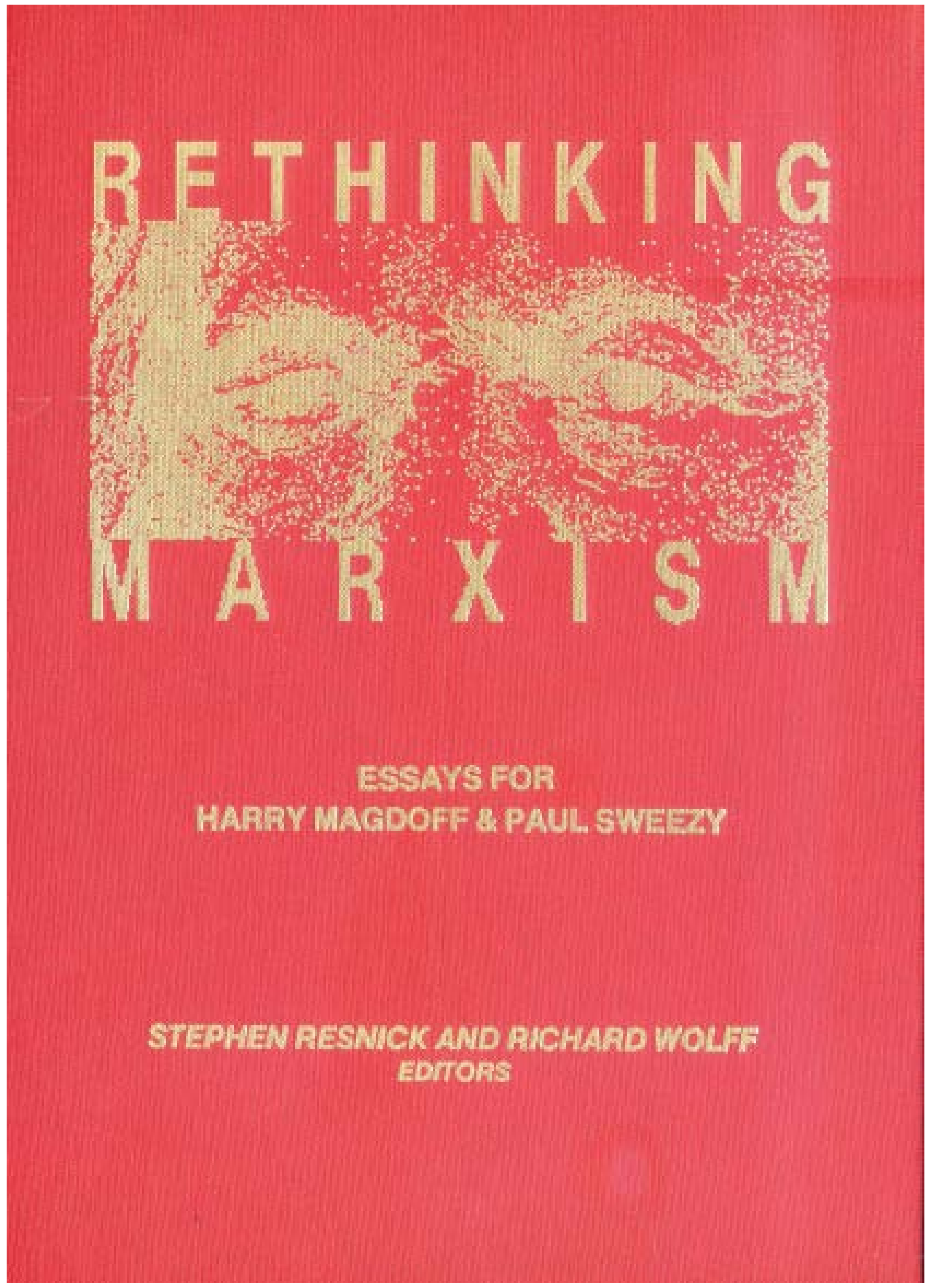
in *Rethinking Marxism: Essays for Harry Magdoff and Paul Sweezy*
eds. S. Resnick and R. Wolff, 45–81. New York: Autonomedia, 1985.



