respectively. All of them advance money, but "what is always forgotten" are "the sources from which they originally obtained this money, and continue to obtain it" (497). The value this money represents must ultimately originate in production. But whether it originated in the past or is anticipated to originate in the future (for example, through debt creation) seems to me to be a very important distinction that is not fully articulated here.

Sections 6 and 7: The Circulation of Constant and Variable Capital and Surplus-Value Within Their Respective Departments

Marx first looks at the circulation of constant capital in department 1. Part of the output goes directly back into production in that same department, because corn is needed to produce corn, "coal into coal production, iron in the form of machines into iron production etc." And of course coal goes into steel production that goes into the production of the machinery needed to mine the coal. So the exchange of means of production for means of production is vigorous, and the question is posed as to how effectively these exchanges are coordinated through the market. To this, Marx adds a comment that gives fuel to those who look to the schemas to provide a means of social planning:

> If production were social instead of capitalist, it is evident that these products of department 1 would be no less constantly redistributed among the branches of production in this department as means of production according to the needs of reproduction; one part directly remaining in

> the sphere of production from which it emerged as a product, another part being shifted to other points of production, and so there would be a constant to and fro between the various points of production in this department. (501)

These are, of course, the input-output relations that Leontief later modeled in his matrices.

In section 7, the movement of variable capital and surplus-value within and between the departments is put under the microscope. We start with the obvious identity under conditions of simple reproduction that the total value of the means of consumption is equivalent to the total variable capital plus surplus-value. But, as the formulae outlined above show, the equivalence arises because the value of the new constant capital output from department 1 that flows to department 2 is realized through the application of labor in department 2. This poses the question, which will be looked at more concretely later, as to which department is in the driving seat of these exchanges. It also poses other problems. Constant capital cannot produce value in itself, and its value is simply passed on into the value of the product by the laborer engaging in productive consumption. But the production of fresh constant capital in department 1 produces both value and surplus-value. Adam Smith was therefore wrong to conclude that the total social product was equivalent to v + s (though it was understandable that he might be misled to think so). The total social product is c + v + s, as Marx has maintained all along.

Section 8: The Flows of Constant Capital Through Both Departments

Marx applies the usual accounting method to look at the flows of constant capital through the two departments. He here encounters an interesting difficulty that is germane to my argument that there is a contradiction between use-value and value relations within the sche-mas. "The difficulty does not lie," says Marx, "in analyzing the value of the social product itself. It arises when the *value* components of the social product are compared with its *material* components" (506). From the standpoint of individual capital, this comparison is irrelevant—all that is required is that the product be a use-value, and that is that. But

> it is different with the product of the total social capital. All material elements of the reproduction must be parts of this product in their natural form. The portion of constant capital consumed can be replaced by the overall production only if the entire reappearing constant portion of the capital reappears in the product in the natural form of new means of production that actually can function as constant capital. On the assumption of simple reproduction, therefore, the value of the portion of the product that consists of means of production must be equal to the (consumed) constant portion of the value of the social capital. (508)

All of which is a rather tortuous way of saying that, if something is produced as constant capital but proves to be useless as a material product, it would have no value. It is very important to ensure that department 1 only produces products "in their natural form" (by which Marx means a physical, material use-value) that can serve to "realize the value of the variable capital and the surplus-value" in both departments (509).

Section 10: Capital and Revenues: Variable Capital and Wages

I leave section 9—a look back to Smith, Storch and Ramsey—to one side, before moving on to section 10. The first issue taken up here is the distinction between the value produced and the value transferred. From the standpoint of the individual capitalist, constant capital produces no value. Its value is simply transferred to the final product through the act of laboring. From the social standpoint, we see department 1 producing constant capital for department 2 "both in its entire value and in its natural form." Please note that, when Marx refers, as he frequently does in this text, to "natural form," he means material use-value form. In fact, "the greater part of the annual social labour is … spent on the production of new constant capital … to replace the constant capital value spent on the production of means of consumption" (514). The active production of means of production produces both value and surplus-value. This was what the economists in general, and Adam Smith in particular, could not understand. They took what is true for the individual capitalist—that constant capital produces no value—and wrongly projected it upon society as a whole, to infer that the production of means of production was not productive of value and surplus-value (that the total social product was v + s). A number of other confusions arise that are a bit difficult to follow.

First, it is important to understand that "the variable capital functions as capital in the hands of the capitalist and as revenue in the hands of the wage-worker." In other words, variable capital does not circulate through the body of the laborer (as I have sometimes been prone to think). The money capital is simply turned into money that circulates as revenue as the workers use their wages to buy commodities. The same money here appears as capital in the hands of the capitalist and there takes on the form of revenue in the hands of the worker.

Under this conception, Marx can resist the idea that the worker ever possesses capital. "In point of fact, labour-power is his capacity (ever renewing and reproducing itself), not his capital. It is the only commodity that he can constantly sell, and he has to sell it in order to live, but it operates as capital (variable capital) only in the hands of the buyer, the capitalist." Marx will have nothing to do with the economist's view of what we now call human capital theory. "If a man is perpetually forced to sell his labour-power over and over again, i.e. to sell himself, to someone else, this proves according to these economists, that he is a capitalist, because he always has a 'commodity' (himself) for sale" (516). By the same logic, Marx ironically notes, "even a slave would be a capitalist." We have encountered this rejection of human capital theory before. Capitalists always have a choice whether to engage in production or simply put their capital on the money market and live off the interest. Workers never have that choice. If they did they could loll in a hammock and live off the interest on their human capital! The worker is in the C-M-C circuit, only able to circulate wages as revenues. "His wage is realized in means of consumption, it is spent as revenue, and taking the working class as a whole, it goes on being spent as revenue continuously" (517).

In order for the flows between the departments to reach the equilibrium point of demand and supply, the market must operate with all agents, both capitalists and workers, taking on the active role of buyers and sellers: "All agents in this exchange simply appear as buyers or sellers, or both; the workers appear in it simply as commodity buyers; the capitalists alternatively as buyers and sellers; and, within certain limits simply as unilateral buyers and sellers" (518). Only in this way can it be ensured that "department 1 once more possesses the variable portion of capital, the only form from which it is directly convertible back into labour-power. … On the other hand, in order to reappear as a buyer of commodities, the worker must firstly reappear as the seller of a commodity, as the seller of his own labour-power" (518–19). It is important to remember, Marx is reminding us, that the exchange between the two departments is mediated through the operation of freely functioning labor markets.

Within this labor market there are, however, some asymmetries: "Since the working class lives from hand to mouth, it buys as long as it is able to. It is different with the capitalists. … The capitalist does not live from hand to mouth. His driving motive is the greatest possible valorization of his capital." It is sometimes advantageous or necessary for the capitalist to save (hoard) and not to spend. Indeed, "reserve capital in money is generally necessary in order to be able to continue operations without interruption, regardless of whether the reflux of the variable capital value in money is quicker or slower" (521).

The main point here is that, when the annual product as a whole is under consideration, many of the important distinctions and interrelations remain invisible. Only when the economy is disaggregated and broken down into departments is it possible to see clearly what the "real" relations are. What the interchanges between departments show, for example, is that laborers live permanently in a world in which money capital becomes money that they spend as revenue in order to live and return to work (they are permanently denied access to capital). The capitalist, on the other hand, continuously circulates variable capital through the moments of money capital used to purchase labor-power, to put that labor-power to work, and to convert the labor value congealed in the commodities produced back into the money capital form. In this case "*it can in no way be said [that variable capital is] converted into revenue for anyone*" (522–3).

This way of looking at things is helpful. What looks odd at the level of the total circulation process, when it is said, for example, that the capitalist must furnish the effective demand equivalent to the surplus-value produced, no longer looks so when we think of the flows of capital and the interchanges occurring between the different departments. Marx does not make this point, but he well could have. In laying out their capital to produce consumer goods, for example, the capitalists in department 2 provide an important part of the effective demand for the capitalists producing means of production in department 1, thereby realizing the surplus-value already congealed in the commodities they have produced. The productive consumption organized in both departments is far more important than personal consumption in furnishing the effective demand for means of production. The idea that the capitalists have to furnish the demand for realizing the surpluses produced no longer looks as ridiculous as it did when the economy was not disaggregated.

Section 12: The Supply of the Money Commodity

I leave aside until later consideration the problem of fixed capital, and take up Marx's brief consideration of the role of gold producers in section 12. "It is self-evident," he says, "that the greater the maturity of capitalist production, the greater is the quantity of money accumulated on all sides, and the smaller therefore the proportion that the new gold production of each year adds to this quantity [of money], even though this addition may be quite significant in absolute terms" (549). If this was so in Marx's day, then it would surely be even more so now. So while the gold and silver producers have a special role, it is not a determinant of the reproduction of capital accumulation.

This still leaves unresolved, however, the question: "How is it possible for each capitalist to withdraw a surplus-value from the annual product in money, i.e. to withdraw more money from the circulation sphere than he cast into it, since in the final analysis the capitalist class itself must be seen as the origin of all money in circulation?"

Marx considers the question ill-posed: "The only assumption required here is that there should always be sufficient money to convert the various elements of the commodity mass annually reproduced." This is the key question, and not "Where does the money come from to realize the surplus-value?" To be sure, there is a difference between the money circulating as capital and the money that circulates as revenue: "The mass of money … exists in the hands of the capitalist class, which is by and large the total quantity of money that exists in the society, one part [of which] circulates the capitalists' revenue" (549–50). To illustrate, he resurrects the case of a capitalist setting up a new business who lives off his own revenues for the purposes of consumption, and "fishes back" the money equivalent later.

Part of the problem derives from the way we typically personify the capitalist as a producer and not a consumer. In the latter role, "the capitalist class casts a certain sum of money into circulation in the shape of revenue." It then "appears as if it paid an equivalent for this part of the total annual product, and that this has thereby ceased to represent surplus-value. But the surplus-product in which the surplus-value is represented costs the capitalist class nothing. As a class, it possesses it and enjoys it free of charge, and the monetary circulation cannot alter this in any way." Each capitalist "withdraws commodities of all kinds from the total stock to the amount of the surplus-value that he appropriated, and appropriates these.” The circulation mechanism shows that the capitalist class “casts money into circulation to be spent as revenue” and then “withdraws the same money from circulation.” Thus “the same process can always begin anew; considered as a capitalist class, therefore, it remains now as before in possession of this sum of money needed for the realization of its surplus-value.”

The logic here is a little hard to follow. But, in essence, Marx is saying that, in withdrawing commodities (which congeal surplus-value) for purposes of consumption, and in selling produced commodities (which congeal surplus-value) at the same time, the capitalist gets a free good. “If I buy commodities for £1 sterling, and the seller of these commodities gives me back my £1 in exchange for a surplus product that cost me nothing, then I have obviously received the commodities for nothing.”

Marx is here assuming that the exchanges are simultaneous and that there are no problems of turnover time. But “in all branches of industry whose production periods (as distinct from their working periods) extend over a relatively long time, money is constantly cast into circulation” to realize values and surplus-values without placing any equivalent commodity value on the market. “This factor becomes very important in developed capitalist production, in connection with long drawn-out enterprises undertaken by joint-stock companies, etc. such as the building of railways, canals, docks, large municipal buildings, the construction of iron ships, the draining of land on a large scale, etc.” One of the attractions of these forms of investment, I note in passing, is that they can absorb vast amounts of surplus money capital without producing much in the way of commodity capital until much later. It is also the case “that all kinds of things circulate as commodities that were not produced within the year: plots of land, houses, etc., as well as products whose production period extends over longer than a year, such as cattle, wood, wine, etc.” In these cases, “it is important to establish … that besides the sum of money required for direct circulation, there is always a certain quantity in a latent and non functioning state, which can come out and function on a given impulse. The value of these products also often circulates bit by bit and gradually: for example the value of houses circulates in rent over a series of years” (553).

This then leads, finally, into the almost ritual, Volume II-style invocation of how “a system of credit and certain aspects of the credit mechanism have developed on this basis.” All of the complications of circulation he then cites “had only to be noted and brought to light by experience, in order to give rise both to a methodical use of the mechanical aids of the credit system and to the actual fishing out of available loan capital” (555–6). The reproduction schemas as here studied do not include any attempt to examine what happens when the circulation of interest-bearing capital becomes a central means by which the collective capitalist may regulate affairs or, as in this instance, may attempt to coordinate the flows between the two departments. What the examination of the credit system shows, as we saw, is that the positive virtues and necessity of credit are inevitably and unfortunately accompanied by the permanent threat of disruptive speculative fevers.

Chapter 20 ends with a consideration of the views of Destutt de Tracy. Marx offers these as a prime example of “bourgeois cretinism in its ultimate state of bliss!” (564). I refrain from any comment.