5

The Centrality of Money, Credit, and Financial Intermediation in Marx's Crisis Theory: An Interpretation of Marx's Methodology

James Crotty

I. Introduction

There is a striking paradox that confronts the reader of that part of the modern literature on Marxian crisis theory written in English. On the one hand, it is evident that monetary and financial problems have been and continue to be at the very center of the recurring economic crises that have afflicted most capitalist economies in the past fifteen to twenty years. These economies have experienced roller-coaster inflation, secular stagnation, domestic credit crunches and recurring waves of bankruptcy. Simultaneously, the international financial system that guided the general prosperity of the 1950s and 1960s has broken down, giving way to a decade of unpredictable, disruptive gyrating exchange rates. Internation debt crises of suffocating magnitude ensnare most of the Third World and a good deal of the Second as well. The business press asks with regularity if an international financial collapse of depression-producing magnitude is very likely, or only moderately likely: the answer changes from time to time.

On the other hand, the Marxian crisis theory literature has had very little to say about monetary and financial aspects of capitalist macrodynamics. Issues of money, credit, financial intermediation, inflation and the institutional structure of domestic and international financial regimes pass almost unnoticed as debate rages intensely around impediments to accumulation in the sphere of production. Yet a well-developed, rich monetary and financial theory is essential to the construction of a Marxian theory of accumulation and crisis adequate to comprehend the complex and threatening events of the current era.[1]

The essays by Harry Magdoff and Paul Sweezy on the state of the U.S. and world economy that have appeared over the years in *Monthly Review* constitute an important exception to the general absence of discussion and debate among Marxist economists on these issues. Their "Reviews of the Month" have consistently stressed the fundamental importance of money, credit and financial intermediation in the modern capitalist economy.[2] Indeed, it is almost

I have benefitted from extensive discussions with Raford Boddy on the topics examined in this paper, as well as from helpful comments on an earlier draft by Steve Cohn, Gary Dymski, Jonathan Goldstein, John Howley, and Stephen Resnick.

impossible to read *Monthly Review* on a regular basis and avoid the conclusion that a gaping hole exists in the main body of literature on Marxian theories of accumulation and crisis where a well-developed theory of money and finance should be found.

In the body of this paper we will argue for the importance of money, credit and financial intermediation in a Marxist theory of accumulation and crisis. Our major objective is to demonstrate that the relative neglect of money and finance in the Marxian literature is inconsistent with Marx's own emphasis on these aspects of accumulation and crisis and to show that the de facto dismissal of the centrality of money and finance in much of this literature is based on a basic misunderstanding of Marx's analytical methodology.

II. The Logic of Marx's Crisis Theory: An Overview

Modern Marxian crisis theorists typically take as the starting point of their analysis a thorough study of the laws of capitalist production. Only when they have accomplished this task do they turn their attention to the sphere of circulation, the sphere that incorporates monetary and financial phenomena. And their analysis of circulation is, in most cases, an afterthought, conducted more or less in passing.[3] As aspects of accumulation and crisis located outside the sphere of production—the really "important" sphere, the "essence" of which circulation is mere "appearance" or "manifestation"—monetary and financial phenomena have been relatively neglected by Marxian theorists.

Worse yet, in treating circulation as subsidiary to production, such theorists mistakenly assume that they are reproducing the methodology Marx used in *Capital*. They are misled, we believe, by the fact that Marx analyzed credit and financial intermediation in detail only in Parts Four and Five of *Volume Three* of *Capital*, after all aspects of the laws of motion of capitalism traditionally accepted as important had already been theorized. The location of the chapters on credit and financial intermediation as well as the relatively low level of abstraction at which the analyses in these chapters is conducted may have been taken as indicators of the low theoretical priority Marx attached to these subjects.

Contrary to the interpretation implicit in much of the traditional literature, we read Marx as building his theory of capitalism's laws of motion on the fundamental methodological assumption that circulation and production constitute a unified whole and that aspects of production have no a priori logical priority over aspects of circulation in the analysis of accumulation and crisis. Capitalism is a mode of economic organization based on the production of commodities, goods and services produced not for direct consumption but for exchange on market. An economic theory of the capitalist mode of production and exchange therefore requires a general theory of commodity exchange, a theory of specifically capitalist production relations and the integration of the two constituent theories.

The logic of exposition used by Marx in *Capital* reflects this analytical structure. Part One of *Volume One*, entitled "Commodities and Money," contains an analysis, conducted at a high level of abstraction, of the commodity exchange economy. Marx abstracts from the specifics of production relations to maximum feasible extent in the analysis of simple commodity production (hereafter SCP) elaborated in this section.[4] The theory of capitalism proper does not begin until Chapter Four; that is, until after the presentation of an extensive analysis of the general properties and attributes of the commodity exchange economy or of simple commodity circulation. Most important, the analysis of capitalist production relations that occupies much of the remainder of *Capital* assumes and is conditioned by the previously theorized model of commodity exchange. The complete theory of the capitalist mode of production then is the contradictory unity of capitalist commodity exchange and capitalist production, or of circulation and production.

There have been many explanations offered as to why Marx organized *Volume One* of *Capital* in the precise form in which it was published. It is generally assumed that the primary purpose of Part One is to accomplish two tasks. First, it oulines Marx's theory of value, thereby paving the way for the analysis of the origins or "secret" of surplus value presented in Part Two. Second, it shows that a society based on commodity exchange must develop commodity money as a universal means of, or intermediary in, commodity circulation: money is a condition of existence of simple commodity circulation. This fact creates the logical possibility that money, as the embodiment of exchange value, will begin to act as "an autonomous economic agent; . . . as starting and final point, and not simply intermediary, of a process of circulation; of money bent upon accretion of money, that is of capital."[5] In other words, in Part One Marx is preparing the reader for the switch from C-M-C to M-C-M′, from SCP to capitalism, elaborated for the first time in Chapter Four, and is creating the foundation for the analysis of surplus value presented in Chapter Six.

Both of these crucial analytical tasks are indeed performed in Part One of *Volume One*, but they do not exhaust the important accomplishments of this section of *Capital*. For our specific purposes here, it is most important to understand that in these same pages Marx presents an analysis of the crisis potential of the advanced (nonbarter) commodity exchange economy, an analysis that takes place almost entirely in the sphere of circulation.[6] In his analysis of SCP in Part One Marx constructs a key concept that he elsewhere refers to as "abstract forms of crisis" in the commodity exchange economy. Basing his analysis of the crisis "possibilities" in SCP on the functions of money and the natural evolution of contracts and credit in commodity exchange, Marx shows that any economic system organized through commodity exchange is anarchic; it is structurally vulnerable to disequilibrium and crisis. And the degree and character of the anarchy and incoherence of SCP and of capitalism depends upon the relative importance and particular institutional underpinnings of the various functions performed by money in each mode. Thus, before Marx even begins his analysis of specifically capitalist production relations he has established that the theory of money and credit and the theory of crisis are so intimately intertwined that they are analytically inseparable.

The major point is this: the abstract forms or models of crisis in commodity exchange constitute a structural framework within which Marx builds his analysis of capitalist production relations. Marx's theory of the crisis tendencies of capitalist production relations—the focus of the crisis theory literature—is affected or conditioned by his theory of commodity exchange even as the model of simple commodity circulation is transformed by its integration with capitalist social relations. Just as Marx constructs his concept of capitalism as the unity of commodity exchange and capitalist relations of production, his theory of accumulation and crisis is the dynamic interaction of the forms of crisis or crisis potential of (capitalist) commodity circulation and the "inevitable" crisis tendencies inherent in capitalist production.

From his analysis of capitalist production Marx develops the familiar tendencies of the rate of profit to alternately rise and fall over time, tendencies that help generate the unstable growth pattern characteristic of capitalist economies. This analysis is fundamentally incomplete, however, because conditions in the sphere of circulation in any era codetermine the vigor of accumulation, the degree and character of the vulnerability of accumulation to adverse financial or nonfinancial developments, the timing of the onset of crisis, and the depth and duration of contraction. Indeed, in the absence of an analysis of circulation it is not clear why a fall in the rate of profit should lead to crisis at all; a lower but positive rate of growth is a more logical outcome of a decline in the profit rate taking only production relations into consideration. Marx's views on accumulation and crisis are neither complete nor compelling unless understood as the unity of circulation and production.[7]