CHAPTER ELEVEN

The Problem of Fixed Capital and Expanded Reproduction (Chapters 20 and 21 of Volume II)

THE CASE OF FIXED CAPITAL

In section 11 of chapter 20, Marx takes up the problem of how the reproduction schemas might be affected by fixed capital formation and circulation. I have delayed consideration of this topic until now because here, at least, Marx's intent and interest are relatively clear. "This example of fixed capital—in the context of reproduction on a constant scale—is a striking one," he writes.

> A disproportionate production of fixed and circulating capital is a factor much favoured by the economists in their explanation of crises. It is something new to them that a disproportion of this kind can and must arise from the mere maintenance of the fixed capital; that it can and must arise on the assumption of an ideal normal production, with simple reproduction of the social capital already functioning. (545)

Crises of disproportionality are, in short, inevitable. How deep and widespread they might be is hard to determine. But Marx clearly concludes that crises arise even when the exchanges between the departments are occurring normally.

There are two ways to interpret this. First, there is the view that the disruptions imparted by fixed capital circulation confirm that there is absolutely no way that the smooth reproduction process can actually be realized, and that crises of disproportionality are therefore both endemic and inevitable throughout. The second is that such crises specifically arise out of fixed capital circulation. In this case crises might be averted through the socialization of fixed capital circulation. This could take a variety of forms, varying from state provision or intervention to more radical forms of social planning, including the decommodification of fixed capital investment under communism. But Marx does not rule out, as we earlier saw, that capitalists themselves may overcome the difficulties with the aid of the credit system and joint-stock company formation. The problem with the latter solution (as we saw in Volume III) is that it opens the Pandora's box of speculative booms and crashes centered on the monetary movements associated with fixed capital circulation. While one problem, that of fixed capital, is solved, another far more serious problem, that of autonomous financial crises, takes its place. Let us examine the case more closely.

Marx opens his commentary in section 11 by reminding us of the complexities that arise when not all of the capital is used up in a given turnover time (in this case, the yearly turnover time that is assumed throughout). Different fixed capitals turn over at different rates, many fixed capitals are renewed piecemeal and in parts, and there is therefore a murky distinction between maintenance, repairs and replacements. But he reintroduces these fine points only to suggest they do not really affect the essential nature of the problem. He then launches into tedious arithmetic calculations on how the exchanges between departments work when some of the means or production in both departments take a fixed capital form. I will not attempt to replicate these.

Problems arise, he shows, from the monetary aspects of the circulation. Marx more than once claims that the problems would disappear if the monetary aspects were excluded. The essence of the problem is that the part of money "which is equal to the wear and tear of the fixed capital is not transformed back again into the component of productive capital whose loss of value it replaces. It settles down alongside the productive capital and persists in its money form." It continues in this money form all the while the fixed capital functions, and does so until the time comes to replace it. "Once the fixed element—buildings, machinery, etc.—has expired … its value exists alongside it completely converted into money." It is then and only then expended on the replacement (Marx does not go into the problems of different replacement costs and moral depreciation that we considered in chapter 4).

"The hoard formation"—as we have encountered several times in Volume II—"is therefore itself an element of the capitalist reproduction process," and hoarded money comes to play a very special role. It is here that Marx proposes that he will later "go on to investigate how different things would look if it were assumed that production was collective and *did not have the form of commodity production*" (526–7; emphasis added). He did not do so, but this is the kind of remark, as I argued earlier, that has led to speculation as to the potential role of the schemas under conditions of social(ist) production. It also reinforces the view that the problems that arise within the schemas are attributable to the distinctive role of money capital, the abolition of which is a necessary condition for more "rational" coordination of inputs and outputs. But the whole framework would also look very different when the credit system, operating as "the common capital of the class," enters the picture.

Unfortunately, Marx proceeds as if there is no credit system, and focuses on the imbalances that arise through hoarding. The sort of example he has in mind is this: department 2 would have a money fund against the wear and tear of its fixed capital; "on the other side, however, that of department I, there would be an overproduction of means of production … and in this way the whole basis of the schema would be destroyed, i.e. reproduction on the same scale, which presupposes complete proportionality between the various systems of production. One difficulty would have only been displaced by another much more inconvenient one." Then, rather ominously, he goes on to say that since political economists have ignored this problem, he intends to investigate "all possible (at least seemingly possible) solutions of the problem, or rather formulations of it" (530). I say "ominously" since this usually signals that we are in for some more endless and tedious calculations.

This seems to me, however, to be an important passage for those looking for clues as to the nature of Marx's intent in constructing the schemas. He seems bent on determining the proportionalities that must hold, and then investigating in what ways such proportionalities might or might not be achieved given the monetary coordinating mechanisms available. His scientific reticence precludes saying at the very outset how impossible this monetary coordination might be, but I somehow doubt that, by the end of his investigations, we would be persuaded that untroubled reproduction would be remotely possible.

He then elaborates on all sorts of possibilities. In his summary of the results, he makes a couple of interesting observations. Consider the case I have already described in which department 2 creates a hoard to cover the wear and tear of its fixed capital. Obviously, there is "some monetary dislocation." Department 1 "has either to contract its production, which means a crisis for their workers and capitalists engaged in it, or to supply a surplus, which again leads to crisis." This is what proves that crises are immanent within this system. But Marx then suggests that, "of themselves, these surpluses are no evil, rather an advantage; in capitalist production, however they are an evil." The reason is that "once we dispense with the capitalist form of reproduction, then the whole problem boils down to the fact that the magnitude of the part of fixed capital that becomes defunct and has therefore to be replaced in kind varies in successive years." A lot is needed in one year, and much less in others. This problem can "only be remedied by perpetual relative over-production; on the one hand a greater quantity of fixed capital is produced than is directly needed; on the other hand … a stock of raw materials, etc. is produced that surpasses the immediate annual need (this is particularly true of means of subsistence). *Over-production of this kind is equivalent to control by the society over the objective means of its own reproduction*. Within capitalist society, however, it is an anarchic element" (544–50; emphasis added).

Overproduction of use-values is socially a good thing, since it opens up new potentialities for human reproduction. But, under capitalism, the overproduction of surpluses becomes a bad thing, because it results in lower profits and even traumatic devaluations of capital. It is therefore the anarchy of market determinations and money considerations that lies at the root of the problem, and not the production of material surpluses per se. But reproduction does not have to be so anarchic, even under capitalism. Many long-term fixed capital investments are undertaken by the state, and are therefore open to rational social engineering and planning. The formation of associated capitals (joint-stock companies) and the "abolition of the capitalist mode of production within the capitalist mode of production" opens up new modes of coordination that may or may not be more or less anarchic (the speculative booms around built-environ-ment investment being the downside, while the upside is collective production of the collective means of production and consumption).

One aside in this section is, I think, also illuminating. For the most part, throughout *Capital* Marx assumes he is dealing with a closed system—either capitalism in one country or a global capitalist economy. Only occasionally does he depart from this to comment on the role and significance of foreign trade. Plainly, under conditions of imbalances between the departments because of hoarding for fixed capital, foreign trade could help bring back the necessary proportionalities. “But foreign trade, in so far as it does not just replace elements (and their value), only shifts the contradictions to a broader sphere, and gives them a wider orbit” (544). This is a very neat formulation of how to understand capital’s struggle to overcome its internal contradictions by resort to external “spatial fixes” (as I call them) through geographical expansion, colonialism and imperialism, and the globalization of the world market. While “capitalist production never exists without foreign trade,” he later comments, “bringing foreign trade into an analysis of the value of the product annually reproduced can therefore only confuse things, without supplying any new factor either to the problem or to its solution” (546). Whether or not Marx was right to assume so may be debated. But that this is what he does throughout is clear. Expanding foreign trade and forming the world market may be temporary palliatives to crises, but at the end of the day they merely shift the contradictions of capital onto a broader geographical scale.

ON CHAPTER 21 OF VOLUME II: EXPANDED REPRODUCTION

In the relatively short chapter 21, Marx takes up the case of expanded reproduction. I propose to follow the text fairly closely, before commenting more generally on its meaning and significance. Marx begins by referring us back to the parallel chapter 24 of Volume I. There he describes how the individual capitalist, having realized the surplus-value embedded in the commodity in money form, is forced by the coercive laws of competition continuously to expand accumulation by using some of that extra money to purchase more means of production (constant capital) and more labor-power (variable capital) to produce even more surplus-value. If this is true for individual capitalists, it must also be true, says Marx, for the total social capital. The expansion may not be smooth and continuous, since it may take several years to hoard enough money capital to open up a new factory or build a railroad. But saving up the money is not the only issue. More constant and variable capital must be readily available for purchase in the market to build the new factory or railroad. “Reproduction on an expanded scale” must therefore already have occurred in commodity form. Hence “money in itself is not an element of real reproduction” (566), because, if there are no surplus commodities available, then the saved money is useless.

There is, obviously, a chicken-and-egg problem here that can only be circumvented by emphasizing the continuity and interconnectedness of the different moments within the overall circulation of capital.

Hoarding (saving) money may not constitute new wealth in itself, but it does create "*potential* new money capital." But, if everyone hoards in anticipation of future expansion, then no one is buying commodities in the here and now, and the circulation process stops. Unsold commodities clog the system. The only form of money creation that does add to real wealth directly is gold production, since gold is a commodity which contains surplus-value (567). In the event of everyone saving and not buying, the only fund available to realize everyone's surplus-value would be the surplus-value of the gold producers. This, says Marx, is of course an "absurd" idea. We need to get to the bottom of the difficulty that saving reduces spending, and therefore diminishes the prospects for realization. To do this we have to look at how the accumulation process works in and between the two departments.

ACCUMULATION IN DEPARTMENT 1

Within department 1 there are two kinds of capitalists—those who are hoarding (designated as A, A', and A" …) and those who are in the process of spending their hoard on buying new constant and variable capital (designated as B, B', B" …). These two categories "relate to each other as buyers and sellers respectively." The activities of these two categories partially compensate each other. As one capitalist withdraws money from circulation to hoard, the other pours extra purchasing power back into the market. With a bit of luck the activities of the hoarders and the spenders will balance each other. Even if they do, "these several points at which money is withdrawn from circulation and accumulated in individual hoards or potential money capitals appear as an equal number of obstacles to circulation, because they immobilize the money and deprive it of its capacity for circulation" (568). And there is always the danger of an imbalance—too much hoarding and not enough buying.

The credit system offers a solution: "It is easy to understand the satisfaction evinced when the credit system concentrates all these potential capitals in the hands of banks, etc. makes them into disposable capital—'loanable capital' i.e. money capital, no longer passive, as it were, a castle in the air, but active, usurious, proliferating capital" (569). It is interesting that he here calls this money capital "usurious." As is his wont throughout Volume II, however, the potential "satisfaction" to be gained from this credit-based solution is laid aside. A solution has to be found without it. Only then will we be able to understand the nature of the problem that the credit system resolves.

A "real balance" in the production and realization of values (including surplus-values) would require that "equal values of commodities are reciprocally exchanged"(570). This "balance exists only on the assumption that the values of the one-sided purchases and one-sided sales cover each other. The fact that the production of commodities is the general form of capitalist production already implies that money plays a role, not just as means of circulation, but also as money capital within the circulation sphere." This

> gives rise to certain conditions for normal exchange that are peculiar to this mode of production, i.e. conditions for the normal course of reproduction, whether simple or on an expanded scale, which turn into an equal number of conditions for an abnormal course, possibilities of crisis, since, on the basis of the spontaneous pattern of this production, this balance is itself an accident. (570–1)

This implies that the interventions of money capital, while necessary, are potentially destabilizing. Again, it is money capital that seems to be at the root of the problem.

Are the proper balances restored through crises? Marx does not say. This is left as an open and important question. In the subsequent development of the schemas, he lays out exactly what the balances would have to be for equilibrium growth to be achieved (under certain assumptions, of course). I interpret Marx as saying (though I may be wrong) that such balances would at best be achieved by accident and at worst through the violent shakeouts occurring through crises.

Similar considerations affect the expansion of the variable capital employed. Expanding outlays on variable capital in department 1 creates further demand for the wage goods produced in department 2. The working class in department 1 "one-sidedly faces the capitalists in class II as buyer of commodities … and it faces the capitalists in department I one-sidedly as a seller … of its labour-power." So it buys from one department (2) and sells in the other (1). The "necessary preconditions" are that "all mutually require one another, but they are mediated by a very complicated process which involves three processes of circulation that proceed independently, even if they are intertwined with one another. The very complexity of the process provides many occasions for it to take an abnormal course" (571). Once again, the hint is that crises of some sort are highly likely.

To form their hoard, capitalists must first sell the commodity that contains the surplus-value produced by the worker. It is, in effect, the worker who produces the hoard, the potential money capital. Within department 1, we encounter the production of "the means of production of means of production" (572). An expansion of the production of means of production for means of production implies, however, a diminution in the production of means of production for the department producing consumer goods.

> Thus in order to make the transition from simple reproduction to expanded reproduction, production in department I must be in a position to produce fewer elements of constant capital for department II, but all the more for department I. This transition, which can never be achieved without difficulty, is made easier by the fact that a number of products of department I can serve as means of production in both departments. (572)

It is indeed important to note that many products—energy being the most obvious example—can serve equally well as means of production in either department. But the main thrust of this argument has had, I believe, enormous consequences. It underpins the view that has long dominated socialist development strategy, that priority must be given to expanding the output of department 1, if necessary at the expense of the production of consumer goods. The starting point is: develop heavy industry, invest in the fixed capital of production and of infrastructures, and restrict personal consumption. Eventually, when the capacity to produce means of production by means of production has reached a certain point, attention may be paid to the consumption needs of the masses. This was the path typically taken in the communist countries (the Soviet Union and China).

What Marx says here is consistent with that view. The actual example Marx constructs of an expanded reproduction schema is exactly of this sort, and confirms this bias. I say "bias" because Marx does not prove the necessity of this priority as a universal truth; and, given some of the historical results of the applications of this kind of development theory in socialist countries and beyond (it has often been built into the five-year plans adopted by democratic countries such as India), it may be wise to go back and take another look at what Marx here presumes to be the case and what he actually means.

Later in the text, however, Marx rejects "the idea that accumulation is achieved at the expense of consumption" as an "illusion that contradicts the essence of capitalist production, in as much as it assumes that the purpose and driving motive of this is consumption, and not the grabbing of surplus-value and its capitalization, i.e. accumulation" (579). In a purely capitalist mode of production, where the aim and objective is solely the further creation and consolidation of ever greater surplus-value, of ever-increasing capitalist class wealth, privilege and power, the strategy of concentrating investment on the production of means of production for the production of the means of production and ignoring consumption makes perfect sense. The conditions of consumption of the masses are of no direct interest. It is, therefore, the carrying over of that class-mandated priority to invest in department 1 into the practices of socialist planning that has to be questioned.

Marx goes on to argue that

> the greater the productive capital already functioning in a country (including the labour-power incorporated into it, the creator of the surplus product), and the more developed the productive power of labour and so also the technical means of rapid expansion of the production of means of production—the greater, accordingly, the mass of surplus product, both in value terms and in the quantity of use-value in which it is represented. (573–4)

But the question of who benefits from all of this expansion is left in the shadows. The unstated implication should surely be that it is the capitalist class that benefits.

Marx examines at length the relations between the A's and the B's in department 1. The A's repeatedly realize their surplus-value through a sale, but are now hoarding much of the money they are acquiring. The B's are buying (partly from the A’s) in order to expand, but upon further expansion there is still the problem of who they can sell to if the A’s are not buying. Where, in short, does the money come from to realize the value of their product?

The problem is that money is “absolutely unproductive … as a hoard and as virtual money capital that is formed bit by bit. In this form it runs parallel with the production process but lies outside of it. It is a ‘dead weight’ on capitalist production.” It may be useful to note the importance of this category of “virtual money capital” here (is this the same as “potential capital” mentioned earlier? And in what relation does it stand to the “fictitious capital” of Volume III?). But, Marx continues, “the attempt to make use of this surplus-value that is being hoarded up as virtual money capital, either for profit or for revenue, culminates in the credit system and ‘papers’. In this way money capital maintains an enormous influence in another form on the course of the capitalist system of production and its prodigious development” (574).

Here is yet another point in Volume II where Marx points to processes that either necessitate or culminate in the creation of the capitalist credit system. He also acknowledges its “enormous influence” over the course of capitalist development and therefore, presumably, over the laws of motion of capital. This further supports the view that one of Marx’s purposes in Volume II is to show the absolute necessity of credit formation and the development of the credit system.

The advantage of making more and more of the virtual capital available to use via the credit system is that these moneys “can be invested more quickly in a particular business, whether in the hands of the same capitalist, or in others.” The virtual capital can even be “completely separated from its parent capital, in order to be invested as new money capital in an independent business” (574). “Virtual money capital accumulated as a hoard, is supposed to function effectively as additional money capital,” which means that it is released into circulation to buy new means of production and new variable capital. But this still does not answer the question of where the extra money comes from. Marx’s answer is this:

> We already know, however, from considering simple reproduction, that a certain quantity of money must exist in the hands of the capitalists in departments I and II so that they may exchange their surplus product. There the money whose only uses was to be spent as revenue on means of consumption returns to the capitalists to the extent that they advanced it for the exchange of their respective commodities; here the same money similarly reappears, but with its function changed. The A’s and B’s (department I) supply one another with the money for transforming their surplus products into additional virtual money capital, and alternately cast the newly formed money capital into the circulation sphere as a means of purchase. (575)

With expansion it has to be assumed, in short, that sufficient money (credit?) exists to accommodate both circulation and hoarding, so that the expansion of accumulation has to be accompanied by an expansion in the money supply or, what amounts to the same thing, an expansion of the facility to use money as a means of payment:

> If this is true absolutely for the early phase of capitalist production, where the credit system is accompanied by a predominantly metallic circulation, it is just as true, too, for the most developed phase of the credit system, which still has metallic circulation as its basis. On the one hand, the extra production of precious metals, according to whether this makes them abundant or scarce, can now exert a disturbing influence on the price of commodities, not only in the long term, but also within very short periods; on the other hand, the whole credit mechanism must constantly be engaged in restricting the actual circulation of metal by all kinds of operations, methods, technical devices, to what is relatively an ever decreasing minimum—though this also increases in the same proportion the artificial character of the entire machinery and the chances of its normal course being disturbed. (576)

In other words, we have to contemplate the very real prospect of commercial and financial crises of the sort dealt with in Volume III. The ongoing battle between the credit system and its monetary base made so much of in that volume reappears here.[1] "It is important above all," says Marx here,

> to start by assuming metal circulation in its most simple original form, since in this way the flux or reflux, settlement of balances, in short all those aspects that appear in the credit system as consciously regulated processes present themselves as existing independently of the credit system, and the thing appears in its spontaneous form, instead of the form of subsequent reflection. (577)

It is not hard to see, given what we know about the role of credit systems operating as "the common capital of the class," that the credit system, far from being the source of crises, can be a primary mechanism not only for removing obstacles to monetary circulation but for crisis avoidance and crisis resolution more generally, even as "the artificial character of the entire machinery" increases "the chances of its normal course being disturbed." It is not surprising, therefore, that Marx makes frequent reference to the credit and banking system in these passages. But its contradictory character (as we have seen) presumably led Marx to reject any systematic attempt to incorporate its effects here. Having already considered Marx's analysis of the credit system as the "mother of all insane forms" allows us a clearer perspective on how credit gets us out of the frying pan of crises of disproportionality only at the expense of plunging us into the wild fires of financial and commercial crises.

The problem of hoarding, you will doubtless have noticed, is frequently invoked throughout Volume II. It is important because imbalances between supply and demand arise within departments, particularly in the department producing means of production. For example, sufficient money must first be acquired to buy the machinery required to mine coal or produce steel. Money must subsequently be set aside for replacement of these means of production even as they are being used up. During all these years the coal and steel producers may be producing and selling their commodity but not buying back the full value equivalent of what they are producing. This problem is exacerbated by the fact that much of the constant capital is fixed capital. This then raises all of the complications of the costs of maintenance, repairs and replacement of fixed capital examined in chapter 4. The upshot is that it is highly unlikely that trading even within department 1 will be harmonious and not subject to imbalances and disruptions. There will be swings, fluctuations, and waves of investment followed by phases when saving and hoard formation predominate.

While problems of this sort can be identified in the department producing consumer goods (it, too, requires fixed capital), the internal dynamic within the department is nowhere near as potentially disruptive. The reason is that wages, which constitute much of the demand for means of consumption, tend to be paid on a regular (usually weekly) basis, and workers, living as they usually do hand-to-mouth, tend to spend immediately that which they receive. They do not hoard (or at least Marx presumes so). Wage workers producing corn and paid the value of their labor-power have enough money to buy the milk they need on a regular basis. Since capitalists only pay for the labor they hire after the work is done, they do not have first to hoard money in preparation for hiring more workers in the same way they have to save to buy a new machine. Matters may be somewhat different when it comes to the consumption of the capitalist class. The demand for luxury goods may fluctuate more violently, depending upon economic conditions, expectations and the general level of confidence that prevails. This problem was mentioned in the previous chapter.

In advanced capitalist economies, such as that of the contemporary US, expectations and the state of consumer confidence among the mass of the working class have now also become critical in ways that Marx did not consider (though he does drop a hint of it, as we shall see). And workers save both voluntarily and involuntarily (through mandated pension schemes).

Not only must we presume that the money and the extra means of production are available for expansion to proceed. There must also be extra labor-power already in existence at the disposal of the capitalist. This elementary requirement leads into an examination of circulation within department 2. The demand for consumer goods emanating from department 1 will depend on the degree of hoarding. This entails the "formation of virtual extra money capital in department I (hence under-consumption from department II's standpoint); piling up of commodity stocks in department II which cannot be transformed back into productive capital (i.e. relative overproduction in department II; surplus money capital in department l and a shortfall in reproduction in department II" (578–9). Note that the contentious terms "under-consumption" and "overproduction" are here used relative to the standpoint of the particular department. Assuming that "there are neither merchants nor money dealers involved, nor classes that merely consume and are not directly involved in commodity production, it follows that the constant formation of commodity stocks is indispensable, in the hands of their respective producers themselves, in order to keep the machinery of reproduction going" (580). While Marx does not say so, commodity stocks are dead capital, and therefore a drag upon accumulation (in effect, hoarding takes commodity form). If department 1 is absorbing more means of production then, other things remaining equal, less will be available for the expansion of production in department 2.

But, as Marx points out in the following section, the capitalists in department 2 have an advantage because "the workers it employs have to buy back again from it the commodities they have themselves produced. … It not only buys labour-power but resells its commodities to its own workers." Capitalists in department 2 can benefit directly by repressing real wages below their value. But they have other means to claw back part of the variable capital they outlay:

> Even if the normal wage is nominally paid, a part of it can in actual fact be grabbed back without a corresponding equivalent, in other words stolen; this is achieved partly by way of the truck system, and partly by falsification of the circulating medium (even if possibly in a way that circumvents the law). This is what happens in England and the USA, for example.

Marx promises to expand on this theme later with "some nice examples."

Since this is one of the few places where this issue crops up in *Capital*, it is worth marking it. The recent fraudulent dispossession of millions of people's housing in the United States, by means of foreclosures, is an obvious contemporary case in point, as has been the whole politics of what I call accumulation by dispossession over the last forty years or so.

As usual, however, Marx rules out deep consideration of such matters, because "blemishes" of this sort "cannot be used as subterfuges for getting round theoretical difficulties" (585). In the purely capitalist mode of production that is the object of his "essentialist" enquiry, such blemishes have no place. In particular, they cannot help resolve the difficulty of lopsided demand and supply relations between the two departments.

The main problem in department 2 arises out of its relations with department 1. This contrasts with the more serious problems of circulation that arise within department 1. So how is this main problem resolved?

The Schemas for Expanded Reproduction

Marx's central aim is to model the trade relations between the departments. He does so assuming the conditions of "accumulation for accumulation's sake" set out in the parallel chapter 24 in Volume I. After a few pages of probing, he arrives at what he considers his most revealing model of dynamic relations between the departments in Section 3, on "Schematic Presentation of Accumulation." I will not go through all the preliminary arguments, but simply outline the solution he arrives at. His starting point is the schema he used for simple reproduction that we have already seen:

I 4,000c + 1,000v + 1,000s = 6,000

II 2,000 c + 500v + 500s = 3,000

The proper proportionality in exchange between the departments under conditions of simple reproduction required department 2 to purchase 2000c from department 1 against the purchase by workers and capitalists engaged in production of means of production of 1000v + 1000s from department 2 (or, algebraically, c2 = v1 + s1). Notice that both the rate of surplus-value (s/v) and the value compositions of capital (c/v) are identical in the two departments.

To analyze the case of expanded reproduction, he chooses a different set of baseline figures to facilitate his calculations:

I 4,000c + 1,000v + 1,000s = 6,000

II 1,500c + 750v + 750s = 3,000

While the rate of surplus-value remains identical, the value composition has been changed such that productivity (the ratio c/v, otherwise known as the value composition of capital) in department 1 is double that in department 2. Marx evidently did this for ease of computation, but it is a change that has some significance. The equilibrium exchange required for simple reproduction—c2 = v1 + s1—no longer holds. There is, in effect, overproduction of means of production and underproduction of means of consumption.