Seen in this light, the fundamental reason that the traditional crisis theory literature incorrectly relegates monetary and financial aspects of crisis theory to such an inferior analytical status is its failure to appreciate the theoretical significance of Marx's analysis of the crisis potential of commodity exchange. The centrality of money and credit is established at the highest level of abstraction in the analysis of SCP with which Marx opens *Capital* while the function of the analysis in Parts Four and Five of *Volume Three* is to provide a detailed and institutionally concrete elaboration of the role of money and finance in specifically capitalist macrodynamics. Banks and securities markets are *capitalist* institutions. Within SCP, the analysis of money and credit is restricted to commodity money and commercial or trade credit. Marx's introduction and analysis of capitalist production relations in *Capital* enables him to radically transform and enrich the theory of commodity circulation and its forms of crisis because it permits credit money, bank loans, and stock and bond markets to be theorized. Marx did not relegate his discussion of financial intermediation to the end of *Volume Three* because circulation is of secondary importance in his crisis theory; rather, its location was dictated by the fact that financial intermediation could not be analyzed until the concepts of capital, interest-bearing capital and surplus value had been theorized.

One caveat is in order before proceeding: our emphasis on the importance of monetary and financial phenomena in Marx's theory of accumulation and crisis should not be misinterpreted as an argument that circulation should have logical priority over production in Marxian theory. It is certainly not our intention to commit the the traditional error in reverse. Marx repeatedly criticized all economists—"bourgeois" and socialist alike—who argued that the credit system is *the* cause, indeed the only possible cause, of capitalist crises. Much of the first section of the *Grundrisse*, for example, is taken up with an attack by Marx on Proudhonist schemes designed to eliminate crises by replacing money and credit with a system of labor-time chits. Marx's main point in these polemics is that a commodity-exchange economy is crisis prone or anarchic, and a capitalist economy even more so, independently of credit. Therefore, you cannot surgically remove capitalist instability (or exploitation) by replacing its financial system with utopian credit or labor-bank schemes. Unfortunately, Marx's criticisms of schools of thought that see all crises as imposed by "irresponsible" financial activity on an otherwise crisis-free capitalism have been frequently misinterpreted as an argument that the financial system is an unimportant aspect of his crisis theory. It is this misinterpretation that we wish to correct.

In the remaining sections of this paper we will further develop these ideas, attempting to justify and support the arguments made here. We begin with a discussion of Marx's theory of the crisis potential of simple commodity circulation.

III. Simple Commodity Production and Abstract Forms of Crisis

Perhaps the best statement by Marx on the role of monetary and financial phenomena in his theory of capitalist crisis can be found in Chapter 17 of *Theories of Surplus Value*. In this chapter Marx lays out with clarity the appropriate theoretical relation between the analysis of SCP and the analysis of capitalist production relations in the complete theory of capitalist crisis.

In Chapter 17, Marx introduces a concept that is central to his development of the methodology of capitalist crisis theory and central to our argument about the key role played by monetary and financial behavior in his theory: the concept of an *abstract form of crisis*. The term *form* refers to an economic model; in this case a model of simple commodity circulation. The adjective *abstract* indicates that the models to be considered are quite simple, incorporate little or no institutional detail, and, most important, abstract as much as possible from reference to specific relations of production: the analysis of these abstract forms of commodity exchange never leaves the sphere of circulation. They are forms or models *of crisis* because Marx uses them to demonstrate that a commodity exchange economy is crisis prone or has crisis potential independently of its specific production relations. Disequilibrium, aggregate supply-demand imbalance and instability are characteristics of the models or forms of SCP examined by Marx in this Chapter.

In Chapter Three of *Volume One* of *Capital,* Marx discusses five different "functions" performed by money in SCP: as measure of value (hereafter MMV), means of circulation (MMC), store of value or hoard (MH), means of payment (MMP) and as means of international payments settlement or world money. In Chapter 17, Marx differentiates his abstract forms of SCP on the basis of the functions of money that each form or model incorporates. He concentrates on two such abstract forms of crisis. The first abstract form of crisis explicitly incorporates MMC and implictly considers MMV and MH. The second, more complete, or "more concrete" abstract form incorporates MMP as well. We label the first form SCP-through-MMC and the second SCP-through-MMP. In both Chapter Three of *Volume One* of *Capital* and Chapter 17 of *Theories of Surplus Value,* Marx uses his analysis of the functions of money in SCP to attack Say's Law and to demonstrate that commodity exchange economies contain the "formal possibilities of crisis"; they are anarchic. Moreover, the more important the advanced functions of money—such as MMP or world money—in the economy, the more crisis-prone the economy becomes.