But this is the position at the beginning of the year. At the end of the year (assuming, as Marx does throughout, that everything turns over on an annual basis) the figures change if some of the surplus-value is reinvested in expansion at the expense of capitalists' personal consumption. Let us suppose that half of the surplus-value in department 1 (1,000s) is reinvested in expansion. Assuming the value composition of capital remains the same, the 500s that is reinvested will be used to purchase an extra 400c and 100v (giving totals of 4,400c + 1,100v) in department 1. Assuming the rate of surplus-value remains constant, then the surplus-value generated is now 1,100s and the total output in this department has increased from 6,000 to 6,600. This then forms the basis for accumulation in the following year. And so it goes from year to year in department 1.

For department 2, Marx presumes a different reinvestment rate, in which only 150s of the 750s available is reinvested. Given the value composition prevailing, this means purchasing 100c and 50v over and above the original 1,500c and the 750c. So the total purchases are now 1,600c and 800v, which produces a surplus-value of 800s for a total output of 3,200 as opposed to the 3,000 at the beginning of the year. This forms the basis for accumulation in the following year. And so it goes from year to year in department 2.

The total output of the two departments at the end of the first year is 9,800 compared to the 9,000 at the beginning of the year. But notice that 1,600c purchased in department 2 from department 1 is now equivalent to the 1,100v + 500s of demand for consumer goods emanating from department 1. A miraculous harmony is produced through the growth process: indeed, growth and fresh capital accumulation have produced a harmony where before there was imbalance! Of course, Marx has chosen his numbers and his conditions carefully to fit the result. But he thereby proves the possibility (but not in any way the probability) of harmonious capital accumulation. He makes it seem as if that process can go on forever. Table 1 shows the year-to-year movement over four years. It can go on indefinitely (everything else remaining equal).

Table 1

First Year	Beginning	I. 4000c + 1000v + 1000m = 6000 II. 1500c + 750v + 750m = 3000
	End	I. 4000c + 400Δc + 1000v + 100Δv + 500u II. 1500c + 100Δc + 750v + 50Δv + 600u
Second Year	Beginning	I. 4400c + 1100v + 1100m = 6600 II. 1600c + 800v + 800m = 3200
	End	I. 4400c + 440Δc + 1100v + 110Δv + 550u II. 1600c + 160Δc + 800v + 80Δv + 560u
Third Year	Beginning	I. 4840c + 1210v + 1210m = 7260 II. 1760c + 880v + 880m = 3520
	End	I. 4840c + 4840Δc + 1210v + 121Δv + 605u II. 1500c + 100Δc + 750v + 50Δv + 600u
Fourth Year	Beginning	I. 5324c + 1331v + 1331m = 7986 II. 1936c + 968v + 968m = 3872
	End	I. 5324c + 532Δc + 1331v + 133Δv + 666u II. 1936c + 194Δc + 968v + 97Δv + 677u

In algebraic terms, the reinvestment in department 1 is c1 + Δc1 +v1 + Δv1 + so1 (where the last term stands for residual capitalist class consumption after reinvestment in expansion), and for department 2 it is c2 + Δc2 +v2 + Δv2 + so2. The equilibrium exchange that keeps the dynamism going smoothly is c2 + Δc2 = v1 + Δv1 + so1. Hit that proportionality and we could have harmonious capital accumulation for ever!

But this provides an answer to the question that has dogged Volume II from the end of chapter 4 onwards. Where does the extra demand come from to bridge the gap between the demand generated by launching c + v into circulation at the beginning of the day, when the supply at then end of the day is c +v + s? When viewed from the standpoint of the individual capitalist, it seems silly to say that the capitalist has to supply the extra demand to mop up the surplus-value. But, when disaggregated individually (the relationship between the A’s and the B’s in department 1) and across departments, we see that some capitalists are buying more than they are producing while others are producing more than they are buying, and that some combination of productive and personal consumption can be arrived at to establish a dynamic equilibrium between aggregate supply and demand.

The big question is what would be required to arrive at this equilibrium position. So what would it take for trading between the two departments to keep the proportionalities and ratios right, so that there is no overproduction in one department relative to the other that might otherwise experience underconsumption? Obviously, the schemas are totally unrealistic, and Marx has cooked the figures to fit his case. But are the schemas so unrealistic as to reveal nothing about the nature of the stresses, strains and contradictions, as well as the dynamic capacities, of a capitalist mode of production? If not, what are the schemas intended for?

These crucial questions require general evaluation. But before dealing with them, there is one other issue raised in this chapter that deserves some comment.

The Problem (Again) of Working-Class Consumption

Throughout Volume II of *Capital*, the issue of working-class consumption has frequently been raised in ways that were totally ignored in Volume I. First, working-class consumption constitutes a "*a relatively decisive share* in the total circulation" (490; emphasis added). One of the fundamental contradictions of capitalism resides in the inability to realize values because of lack of consumer power in "a society in which the great majority are always poor and must always remain poor" (391). Marx has even gone so far as to suggest that "the ultimate reason for all real crises always remains the poverty and restricted consumption of the masses, in the face of the drive of capitalist production to develop the productive forces as if only the absolute consumption capacity of society set a limit to them" (C3, 615).

It is in this context that we have to accord some significance (although exactly how much is open to debate) to his "incidental" insertion of the following observations in this chapter. This concerns how "Mr Capitalist, as well as his press, is frequently discontent with the way in which labour-power spends its money, and with the commodities II in which it realizes this. On this occasion he philosophizes, waxes cultural and philanthropizes." He then cites an article in the *Nation* from 1879 (published after the last theoretical work had been done), which complained that "the working people have not kept up in culture with the growth of invention, and they have had things showered on them which they do not know how to use, and thus make no market for." The problem is "how to raise him as a consumer by rational and healthful processes," and this is not easy to do, because "his ambition does not go beyond a diminution of his hours of labour, the demagogues rather inciting him to this than to raising his condition by the improvement of his mental and moral powers." While Marx is scathing in his criticism of this sort of thing, he also accepts the idea that making the worker into a "rational consumer" is a necessary condition for workers' consumption to function as a "relatively decisive" part of capital circulation. What is meant by "rational consumption is shown when [the capitalist] is condescending enough to take a direct interest in the consumer behavior of his workers—i.e. in the truck system." He also uses the example of the model cotton factories of Lowell in Massachusetts, where the policing of the lodging and living conditions of the girls employed provides a beautiful example of "the rational consumer in all his or her glory." But Marx began his studies when wages in Britain (his prime example) were being held down while, after 1860 or so, the evidence suggests that wages were rising. Much later, when the $5, eight-hour day was introduced in the automobile industry in 1914, Henry Ford sent in an army of social workers to teach the workers how to consume soberly and rationally. The rationality is, of course, defined by the need for workers to "make a market" for whatever consumer goods the capitalists can produce. How the singularities of consumption might be rationalized through organized consumerism is a challenge that

Marx does not take up. But this “insertion” opens the door for such considerations, even though Marx himself rejects them.

The Assumptions

In evaluating what is going on in these schemas, it is useful first to point out the assumptions built into the account. To begin with, Marx assumes there is no problem assigning activities to one or other of the departments. Ambiguities in definition (Is flour a means of production when it is used to make bread, which is in turn a means of production to make sandwiches, before finally being consumed?) and of dual uses and joint products (sheep produce meat to eat, as well as wool and hides for industrial manufacturers) are pushed to one side. There are only two classes—capitalists and laborers (so there are no bankers or merchants even, and certainly no middle class, however defined). The productivity of labor (the value composition, c/v), which in practice is constantly evolving (through the technological and organizational changes produced through the search for relative surplus-value, as described in Volume I) is held constant, except for a rather opportunistic differential in value composition between the two departments introduced into the expanded schemas in order to get the figures to balance. (Does this imply that there is a unique path of technological change required that can facilitate equilibrium in the schemas, as some commentators have suggested might be the case?) The value of labor-power is fixed, and the reinvestment rates are considered (with one exception) constant. Reinvestments are confined within departments so that capital cannot flow from one department to another (and there is an odd blip in the reinvestment/savings rate in the second year of the arithmetic example, designed to keep everything in balance).

The fact that investment funds cannot flow between the departments implies that there is no mechanism for the equalization of the profit rate across the departments. Since this is a vital aspect of Marx’s theory in relation to the falling profit rates examined in Volume III, there is an obvious theoretical problem here that needs attention. The exchanges are established in value terms on the assumption that everything exchanges at its value (and not according to the prices of production, as laid out in the early chapters of Volume III). Though the interventions of money capital frequently appear to disrupt matters, the monetary aspects of circulation are not fully integrated into the analysis. Everything turns over in one year, and the serious problem of fixed capital formation and circulation is for the most part assumed away. Other forms of appropriation and exploitation through rent, interest, profit on merchants’ capital, and taxes are sidelined.

It is, I think, obvious from this that the schemas as stated form a completely unrealistic model of how a capitalist economy might work. But the purpose of modeling in this way is not necessarily to arrive at a realistic representation (though successful modeling of this sort may lay a basis for ultimately doing so). It is to highlight, as Marx would put it, key relations—the essence—in the inner structure of a capitalist mode of production and, in this case, reproduction. So what is it that the schemas reveal? Quite simply, it is that the reproduction of accumulation of capital through the continuous flow of capital by way of the three circuits of money, commodity and production capital is bound to be a tricky business and therefore crisis-prone, and that crises of one sort (of fixed capital flows, and of disproportionalities more generally) may be resolved only at the expense of generating even more problematic crises elsewhere (most notably in the financial system). I am fond of suggesting that, in Marx's analyses, crisis tendencies do not get resolved but are merely moved around, and I may be guilty of superimposing that idea on what is happening here. But I think a close reading of the text, particularly taken in conjunction with a close reading of the Volume III materials on credit and finance, is far more supportive of this reading than not.

The Schemas Under Capitalism: The Role of Money and Credit

What happens when the credit system operating as a common capital of the class is brought to bear upon these problems of macro-coordination of capital flows in a capitalist society? Why can't we imagine that the credit system can somehow exercise a controlling power over all of this, and even rationalize capital flows rather than leave them in the anarchic state that Marx depicts as the case under raw market determinations? The credit system, after all, plays a crucial role in rationalizing turnover times, and solves many of the problems of differential turnover times. It also finesses the circulation of fixed capital by reducing the associated monthly hoarding to the simple monthly payment. We encounter a similar problem of coordination between different sectors—and maybe the signals transmitted and worked out via the credit system as a system of periodic payments at a stated rate of interest could be used in macro-planning, by a state apparatus or some equivalent. Is this not in effect what central bank policies, being the pivot of the credit system and backed by the state, are largely mandated to do?

What this signals, once more, is the ambivalent role of the credit system. A realistic model of how this all works cannot be arrived at, I believe, without integrating the credit system into the framework. This is something that subsequent work should have done, but which still remains for the most part an uncultivated field of endeavor.

The Meaning of the Schemas and their Subsequent Development

Subsequent discussion and debate over the status and meaning of Marx's reproduction schemas has revealed some major disagreements on how best to interpret them. While I argue that Marx's purpose in setting up a harmonious equilibrium version of the relations was to show what an impossible condition this was, there are others who argue that he was in fact demonstrating the possibility of such a harmonious developmental path, and that diversions from this harmonious condition, when corrected by minor crises here and there, can in principle be controlled.

Rosa Luxemburg, in *The Accumulation of Capital*, thought that the schemas showed that “accumulation, production, realization and exchange run smoothly with clockwork precision, and no doubt this particular kind of ‘accumulation’ can continue ad infinitum.” Fiercely resisting what she saw as the political passivity that was implied by the schemas, she charged that they were fatally flawed. Marx had totally failed to answer his own question: “Where does the effective demand come from to pay for the surplus product?” This is, of course, a question that Marx confronts in chapter 17, and attempts to resolve in chapters 20 and 21. This is also a question that is central to Keynesian economic theory. Marx’s reproduction schemas seem to have had a hidden role in animating certain strains of Keynesian thought, as well as the macroeconomic models of economic growth that evolved from the 1930s onwards. There has consequently arisen a substantial literature on the relations between Marx and Keynes, in which the questions of aggregate effective demand and of rates of reinvestment, along with paths of technological change, loom large. For Keynes, the argument leads to the necessity for adequate fiscal and monetary policies on the part of the state (or states and international financial institutions such as the IMF) if anything like harmonious growth is to be achieved. Other economists of a Keynesian persuasion have shown that correct proportionalities could be sustained only by a unique path of technological and organizational change (the evolution of the productivity ratio of c/v). It would be unlikely, however, that the actual path of technological change would correspond to that required to achieve balanced growth. The more technological change deviated from that which would secure balanced growth, the more severe the crises of dispropor-tionality would become.
As we earlier saw in the case of money and financial capital and credit, Marx does not appear to believe it possible to evade serious crises (as opposed to regulatory crises to correct disproportionalities) in this way. Almost certainly, this is how Marx would have differentiated himself from Keynes, who believed the crises and hence the contradictions were broadly manageable by state interventions. Before Marx, there had been little attempt—other than that of Quesnay, mentioned above—to build a macroeconomic model of the flows whereby capital is reproduced. Quesnay believed that the basis of all capital and wealth lay in production on the land, but Marx’s version focuses on industrial production, and seeks to define the necessary flows and balances between the two departments he identifies. The “spontaneous pattern” of capitalist production (by which he means individual capitalists operating in their own self-interest) would mean, he said, that “balance is itself an accident,” and that “conditions for the normal course of reproduction, whether simple or on an expanded scale,” could all too easily “turn into an equal number of conditions for an abnormal course, possibilities of crisis.” The “necessary preconditions” for balanced growth “all mutually require one another, but they are mediated by a very complicated process which involves three processes of circulation

that proceed independently, even if they are intertwined with one another. The very complexity of the process provides many occasions for it to take an abnormal course" (571).

These kinds of crises are generally referred to in the Marxist literature as "crises of disproportionality." How deep and broad they may become is unclear, but a contemporary version of this sort of argument can be found in the frequent references in IMF reports and other documents to "global imbalances." To be sure, this usually refers under contemporary conditions to trade imbalances between national economies (such as those of the United States and China), but in a way this can be understood as a version of the uneven development and imbalances that can and do arise between sectors. This overlap and the extensive subsequent work to which it has given rise pose problems for a geographical version of the potential identified here of imbalances in the dynamic interactions between production and consumption.

The schemas show what capital would need to do to achieve harmonious and balanced growth at the same time as they set the stage for understanding the sheer impossibility of doing so. There are also some potential contradictions that remain unexplored. The technical analysis, as is the case throughout Volume II, points to possibilities of disruptions and dislocations. In the grander scheme of things, such as that portrayed in Volume III, we see how these possibilities are more fully realized in practice.

The schemas were first applied in the early years of the Soviet Union, when a Polish economist called Feldman began to explore their utility for building five-year economic development plans. Marx's schemas were then picked up by economists such as Michał Kalecki (also Polish) and others of a more straightforwardly Keynesian persuasion to formulate macroeconomic growth models and theories of economic development in bourgeois economics. Evsey Domar, jointly credited in the creation of what became known as Harrod–Domar macroeconomic growth models in the 1940s, was emphatic in acknowledging his debt to Marx's schemas. The whole field of macroeconomic growth modeling in bourgeois economics owes something to this heritage. Conventional economists would have saved themselves a lot of trouble, and actually moved ahead towards macroeconomic modeling and public policy planning seventy or so years before, had they taken Marx's schemas more seriously.

These ideas were also taken up theoretically, and with devastating effects, in Piero Sraffa's *Production of Commodities by Means of Commodities*, whose title says it all. There is, therefore, an overlap between Marx's achievements in creating the reproduction schemas and the development of bourgeois economics, normative economic and socialist planning.

The structure of relations Marx uncovers appears in fact to have a universal significance, beyond the specific historical relations of a capitalist mode of production. Its special capitalistic qualities seem to rest on the distinctive role of money capital flows as a grand coordinator of the relations between sectors and departments of production and consumption. But what if the schemas were set up in terms of physical use-value (rather than value or exchange-value)? Could they be used for planning of physical relations between different sectors of the economy without reference to capital accumulation? Marx clearly states that the circulatory process “can proceed quite well on the basis of non-capitalist production” (430).

The highly sophisticated explorations of the mathematics of Marx’s “model” by mathematical economists—both Marxist and non-Marxist—have certainly developed Marx’s insights, though in a non-dialectical way. But, given the way Marx presents the materials, it is very hard to see any other way forward. And if this is the dominant way forward, then how far should one go in presenting these materials for the first time to a relatively new audience, and in following up developments that require a familiarity with some pretty high-powered mathematical economics? The best I have been able to do under these circumstances (particularly since my own command of the mathematics required is minimal) is to indicate some references with which those inclined to push further down the mathematical road might begin to do so.

There are broadly two schools of development of the schemas that depend on the framework of economic thinking that is brought to bear on what Marx appears to have been doing. For example, Michio Morishima converts the schemas into that of neoclassical equilibrium theory, and deploys highly sophisticated mathematical techniques to show what the schemas actually imply about economic growth trajectories. The results are interesting. When the assumption that accumulation occurs separately in each department is dropped, Marx’s numerical examples depict “explosive oscillations … around the balanced growth path, if department II, producing wage and luxury goods, is higher in the value composition of capital (or more capital-intensive) than department I.” When “the value composition of capital is higher in department I than in department II, the result would be a monotonic divergence from a balanced growth path.” Exercises of this sort are fascinating, since they illustrate how difficult it is to calculate even with fairly simple models what a balanced growth path would look like.

The other school of thought, broadly Keynesian, has also gone over the numbers in order to show that everything depends on the creation of a viable technology that can equilibrate the physical and value exchanges between departments simultaneously, and that rates of reinvestment and employment must all move in tandem within a very strictly defined band. Again, the implication is that balanced growth is extremely unlikely, and that Marx’s intuition that it could only be achieved “by accident” is right on the mark.

The conclusion that Marx arrives at elsewhere—that crises are violent restorations of equilibrium conditions for a balanced growth that can at best be momentary, and never permanent—then stands as entirely plausible, if not thoroughly justifiable. The intensely discomfiting corollary is the difficult question of how these dynamic relations can be articulated through conscious social planning and design to accommodate the needs of a noncapitalist mode of production.

The Possibility of Rational Socialist Planning

Several times throughout these chapters (as well as elsewhere) Marx refers to the problem of rationally allocating labor across different facets of the division of labor within society as a whole. He suggests that social means have to be devised to do this. This contrasts with the anarchy of allocations arrived at through money flows and market processes, and the irrationality of the crises that result. Some substance is given to the view that balanced growth might in principle be possible by applying the reproduction schemas. They have therefore been invoked as useful tools for the rational planning of production and consumption under socialism and communism. In a "communist society," says Marx,

> society *must reckon in advance* how much labour, means of production and means of subsistence it can spend, without dislocation, on branches of industry which, like the building of railways, for instance supply neither means of production nor means of subsistence nor any kind of useful effect, for a long period … though they certainly do withdraw labour, means of production and means of subsistence from the total annual product. (390)

He also stated, in chapter 49 of Volume III (written before the major theoretical studies of the 1870s, but where the reproduction schemas put in a cameo appearance), that "even after the capitalist mode of production is abolished, though social production remains, the determination of value still prevails in the sense that the regulation of labour time and the distribution of social labour among the various production groups becomes more essential than ever, as well as the keeping of accounts on this" (C3, 991). The implication is that Marx thought the schemas had some sort of role to play in the development of rational socialist planning. As they are, the reproduction schemas go nowhere near solving such problems. But they do show in principle how much new means of production might be needed to expand the production of both means of production and wage goods in order to establish balanced growth in a rationally ordered society. In any alternative society, coordinations of this sort would have to be socially organized, given Marx's repeated insistence that the role of money capital in such coordinations is too problematic and would have to be abolished. In other words, the schemas would have to be rewritten in purely use-value and physical terms (of the sort that Leontief later devised), rather than being guided by monetary flow and profitability considerations.

Throughout *Capital*, Marx also frequently invoked the exploitative capital-labor class relation in production as the fundamental problem that needed to be addressed and displaced by "associated laborers" freely organizing their production on a collective basis. This is the conception of "the alternative" at the level of individual enterprise. But this alternative is, as he recognizes in Volume III, limited in that it would in the end merely replicate the problems of capitalist enterprises (and even lead to chronic self-exploitation) unless steps were taken to gain control of all three circuits of capital simultaneously and subject them to social control.

Marx seems to be implying here that the anticapitalist alternative of control by the associated workers of production has to be supplemented, if not superseded, by social means to coordinate the allocation of labor across the various interrelated divisions of labor in society as a whole. The distinction here examined between the production of means of production and of means of consumption is but one variant of this. But it would surely continue to be as important under communism as under capitalism. This part of the anticapitalist project is far more difficult to conceptualize and to organize, even as it is absolutely critical in defining what an anticapitalist alternative might look like. Marx shies away from any further or deep consideration of it here.

It is fair to say that, in the present conjuncture, far more weight is given to the "associated laborer" aspects of the anticapitalist project than to the problem of the rational allocation of labor in society as a whole. This is partly because the latter is associated with the past dominations and repressions of the communist and even social-democratic state—institutions which no one is now prone (in my view rightly) to trust—and partly because the experience of communist and social-democratic planning has been in aggregate far from benign (though it would be wrong to dismiss it as totally unsuccessful). But, as Marx puts it in another context, we can ill afford to use such blemishes "as a subterfuge to avoid theoretical difficulties."

Unfortunately, it is generally the case that the contemporary left is all too prone to avoid such theoretical difficulties. In a complex socialist society, there are coordinations that need to be established to avoid overproduction, lack of supply, and bottlenecks in the physical flows required to reproduce daily life at an acceptable level of material well-being, and with an acceptable if not far more benign relation to ecological conditions. How to do this in the absence of the coordinations of money flows and profit-seeking in uncontrolled markets is the big question that cannot be evaded. And how to do it without developing something like a state apparatus is a huge challenge.

The sorts of things that can go wrong are illustrated by just one facet of Marx's schemas that, unthinkingly and without any justification, became a standard practice. In Marx's arithmetic example, the whole expansion is driven by changes in department 1. From this derived the view, already mentioned, that economic and developmental planning should concentrate investment in the production of capital goods and means of production, and then let the production of consumption goods follow on later. The socialist development model adopted this convention to the letter. Postcolonial governments, such as that of Ghana, also fell victim to this style of thinking in the 1960s, and have still not fully recovered from its effects.

There is absolutely no reason why department 2 should depend on department 1. This all arose because of an arbitrary choice by Marx and because of the lopsided character of relations between the two departments that arose from the differential impact of a greater level of hoarding in department 1 relative to department 2. The point of a socialist transition would, of course, be to eradicate that differential. This would make it entirely possible to reverse the relation and put department 1 at the service of department 2. Under capitalist social relations that would be impossible, as Marx has pointed out, because the objective of capital is to accumulate capital, not to satisfy the bodily and consumer needs of the mass of the people. But, surely, the aim in a socialist/communist world would be exactly the converse.

CHAPTER TWELVE

Reflections

So what can we conclude about the "contradictory unity between production and realization" that frames the relationship between volumes I and II of *Capital*?

What Volume II shows is that the continuity of the circulation of capital is again and again threatened by the limits and barriers that arise within the realization process. These barriers are different from those with which most Marxists are all too familiar in the labor market and within the realm of production. But, as Marx insists in the *Grundrisse* (404–10), the various limits and barriers to realization constitute a permanent threat to the dynamics of continuous accumulation, and frequently spawn major crises. He even goes so far as to suggest that "the universality towards which [capital] irresistibly strives encounters barriers in its own nature, which will, at a certain stage of its development, allow it to be recognized as being itself the greatest barrier to this tendency, and hence will drive towards its own suspension."

These barriers can be viewed collectively as barriers of consumption and of coordination in a context dictated by "accumulation for accumulation's sake." But consumption is far too crude a category by itself to capture all of the issues involved. To begin with, it is vital to distinguish between productive consumption (the consumption by capital of raw materials, energy, partially finished products and fixed capital items) and final consumption (the purchase and consumption of wage goods and luxuries by wage laborers, capitalists and the "unproductive classes"). Reinvestment of surplus-value to create more surplus-value continuously expands productive consumption. But, as Volume II shows, productive consumption generates a demand for the specific use-values required to produce each particular commodity. The nature and quantities of these specific use-values is perpetually changing according to technological requirements. These are in constant flux, as the coercive laws of competition drive dramatic shifts in the search for increasing labor productivity (the relative surplus-value so thoroughly examined in Volume I). At the same time, the creation of new wants and needs (for example, cell phones in recent times) calls for an ever wider range of commodity inputs, which have to be at the ready whenever capital requires them. While it is not impossible, as Marx demonstrates in his investigation of the reproduction schemas, for capital to achieve a rational coordination of all of these demands with supplies through market mechanisms, the likelihood of achieving balanced growth without many a mismatch is surely very low, thus presaging periodic crises of disproportionality (too many or too few use-values available to satisfy the needs of a given mix of production processes). Oscillating departures from equilibria are one thing, whereas monotonic divergence for one reason or another is quite a different proposition.