Both chapters present these same basic arguments; nevertheless, they are complements, not substitutes. The analysis in *Capital* presents a richer, more detailed discussion of the various functions of money, while in Chapter 17 Marx is much more explicit about the analytical method or logic he is using to develop his theory of capitalist crisis. In Chapter 17 he argues that because capitalism is a commodity exchange economy its general or abstract laws of circulation must be developed from an analysis of SCP such as the one presented in Part One of *Volume One* of *Capital*. This analysis of the sphere of circulation produces abstract forms of crisis, models that demonstrate the crisis potential of capitalism and stress monetary and financial phenomena. But, Marx goes on to argue, the crisis potential of SCP or, indeed, of capitalist commodity circulation is not a theory of the *causes* of crisis in capitalism or of capitalism's laws of motion. A complete theory of crisis requires the analysis of the general laws and tendencies inherent in the specific production relations of the capitalist mode of production, the subject matter of the traditional crisis theory literature. This analysis provides the "concrete," "compelling motivating factors" missing from the analysis of abstract forms. The analysis of circulation provides the framework, the structure, the abstract forms within which the contradictions of capitalist production relations take place or are embedded.[8] Although choppy and unpolished, Chapter 17 has the great advantage of being methodologically more self-conscious than Chapter Three of *Volume One* of *Capital.*[9]

III. a. The First Abstract Form of Crisis: Money As Means of Circulation

In Part One of *Volume One* Marx compares two logically distinct forms of noncapitialist commodity exchange: barter and simple commodity production. In direct barter, C-C, products are exchanged for products without the intermediation of money as a means of commodity circulation. In Marx's concept of barter economy, "the bulk of production is intended by the producer to satisfy his own needs, or, where the division of labour is more developed, to satisfy the needs of his fellow producers . . . that are known to him. What is exchanged as a commodity is the surplus and it is unimportant whether this surplus is exchanged or not."[10] Barter, therefore, represents a relatively primitive form of commodity production and exchange, one in which exchange value, the market system, or the "law of value" does not yet dominate and control the social divsion of labor. It reflects a simple, uncomplicated way of economic life, one implicitly assumed to take place within limited geographic boundaries.

As such, C-C holds no interest for Marx insofar as his task is to develop a crisis theory. In barter, the individual act of commodity exchange is a complete act; C-C represents simultaneous purchase and sale, not only in the tautological sense that each commdoity is purchased in the same act in which it is sold, but also because each transactor makes a sale through the same act by which he purchases.

When we proceed to SCP, however, money as *means of circulation* ruptures the simultanaity of purchase and sale. In SCP the individual act of exchange is by its nature incomplete; it is only one link in an ever-expanding chain of actions and interactions. C-M-C consists of two logically distinct phases, C-M and M-C. C-M may represent the final stage of exchange for the money holder, who must have previously sold a commodity in exchange for the money he uses here to obtain a product for consumption as a use-value, but it only represents the starting point for the commodity owner who has exchanged his product for money. This transactor must now go on to attempt to complete the exchange cycle through a third party. The third agent, of course, must find a fourth, who desires to engage in a C-M transaction with the third agent. And so on.

SCP is thus qualitatively different from barter in that it separates the acts of purchase and sale in time and space and inevitably draws vast numbers of producers into a complex, interlocked, interdependent *system* of social relations of production and exchange. As Marx puts it:

> We see here on the one hand, how the exchange of commodities [SCP] breaks through all the individual and local limitations of the direct exchange of products [barter], 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.[11]

Since each individual agent's sale of his or her commodity is dependent upon the successful sales and purchases by "innumerable" others, the entire society of commodity producers is drawn together in a network of mutual interdependence, a system in which rupture at any point can lead to disruption everywhere, a system beyond anyone's control. And the creation of this system, the weaving together of this web, the breaking through the boundaries and limitations of barter, is accomplished by and through money. Because it is the medium of circulation, money becomes the medium of social cohesion, the tie that binds the fortunes of economic agents one to another.