But it is not only the flows of physical use-values that require coordination. The money (and value) flows also have to match the purposive pursuit of balanced growth. While money, as the material representation of the sociality of labor, is entirely indifferent to the specificity of use-values, its quantitative flows have to be kept in balance in a situation where there are abundant opportunities for the monetary coordinations within the divisions of labor to go radically wrong. The problem is not that the total quantity of money may be insufficient to the task, for, as Marx convincingly argues, there are many monetary mechanisms to accommodate increases in commodity exchanges (for example, resorting to money of account). The problem is the mobilization of effective demand (demand backed by ability to pay) in a way that does not frustrate the possibility of realizing profit at every exchange point within the intricate pattern of exchanges.

When any of this goes wrong, as it surely will, we will likely witness crises of overproduction, which may be registered (as Marx shows in the first four chapters of Volume II) as idle money capital, idle productive capacity, and surpluses of commodities that cannot be sold at a remunerative (i.e. profitable) price. The consequence is a crisis of *devaluation* of capital. How long that crisis lasts and how deep it goes depends on the circumstances in each case.

The intricate trading that arises between capitalists with respect to commodities that form the means of production is ultimately conditional, however, upon the realization of commodities in the sphere of final consumption.

In this sphere, we immediately encounter a potential contradiction between the fact that the expansion of value and its monetary representation is potentially limitless, while the demand for specific use-values is not. Products that are not useful (in the sense that no one wants, needs or desires them) are valueless, and by extension all the commodities required to produce such products are likewise devalued. While there is a long history within capitalism of the creation of new wants and needs, along with the mobilization of all manner of desires (however stupid or meaningless we might judge them), the human capacity to consume is never infinite (even though Imelda Marcos, the wife of the disgraced Filipino dictator, had 6,000 or so pairs of shoes in her closets). The perpetual thrust to expand value thus runs up against what Marx in the *Grundrisse* (407) calls “alien consumption” as a universal potential barrier that cannot easily be surpassed.

There is, however, a distinction between necessities and luxuries with respect to final consumption. The limits and barriers in the sphere of necessities look different from those related to luxuries, because in the former case the wants, needs and desires are limited not by the human incapacity to absorb ever more use-values, but by the lack of effective demand (wants and needs backed by ability to pay) consequent upon the imposition of a wage contract upon labor that is more concerned to maximize immediate profitability rather than to expand the market. So, for the workers, the possibility of acquiring adequate consumer goods for a reasonable standard of living is strictly limited. As Marx points out at several points, this creates a major contradiction that has no easy resolution, and consequently is a frequent harbinger of crises in aggregate demand.

The situation is quite different with respect to the consumption of the bourgeoisie, as constituted by the capitalist classes themselves along with what Marx calls the “unproductive classes” that consume without producing anything. Marx generally excludes these unproductive classes from his analysis, but he clearly acknowledges their importance in the various outlines he devised for *Capital*. But, even if we insert these unproductive classes into the mix, at some point it becomes clear that their revenues depend ultimately upon extractions from value and surplus-value production by some means or other (for example, the taxation that funds the military). This leaves the question of how to overcome what Marx identifies in Volume II as a deeply problematic structural imbalance between supply of value (c + v + s) against the demand (c + v) that the capitalist class launches into circulation. While, ultimately, it can be argued that the appropriation of the surplus-value by the capitalists and the unproductive classes ultimately furnishes the demand, the time-structure of this entails buying now and paying later or—more emphatically, resort to credit (on which more anon).

In none of what we have so far outlined do we consider the impacts of differential turnover times (working periods, production times, circulation times). In particular, we have paid absolutely no mind to the thorny question of the circulation of fixed capital (and its parallel of fixed items of long life, such as housing, within the consumption fund). Volume II painstakingly reconstructs how all of these circulation processes work to shape the time-space of capital accumulation without—and this is a key point—any resort to the credit system. As noted in the first lecture, what results is the hoarding of ever greater quantities of money capital in a dead and unproductive state. Money needs to be held in reserve to deal with disparate turnover times and to renew fixed capital on a periodic basis. The more complex and intricate the capitalist production system becomes, the more money has to be hoarded. This hoarding constitutes an increasing barrier to the expansion of accumulation. This makes it more and more imperative to create an adequate money market and a sophisticated credit system. The result is that capital itself radically changes its spots, such that “in a general crisis of overproduction the contradiction is not between the different kinds of productive capital, but between industrial and loanable capi-tal—between capital as directly involved in the production process and capital as money existing (relatively) outside of it” (*Grundrisse*, 413).

It is for this reason that integrating into the analysis the readings on merchants' and money capital from Volume III becomes so crucial, because it then becomes possible to understand why the liberation of the credit system as an independent and autonomous force within capitalism is so necessary. Marx began his studies with the idea that rent, interest and the profit on merchants' capital would end up being disciplined to the rules of circulation of industrial capital. While he considered that he had showed how such a disciplined posture was achievable with respect to merchants', capital and went to enormous lengths to try and show (unsuccessfully in my view) how land rent might end up in the same position, he clearly saw that this could never be the case with interest-bearing and money capital. Its autonomy and independence, and its consequent power as an external force in relation to if not over the circulation of industrial capital, was necessary to facilitate and lubricate the path towards continuous and perpetual capital accumulation. This was what money capital, organized as "the common capital of the class," had to do. And it is not hard to see, as in the case of mortgage finance, that rental appropriations were far more likely to be thrown together with the circuit of interest-bearing money capital rather than disciplined strictly to the requirements of the circulation of industrial capital. Recall that "all rent is now the payment of interest on capital previously invested in the land" (C3, 521). But, while the rise of the modern credit system liberated vast amounts of hoarded money and turned it into money capital, active and fructiferous in the production of surplus-value, it let loose the rogue force of fictitious capital circulation upon the land, converting the primary agents of capital accumulation (capital and labor) into a clash of industrial and loanable capital (about which workers had very little direct say). Hence the transformation of the crisis tendencies of capital into the financial and commercial crises with which we are now all too familiar.

I may, in all of this, be reasonably accused of stretching Marx's argument on to a terrain of my own rather than Marx's making. In defense, I would say that there are many signs in the chapters on money and finance of a radical reconstruction of Marx's thought—though, when set against the background of the whole corpus of his writing this can be taken more as a deepening of than a radical departure from his initial stance. This is why, for example, I put such emphasis upon his resurrection of the concept of fetishism and its translation into the concept of fictitious capital. Marx's penetrating revelations concerning the illusions and fictions of money capital, that fantasy of capitalization of any stream of revenues, and the consequent creation of a plethora of money capital (what the IMF routinely refers to as surpluses of liquidity) that can pile up without limit, led him to insist: "If we were to consider a communist society in place of a capitalist one, then money capital would immediately be done away with, and so too the disguises that transactions acquire through it" (390). This requirement for the immediate abolition of money capital only makes sense in relation to the primary role it was then beginning to assume in Marx's time in fostering perpetual accumulation through the increasing repression of the aspirations of wage labor. If this was becoming true in Marx's time, then surely money capital has now reached its pinnacle of influence and power.

While a careful and critical reading of Volume II and the chapters on distribution from Volume III can inspire and inform across an enormously wide range of topics—varying from disparate turnover times to the volatility of credit provision—it is still hard to draw any definitive conclusions as to how the laws of motion of capital actually work under today's conditions. Plainly, much work needs to be done to complete and straighten out what Marx had accomplished by 1878, and to understand where he might have been headed in the enormous enterprise he had set for himself around the time that the *Grundrisse* was written, in 1856–57. It is useful here firstly to recall the astonishing breadth and depth of Marx's original conception. In one of the several outlines he creates in the *Grundrisse*, he writes:

> I. (1) General concept of capital.—(2) Particularity of capital: circulating capital, fixed capital. (Capital as necessaries of life, as raw material, as instrument of labour.) (3) Capital as money. II (1) *Quantity of capital. Accumulation*. (2) *Capital measured by itself. Profit. Interest. Value of capital*: i.e. capital as distinct from itself as interest and profit. (3) *The circulation of capitals*. (α) Exchange of capital and capital. Exchange of capital with revenue. Capital and *prices*. (β) *Competitions of capitals*. (γ) *Concentration of capitals*. III Capital as credit. IV Capital as share capital. V. *Capital as money market*. VI Capital as source of wealth. The capitalist. After capital, landed property would be dealt with. After that, wage labour. All three presupposed, the *movement of prices*, as circulation now defined in its inner totality. On the other side, the three classes, as production posited in its three basic forms and presuppositions of circulation. Then the *state*. (State and bourgeois society.—Taxes, or the existence of the unproductive classes.—The state debt.—Population.—The state externally: colonies. External trade. Rate of Exchange. Money as international coin.—Finally the world market. Encroachment of bourgeois society over the state. Crises. Dissolution of the mode of production and form of society based on exchange value. Real positing of individual labour as social and vice versa). (*Grundrisse*, 264)

Marx would have had to become Methuselah to have completed this gargantuan project. And there is no doubt from this and his subsequent language in the *Grundrisse* that his grand ambition was to depict the becoming of bourgeois society as an organic totality.

It is against this background that we can lay down some general markers that help us understand critically and in more detail what he was doing and why in Volume II. To begin with, I think it is undeniable that, in this volume, he is working within the framework of the "shallow syllogism" constructed in classical political economy. The clarity of his argument depends on a strict adherence to reconstructing the dynamics of accumulation and realization at the level of generality without appeal to universalities, particularities and singularities. Volume II is by far the most spectacular example of Marx's adoption of the shallow syllogistic framework he attributed to classical political economy in order to pursue his enquiries. From this, he seeks to build a theoretical understanding of a capitalist mode of production “in its pure state.” Once this work was done, he could slot his finding into the more organic modes of thinking as broadly articulated in the *Grundrisse*.

While Marx sticks fairly rigidly to this framework, he always acknowledges that there are occasions when the universalities, the particularities and even the singularities may directly affect the laws of motion of capital. While he excludes supply and demand from Volume I, for example, the gap between aggregate supply and demand and how to fill it become critical questions in Volume II. While consumption (and the relation between productive and personal consumption) is mentioned but not analyzed in Volume I, it emerges as a more and more critical topic for analysis in Volume II. And while Marx seems to have believed he had disciplined the return on merchant capital and the role of rent to the requirements of productive capital in Volume III, the third main pillar of distribution, interest and finance necessarily escaped that disciplinary power such that the contingencies of competition and of supply and demand for money capital determined all, while the rise of associated forms of capital created a different situation, out of which socialism might or would have to arise.

The result is an incomplete edifice of theory that is robust across all the historical and geographical configurations that capitalism might assume, but not so helpful in explicating actual situations where divergences, imperfections and political contaminations of a pure capitalist mode of production brook large, and where the particularities of finance, for example, or the odd singularities of consumerism, dominate. Above all, the relation that might pertain between commercial and financial crises on the one hand and the already established contradictory laws of motion of capital on the other still remains undeveloped.

The question, therefore, of what Marx’s theorizations can do for us, and what we have to do for ourselves to analyze present predicaments, must always feature prominently in any attempt to shape a Marxist-style understanding of capitalism’s fraught history. We cannot, for example, take current events and plug them into some version of Marx’s theory and expect ready-made answers to pop out. But what Marx does provide is a mode of thinking that gets behind the fetish world of appearances to identify the emancipatory possibilities immanent within our present condition.

In Volume I, of course, there is a dialogue of sorts between essence and form of historical appearance that helps overcome the theory-history divide. Having derived the theory of absolute surplus-value, we plunge into the details of the historical struggle over the length of the working day, against a background of an even longer precapitalist history in which the appropriation of the time and labor of others had formed the basis for the formation of some form of class society. Having derived the theory of relative surplus-value, we plunge into the whole history of changing organizational forms (cooperation, divisions of labor, and the factory system) and new technologies (the rise of a machine-tool industry—the production of machines by way of machines—automation and the application of science) that are expressive of this theoretical movement. Having theoretically established a general law of capitalist accumulation that entails the production of unemployment and of an industrial reserve army of labor, Marx looks concretely at the historical forms taken by this industrial reserve army and its conditions of life as rural, immigrant and ultimately urbanized workers.

There is no attempt whatsoever in Volume II to put such historical flesh on the bare bones of the theoretical argument. It could be said that there are certain inherent difficulties in so doing that derive from the focus on circulation as opposed to production. I do not believe that to be the case. Even the first three chapters—which disaggregate the unity of the circulation of industrial capital laid out in chapter 4 into the different circulations of money, productive and commodity capital—could have been presented in a way that was more grounded in history. This is in fact what we find when we read the historical chapters from Volume III, on merchants' capital and the history of credit relations. In a way, these chapters perform the same function as the chapter on struggles over the length of the working day, which refers back to serfdom and other modes of mobilizing and appropriating the surplus labor of others. Marx had already written the historical chapters on merchants' capital and credit when he wrote much of Volume II, but he rarely refers us to the Volume III materials for historical enlightenment.

It is not only the history that is missing in Volume II. When we plunge into the materials on finance and credit in Volume III, we find ourselves embroiled for the first and only time in *Capital* in a concrete analysis of the actual crises of 1848 and 1857. Although these are depicted as commercial and financial crises, in some way "independent and autonomous" of the deeper laws of motion with which Marx is elsewhere concerned, it is not hard to see how the many possibilities for disruption and blockages, as outlined in the first chapters of Volume II, are here converted into historical events and realities.

There are, however, some major absences in Marx's theorizations that are of particular importance. In the conclusion to *The Limits to Capital*, I noted two general topics that required immediate attention: the nature of the capitalist state and questions of social reproduction. Interestingly, in the discussion that took place in the very last session of the lectures on Volume II, the participants converged almost exclusively, without any prompting from me, on these two topics. To these questions, I would now add the issue of the dynamics of the relation to nature, which Marx fully recognizes as being of universal significance but fails to investigate in sufficient detail within the generality of a capitalist mode of production. There are now, of course, substantial literatures dealing with all of these topics, but the exhaustion that resulted from the intense debate over the Marxist theory of the capitalist state in the 1970s, the pulling away of issues to do with social reproduction and political subjectivity from the field of political economy, and the antagonism of much of the environmental movement toward Marxist thinking, have in some regards exacerbated rather than assuaged the difficulties.

For example, the metabolic relation to nature that is occasionally invoked in Volume I rates no mention in Volume II, except when it enters into the material conditions that determine perishability, rates of “natural” decay, production as opposed to working times, the lifetime of fixed capitals, the cost and time of overcoming physical distances, and the capacity to annihilate space through time. We are thus alerted to the changing space and time of capital, but almost no attention is paid to the consequences (or the contradictions) that might flow therefrom, and in what relation this exists to the construction of the world market and structures of geopolitical domination. And while Marx sticks by his utter contempt for Malthus’s “natural” explanation for the poverty and distress of the mass of the population, he does not deny that natural scarcities (particularly when exacerbated by rental extractions and speculation) and the dynamics of population growth materially affect the ability to procure both means of production and adequate labor supplies.

There are also some themes gently inserted into the analysis that have consequences for understanding Marx’s so-called “deterministic” and “teleological” bent. For example, the phrase “autonomous and independent” crops up at various key points in the text and warrants some commentary, since much of the hostile and ill-informed criticism of Marx dwells on how he supposedly gives no credit to the importance and power of individual initiative, and depicts everyone as automata blindly obeying abstract forces over which they have no control. This criticism is very strange, given that it was the much-admired and frequently cited Adam Smith who came up with the idea that it was the power of the hidden hand of the market over which no one individual had control, and that determined aggregate outcomes. Marx merely adopts Smith’s position in chapter 2 of Volume I, sticking with its utopian pretensions pretty much throughout. That the libertarian right continues to embrace Smith’s utopian pretensions while excoriating Marx seems mighty odd—except of course when it is realized that Marx’s purpose in embracing the Smithian model is to show how it cannot possibly work for the benefit of all. It exacerbates and deepens class inequalities, which is precisely why, one suspects, the bourgeoisie so happily embraces the Smithian but not the Marxist version of the same theory.

The point here, of course, is not to deny individual independence and autonomy, but to recognize (a) the particular socioeconomic conditions under which such individual initiative might flourish, and (b) how the aggregate consequences might be very different from individual intentions when mediated through the coercive laws of competition and market exchange, where the law of value ultimately holds sway.

But Marx extends this theme of "independent and autonomous" in considering the circulations of merchants', interest-bearing and money (finance) capitals. I take this to mean that, being particularities, these forms of circulation need not, and most of the time do not, conform directly and mechanically to the general laws of motion of capital. Yet, as the structure of "pivots" upon which the credit system turns indicates, and as the unfolding of commercial and financial crises illustrates, some sort of power disciplines the independent and autonomous movements in the worlds of commerce and finance to the necessity of surplus-value production and realization.

It is not clear to me exactly how this disciplinary apparatus works. I believe that Marx was only at the beginning of his studies of it. I suspect this is why Engels considered the chapters on finance as perhaps the most important chapters in Volume III. There are, of course, certain minimal principles that Marx cites (for example, that if all capitalists abandoned production to live on interest, then capital accumulation would quickly grind to a halt). And there is a presumption that crises somehow do bring a measure of concordance in the relation between surplus-value production and the proliferation of, for example, credit arrangements.

In the introduction to this *Companion*, I identified what might be termed a "theory of determination" in Marx. I suggested that a wide range of particular distributive and institutional (political) arrangements and of consumption regimes might be possible throughout the world at any one historical moment, "*provided that they do not unduly restrict or destroy the capacity to produce surplus-value on an ever-expanding scale*." To the degree that some arrangements and regimes are more successful than others, so competitive pressures would likely force adaptations over time toward the more successful model of accumulation. We have seen this sort of thing going on historically. In the 1980s, it was West Germany and Japan that were leading the way. Then it was the so-called Washington Consensus; and now it is the East Asian model. But, as the history of shifts in global hegemony illustrates, the independent and autonomous elements never go away. Uneven geographical development keeps the question of what is the most successful model of accumulation for different times and places very much on the boil. It is, in my view, a crucial means of capital's successful reproduction. The same is also true for the independent and autonomous forms of circulation, and the crises they regularly foment. Without such independence and autonomy, capital could not adapt, reproduce and grow.

This illustrates how robust and flexible capital can be in relation, for example, to the singularities of consumption. Since this is perhaps one of the more problematic aspects of Marx's theorizing—his failure to discuss, let alone theorize, consumerism—let me give a strange, personal and definitively singular example. I had until recently a passionate attachment to British bitter marmalade. It seems a peculiar taste for which we Brits either have a genetic predisposition or a perverted cultural sense, but many of us can only face the day by consuming something bitter for breakfast. I got used, when back in Britain in the early 1990s, to making my own marmalade (like my mother and grandmother before me). I was incidentally surprised to find that so many of my academic colleagues did the same. So, every January and February, kitchens all over Britain are activated to make marmalade. I could not get the bitter oranges when I got back to the US. I would therefore always find an excuse to be in Europe in January and February, to get the bitter oranges and make the pulp, from which I would then make the marmalade when I returned to the US. I even engineered a January invitation to Córdoba, where the bitter oranges lie all around on the ground in the beautiful Islamic garden next to the spectacular mosque. I gathered up the oranges (much to the surprise of the locals, who kept telling me that these oranges were inedible) and made the pulp in my hotel room—causing an uproar with the room staff, who couldn't stand the pungent smell. They plainly thought I was mad. Could anything be more singular than this?

But there is, in fact, a fascinating Marxist-style story to be told that puts my strange consumer behavior very much in context. I had discovered, when researching my doctoral dissertation on hop and fruit cultivation in Kent during the nineteenth century, that there had emerged a strange and unlikely alliance in the 1840s between the mid-Kent yeoman farmers and the West Indian sugar-plantation owners. Both groups were agitating for the reduction of the sugar duties. For the fruit growers, this meant cheaper sugar and more demand for fruit to go into jams and conserves. This was the period when free-trade agitation in Britain was at its height, led by the Manchester manufacturers who wanted cheap foodstuffs to lower the value of labor-power and thereby increase the surplus-value they could appropriate. While this agitation mainly focused on the price of bread, the workers needed something to put on the bread. Sugar-laden conserves (along with sweetened tea) provided an instant source of energy for factory workers with long working hours. So, as Sidney Mintz points out in his brilliant book on *Sweetness and Power*, the industrial interest promoted the consumption of such instant energy for their workers (hence the long-lasting significance of the tea break in British working-class life). The analysis in Volume I of *Capital* of trade policy in relation to the value and intensity of labor-power (in the chapter on "The Working Day") sets the context for the promotion of these forms of working-class consumption.

But it does not explain why bitter marmalade. For this we have to go to Volume II of *Capital*. The conserve and jam manufacturers typically ran out of fresh fruit and fruit pulp by around December. Somebody saw all these inedible oranges dropping off the trees in Spain in January and February (where they liked the orange blossoms but did not want the trees being raided for edible fruit). Using the bitter oranges from Spain provided a marvelous way to keep fixed capital fully employed (a Volume II problem) all around the year. So problems in the turnover time of fixed capital played a critical role in promoting bitter marmalade for breakfast. Heavy on sugar and Vitamin C, this cultural habit of eating bitter marmalade became deeply engrained, and has lasted in Britain to this day.

There is nothing here that determines my peculiar and singular cultural habit. I can drop it if I like (and recently have). But capital creates certain “conditions of possibility” for the formation and perpetuation of seemingly singular cultural habits. Homeownership and the “American Dream” are other obvious examples. I take great pleasure in uncovering what these conditions of possibility might look like, and find it fascinating that a spot of Marxist-style theorizing helps me understand where some of my own peculiar habits and tastes might come from.

I cite this seemingly trivial personal anecdote because I believe deeply that Marx makes more and more sense as his abstract analysis is brought to earth, and that if the theory is incapable of illuminating not only the abstract processes through which capital moves but also daily life as it is lived by all (including why so many Brits love bitter marmalade), then the theory is wanting as an emancipatory tool in the search to construct an alternative, more egalitarian and less violence-prone mode of production.

Interestingly, the concepts of socialism and communism do come up in Volume II more explicitly than elsewhere in *Capital*. It seems Marx had in mind some mix of associated workers controlling their own production processes and levels of reward, and embedded in a broader-based form of social organization capable of displacing the disruptive powers of money capital circulation with a rationally specified and coordinated pattern of flows of non-commodified goods (use-values) within an international division of labor. The abolition of a society based on exchange-value is central in all of Marx’s anticapitalist formulations. The corollary is that a society based on equality and justice and dedicated to human emancipation can never be constructed in a world where money is a form of social power appropriable by private persons, and where the monetary coordination of exchange in commodity markets is the primary social relation through which daily life is reproduced. Plainly, Marx’s minimum specifications constitute a wholly inadequate and utopian program. But they do highlight the problem of international coordination within a deepening division of labor that the anticapitalist left is notoriously reluctant to confront, partly because of an understandable distrust of anything that looks like reliance upon state power in the transition to an anticapitalist alternative. What Volume II also illuminates are the complex processes of intertwining circuits of capital that have been built so as to sustain the production and realization of surplus-value seemingly ad infinitum—and that these are designed to perpetuate a singularly capitalist class power. What Marx convincingly shows is that no one aspect of circulation (such as money capital) can be radically changed without equally radical transformations occurring in the sequential circuits of production and of commodities.

What a noncapitalist alternative might look like will have to be determined by future generations of activists and scholars in the light of contemporary possibilities (including electronic modes of social coordination undreamt of by Marx). But the basis that Marx laid so long ago furnishes a stunning picture of the systemic if contradictory character of capital flow that has to be transformed into flows of use-values that can feed, house, clothe, nurture and sustain more than eight billion people on planet Earth. For someone who so famously said that our task is to change the world rather than to understand it, Marx spends an inordinate amount of time and energy dissecting, understanding and illuminating that which has to be changed. There is still a great deal of work to be done in this vein. But it is, as always, equally imperative that we begin upon the task of changing it—particularly since there are abundant signs that capitalism as a social system has outlived its shelf-life and cannot endlessly and mindlessly grow at a compounding rate through "alien consumerism," no matter what the social, political and environmental consequences. Only capital, says Marx, "has subjugated historical progress to the service of wealth." The

> growing incompatibility between the productive development of society and its hitherto existing relations of production expresses itself in bitter contradictions, crises, spasms. The violent destruction of capital not by relations external to it, but rather as a condition of its self-preservation is the most striking form in which advice is given it to be gone and give room to a higher state of social production. (*Grundrisse*, 590, 749–50)

It is surely time we all listened to that advice.

Notes

Volume I

Introduction

1. Karl Marx, *Capital: A Critique of Political Economy*, Volume I, trans. Ben Fowkes (London: Penguin Classics, 1990). Future references to this work are cited with page references only.
2. David Harvey, *The Limits to Capital* (London: Verso, 2006).