The existence of MMC, of the requirement that economic agents must first convert the commodities they produce into money before they can obtain use-values, dramatically alters the system characteristics of commodity exchange in SCP from those associated with its barter form: Says's Law cracks under the weight of MMC. Indeed, Marx's analysis of crisis in SCP can be thought of as extensive critique of the idea enshrined in Say's Law that commodity exchange economies with money can be adequately theorized as very complex systems of barter in which money really does not matter. The fundamental distinction between Marx's analysis of the dynamics of advanced commodity exchange and "the childish babble of a Say"[12] or, one might add, of a Walras or a Friedman, is precisely the distinction between a monetary economy and barter.

The following quotation shows quite clearly that Marx believed that the introduction of MMC into the commodity exchange model created a mode of economic organization in which crises were possible:

> No one can sell unless someone else purchases. But no one directly needs to purchase because he has just sold. Circulation . . . [splits] up the direct identity . . . between the exchange of one's own product and the acquisition of someone else's into the two antithetical segments of sale and purchase. To say that these mutually independent and antithetical processes form an internal unity is to say also that their internal unity moves forward through external antithesis. 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 exchange-value, between private labour which simultaneously manifests itself as directly social labour, and a particular concrete kind of labour which simultaneously counts as merely abstract universal labour. . . ; the antithetical phases of the metamorphoses of the commodity are the developed forms of motion of this immanent contradiction. These forms therefore imply the possibility of crisis, though no more than the possibility. For the development of this possibility into a reality a whole series of conditions is required, which do not yet even exist from the standpoint of the simple circulation of commodities.[13]

One of the most important logical implications of letting money stand between purchase and sale is the elimination of the analytically instantaneous character of commodity exchange in barter: money introduces the passage of *time* into the model. In turn, the separation of purchase and sale, or the passage of time while money is suspended between acts of circulation, implicitly introduces two new related monetary concepts into Marx's analysis: money as an asset, "hoard" or store of wealth, and the "velocity" of money or its speed of circulation. Money as a hoard, MH, is a component of the SCP-through-MMC form.

Marx's argument above clearly implies that the velocity of money as a medium of circulation may slow down; that is, the time during which it stands suspended between acts of exchange may lengthen. "No one needs to purchase because he has just sold"; money can be held rather than spent for some variable period of time. Moreover, the idea that velocity can slow down is intimately related to Marx's assertion that there can be a general excess supply of commodities—a crisis of reproduction—in SCP. For example:

> . . . the velocity of ciculation of money is merely a reflection of the rapidity with which commodities change form. . . . In the velocity of circulation, therefore, appears the fluid unity of the antithetical and complementary phases, . . . or the two processes of sale and purchase. Inversely, when the circulation of money slows down, they assert their independence and mutual antagonism; stagnation occurs. . . The circulation itself, of course, gives no clue to the origin of this stagnation; it merely presents us with this phenomenon.[14]

What Marx is doing here is considering disequilibrium aspects of SCP, arguing that the aggregate supply of commodities can exceed the aggregate demand for commodities—hence crisis—precisely because money exists not just as a medium of circulation but as an asset or store of wealth as well. Indeed, in *Theories of Surplus Value* he states his argument in the modern form we associate with Walras Law, defined here as the statement that the sum of the excess demands of all commodities *including money* is equal to zero. There can be an excess supply of all commodities—a general glut—if at the same time there is an excess demand to hold money. If we consider SCP, Marx tells us:

> At a given moment, the supply of all commodities can be greater than the demand for all commodities, since the demand for the *general commodity*, money, exchange value, is greater than the demand for all particular commodites, in other words the motive to turn the commodity into money, to realize its exchange-value, prevails over the motive to transform the commodity into use-value.[15]

We turn briefly to the function of money as a measure of value. Money—here gold—is the universal general equivalent and hence "the necessary form of appearance of the measure of value which is immanent in commodities, namely labour-time."[16] The interesting aspect of MMV for us is that money acts as a measure of value *before* it acts as a means of circulation: time intervenes between the two functions. By MMV, Marx refers to the *estimate* of the value of a commodity made by its owner or by others prior to its actual sale.