Chapter One: Commodities and Exchange

1. *Capital*, 151. The quotations from Aristotle, as cited by Marx, are from *Nicomachean Ethics*, Book V, chapter 5.
2. Marx, *Grundrisse*, 524.
3. *David Harvey, Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development (London: Verso, 2006).*

Chapter Two: Money

1. See the sophisticated defense of the law in *Say's Law: An Historical Analysis* (Princeton, NJ: Princeton University Press, 1972) by the conservative economist Thomas Sowell.
2. Marx, *Grundrisse*, 224.

Chapter Three: From Capital To Labor-Power

1. Marx, *Grundrisse*, 105.
2. Ibid.
3. Marx cites the same tautological definition of capital in J. B. Say's theory of circulation.
4. Rosa Luxemburg, *The Accumulation of Capital* (New York: Routledge, 2003), 104–5.
5. *David Harvey, Spaces of Capital: Towards a Critical Geography (New York: Routledge, 2001).*
6. David Harvey, *Paris: Capital of Modernity* (New York: Routledge, 2003), 119.

Chapter Four: The Labor Process And The Production Of Surplus-Value

1. Harry Cleaver, *Reading* Capital *Politically* (Leeds: AK/Anti-Thesis, 2000).

Chapter Five: The Working Day

1. Karl Marx, *Capital*, Vol. III, trans. David Fernbach (London: Penguin, 1981), 958–9.

Chapter Six: Relative Surplus-Value

1. Marx, *Grundrisse*, 552.

Chapter Seven: What Technology Reveals

1. Marx to Engels, June 18, 1862, in *Selected Correspondence*, ed. S. W. Ryazanskaya, trans. I. Lasker (Moscow: Progress, 1965), 128.
2. Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, 3rd edn. (Athens, GA: University of Georgia Press, 2008 [1984]).
3. Thomas Friedman, *The World Is Flat: A Brief History of the Twenty-first Century* (New York: Farrar, Straus and Giroux, 2005), 201-4.
4. John Gray, "The World Is Round," *The New York Review of Books* 52, No. 13 (August 11, 2005).
5. G. A. Cohen, *Karl Marx's Theory of History: A Defence*, expanded edn. (Princeton, NJ: Princeton University Press, 2000 [1978]).
6. *Paul Hawken, Blessed Unrest: How the Largest Movement in the World Came into Being and Why No One Saw It Coming (New York: Viking, 2007).*

7. Marx, *Grundrisse*, 524.

Chapter Eight: Machinery and Large-Scale Industry

1. Harry Braverman, Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century (New York: Monthly Review Press, 1974).

Chapter Ten: Capitalist Accumulation

1. Grundrisse, 753–4.

2. See *The Observer*, June 21, 1992.

3. David Harvey, *A Brief History of Neoliberalism* (New York: Oxford University Press, 2005).

Chapter Eleven: The Secret of Primitive Accumulation

1. Michael Perelman, The Invention of Capitalism: Classical Political Economy and the Secret History of Primitive Accumulation (Durham, NC: Duke University Press, 2000).

2. G.W. F. Hegel, *Hegel's Philosophy of Right*, trans. T. M. Knox (Oxford: Clarendon Press, 1957), 149–52.

3. Ibid., 277.

4. Rosa Luxemburg, *The Accumulation of Capital*, trans. Agnes Schwarzschild (London: Routledge, 2003), 432.

5. David Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003).

Reflections and Prognoses

1. Andrew Glyn and Bob Sutcliffe, *British Capitalism, Workers and the Profits Squeeze* (Harmondsworth: Penguin, 1972).

2. Harvey, The Limits to Capital, 176–189.

3. Marx, *Grundrisse*, 416.

4. Paul A. Baran and Paul M. Sweezy, *Monopoly Capital* (New York: Monthly Review Press, 1966).

5. Karl Marx, *Economic and Philosophic Manuscripts of 1844*, trans. Martin Milligan, in *The Marx-Engels Reader*, ed. Robert C. Tucker (New York: W. W. Norton, 1978), 103.

6. Ibid., 224.

7. Marx, *Grundrisse*, 408.

8. Marx, *Grundrisse*, 750.

9. Henri Lefebvre, *The Explosion: Marxism and the French Revolution*, trans. Albert Ehrenfeld (New York: Monthly Review Press, 1969), 7–8.

Volume II

Introduction

1 The only set of studies on this volume is that of Christopher John Arthur and Geert A. Reuten, eds., *The Circulation of Capital: Essays on Volume Two of Marx's* Capital (London: Macmillan, 1998).

2 K. Marx, *The Eighteenth Brumaire of Louis Bonaparte* (New York: International Publishers, 1963); K. Marx and V. I. Lenin, *The Civil War in France* (New York: International Publishers, 1989).

3 A more detailed version of the argument that follows can be found in David Harvey, "History versus Theory: A Commentary on Marx's Method in Capital," *Historical Materialism* 20: 2 (2012), 3–38.

4 It is all too easy to confuse Marx's presentation of the arguments of the classical political economists with what he claims as his own. For example, the statement cited above from the

Grundrisse, that the falling rate of profit is "the most important law of modern political economy," refers in the first instance to the political economy of Ricardo. The degree to which Marx accepted this law is therefore an open question that has to be settled by further study of his writings. Broadly speaking, he accepted the general thrust of the law, but radically reformulated the mechanism by which it worked.

5 Paul Boccara, *Études sur le capitalisme monopoliste d'État, sa crise et son issue* (Paris: Éditions Sociales, 1974); Paul Baran and Paul Sweezy, *Monopoly Capital* (New York: Monthly Review Press, 1966); V. I. Lenin, "Imperialism: The Highest Stage of Capitalism," in *Selected Works*, Vol. 1 (Moscow: Progress Publishers, 1963).

6 Antonio Negri, *Marx Beyond Marx: Lessons on the Grundrisse* (London: Pluto Press, 1991); Harry Cleaver, *Reading* Capital *Politically* (Leeds–Edinburgh: Anti/Theses/AK Press, 2000).

Chapter One: The Circuits of Capital (Chapters 1–3 of Volume II)

1 David Harvey, *The Enigma of Capital: and the Crises of Capitalism* (London: Profile, 2010), chapter 5.

Chapter Two: The Three Figures of the Circuit and the Continuity of Capital Flow (Chapters 4–6 of Volume II)

1 For a critique of Mandel's arguments in the Introduction to Volume II, see Patrick Murray, "Beyond the 'Commerce and Industry' Picture of Capital," in Christopher John Arthur and Geert A. Reuten, eds., *The Circulation of Capital: Essays on Volume Two of Marx's* Capital (London: Macmillan, 1998), 57–61.

Chapter Three: The Question of Fixed Capital (Chapters 7–11 of Volume II)

1 Henri Lefebvre, *The Production of Space* (Oxford: Basil Blackwell, 1991); Neil Smith, *Uneven Development* (Oxford: Basil Blackwell, 1984); David Harvey, *Spaces of Capital: Towards a Critical Geography* (Edinburgh: Edinburgh University Press, 2001).

2 W. W. Rostow, *The Stages of Economic Growth: A Non-Communist Manifesto* (London: Cambridge University Press, 1960); M. M. Postan, *Medieval Trade and Finance* (Cambridge: Cambridge University Press, 1973).

3 David Harvey, *The Limits to Capital* (Oxford: Basil Blackwell, 1982), chapter 8; John E. Roemer, "Continuing Controversy on the Falling Rate of Profit: Fixed Capital and Other Issues," *Cambridge Journal of Economics* 3 (1979), 379–98; Ian Steedman, *Marx After Sraffa* (London: Verso, 1977).

4 David Harvey, *Limits to Capital*, 215.

Chapter Four: Merchants' Capital (Chapters 16–20 of Volume III)

5 *Giovanni Arrighi, The Long Twentieth Century: Money, Power and the Origins of Our Times (London: Verso, 1994).*

Chapter Five: Interest, Credit and Finance (Chapters 21–26 of Volume III)

1 This question takes center stage in Enrique Dussel, *Towards an Unknown Marx: A Commentary on the Manuscripts of 1861–3* (New York: Routledge, 2001). This text deserves close study.

2 Rudolf Hilferding, *Finance Capital: A Study of the Most Recent Phase of Capitalist Development* (New York: Routledge, 2006); John Atkinson Hobson, *Imperialism* (Ann Arbor, MI: University of Michigan Press), 1965.

3 Adolf A. Berle and Gardiner C. Means, *The Modern Corporation and Private Property* (New York: Macmillan, 1932).

Chapter Six: Marx’s Views on the Credit System (Chapters 27–37 of Volume III)

1 Émile Zola, *Money* (Stroud, UK: Alan Sutton, translated by Ernest Vizetelly, 1991), 232.

Chapter Seven: The Role of Credit and the Banking System (Chapter 27 Onwards in Volume III)

2 Peter Drucker, *The Unseen Revolution: How Pension Fund Socialism Came to America* (New York: Harpercollins, 1976); Robin Blackburn, “Rudolf Meidner: A Visionary Pragmatist,” *Counterpunch*, December 22, 2005.

3 Michael Piore and Charles Sabel, *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1986).

Chapter Eight: The Time and Space of Capital (Chapters 12–14 of Volume II)

1 Property speculation appears to have played a role in the crisis of 1857, which probably explains why it was the focus of a parliamentary enquiry.

2 David Harvey, “The Geography of Capitalist Accumulation: A Reconstruction of the Marxian Theory,” *Antipode* 7: 2 (1975), 9–21; reprinted in *Spaces of Capital: Towards a Critical Geography* (Edinburgh: Edinburgh University Press, 2001).

3 *See David Harvey, “Space as a Key Word,” in Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development (London: Verso, 2006).*

4 Though this required people to get used to the bitter taste—which is still with us as a cultural habit even though hops have since been replaced by chemical preservatives. The much sweeter malt beers sold earlier as home brews had the disadvantage that they quickly went sour.

5 *William Cronon, Nature’s Metropolis: Chicago and the Great West (New York: Norton, 1992).*

Chapter Ten: The Reproduction of Capital (Chapters 18–20 of Volume II)

6 Karl Marx, *The Civil War in France* (New York: International Publishers, 1989).

7 *Andrew Trigg, Marxian Reproduction Schema: Money and Aggregate Demand in a Capitalist Economy (New York: Routledge, 2006), 2.*

8 There is an extensive literature on the reproduction schemas. Some of it requires higher-order mathematics, and the overall emphasis is upon exploring the technical aspects of the reproduction process while relaxing some of Marx’s more restrictive assumptions. The classic texts include Henryk Grossmann, *The Law of Accumulation and the Breakdown of the Capitalist System: Being Also a Theory of Crises* (London: Pluto, 1992); and Paul M. Sweezy, *The Theory of Capitalist Development: Principles of Marxian Political Economy* (New York: Monthly Review Press, 1942). For Luxemburg’s objections, see Rosa Luxemburg, *The Accumulation of Capital* (London: Routledge, 1951). Survey works include Meghnad Desai, *Marxian Economics* (Oxford: Blackwell, 1979); Michael C. Howard and John E. King, *The Political Economy of Marx* (London: Longman, 1975); and Shinzabur£ Koshimura, *Theory of Capital Reproduction and Accumulation* (Kitchener, Ontario: DPG Publishers, 1975). For those interested in a mathematically rigorous development of the argument from a Keynesian perspective, see Trigg, *Marxian Reproduction Schema*, cited earlier. For a sophisticated neoclassical exploration of the schemas, see Michio Morishima, *Marx’s Economics: A Dual Theory of Value and Growth* (London: Cambridge University Press, 1973).

9 Piero Sraffa, *The Production of Commodities by Means of Commodities* (Cambridge: Cambridge University Press, 1960). What Sraffa showed was that the whole of the neoclassical framework of economics was founded on a tautology. But his techniques were actually put to

use by some Marxist economists—most notably in Ian Steedman, *Marx After Sraffa* (London: Verso, 1977)—to destroy the prevailing (non-dialectical) notion of value theory in Marx, while the neoclassical theorists just decided, after some controversy, to ignore his mathematical proofs and findings entirely! The only way the neoclassicals could get out of the tautology would be to reformulate their arguments dialectically, but they would not have the foggiest idea how to do this.

10 This is the main argument in Fred Moseley, "Marx's Reproduction Schemes and Smith's Dogma," in Christopher John Arthur and Geert A. Reuten, eds., *The Circulation of Capital: Essays on Volume Two of Marx's* Capital (New York: Routledge, 1998).

Chapter Eleven: The Problem of Fixed Capital and Expanded Reproduction (Chapters 20 and 21 of Volume II)

1 Recall from Volume III how "capitalist production constantly strives to overcome this metallic barrier, which is both a material and an imaginary barrier to wealth and its movement, while time and again breaking its head on it" (C3, 708).

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