> Since the expression of the value of commodities in gold is purely and ideal act, we may use purely imaginary or ideal gold to perform this operation. Every owner of commodities knows that he is nowhere near turning them into gold when he has given their value in the form of a price or of imaginary gold. . . In its function as measure of value, money therefore serves only in an imaginary or ideal capacity.[17]

Thus, MMV measures the expectations of commodity owners as to the value they will receive in the market when they actually exchange their commodity for gold; that is, when money acts as a means of circulation.

Nothing gurantees, however, that the expectations of commodity owners will be fulfilled. Indeed, the lack of any precoordinating mechanism in a commodity exchange economy practically guarantees that these expectations will not be fulfilled. If the value actually received at sale is greater than, equal to, or not much below expecations, reproduction need not be disrupted. But if conditions change substantially between the time that money acts as measure of value and as means of circulation, a crisis could develop.

The real signigicance of the separation of money into MMV and MMC (or the recognition of the passage of time between the decision to produce and the sale of the product) for monetary and crisis theory cannot be established, however, until the point has been reached where Marx introduces money as a means of payment into the analysis of SCP. It will not attain its maximum significance until production, especially capitalist production, is incorporated into the model. It is only with contracts. credit and financial intermediation, and with time-consuming interdependent production and circulation processes involving long-lived capital goods that the potential differences between the price expectations that guide decisions to produce and prices *actually prevailing* at the time of sale take on a key, and often a dominating, role in crisis theory.

Even so, Marx comments right at this point about the anarchic character of a mode of production in which expected values and realized values diverge. The fact that a producer accurately estimates the average or trend value of his commodity does not guarantee that the market price will adequately reflect that value when the good is sold. The price of a commodity, Marx tells us:

> however, may express both the magnitude of value of the commodity and the greater or lesser quantity of money for which it can be sold under the given circumstances. The possibility, therefore, of a quantitative incongruity between price and the magnitude of value, i.e, the possibility that the price may diverge from the magnitude of value, is inherent in 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.[18]

Chapter Three of *Volume One* of *Capital* thus contains Marx's basic argument that it is the intervention of money into direct commodity circulation, the monetization of the exchange economy, MMC, that creates the potential for crises. In Chapter 17 of *Theories of Surplus Value* Marx presents the same basic analysis, but the language he uses there makes it harder to misunderstand the theoretical status of the abstract forms of crisis in SCP and their centrality in his theory of *capitalist* crisis. We quote Marx from Chapter 17 in order to call attention to the important terms and concepts that he uses there:

> Crisis results from the impossibility to sell. . . The difficulty of converting the commodity into money, of selling it, arises from the fact that the commodity must be turned into money but the money need not be immediately turned into commodity, and therefore *sale* and *purchase* can be separated. We have said that this *form* contains the *possibility of crisis*, that is to say, the possibility that elements which are correlated, which are inseparable, are separated. . .[19]

The SCP model theorized only through the function of money as means of circulation thus respresents a "form" within which crisis is possible because sale and purchase are separated and thus have the potential to temporarily lose their unity, to become, for a time, independent. Having established this point about the SCP-through-MMC form, Marx immediately tells us that a theory of a form with crisis potential is not yet a theory of crises, an explanation of why capitalist crises *must* take place:

> The general abstract possibility of crisis denotes no more than the *most abstract form* of crisis, without content, without a compelling motivating factor. Sale and purchase may fall apart. They thus represent potential *crisis* and their coincidence always remains a critical factor for the commodity. The transition from one to the other may, however, proceed smoothly. The *most abstract* form of crisis (and therefore the form of possibility of crisis) is thus the *metamorphosis of the commodity* itself; the contradiction of exchange-value and use-value, and furthermore of money and commodity, comprised within the unity of the commodity, exists in metamorphosis only as an involved movement. The factors which turn this possibility of crisis into [an actual] crisis are not contained in this form itself; it only implies that *the framework* for a crisis exists.[20]

SCP-through-MMC constitutes an abstract form of crisis, indeed the most abstract form of crisis. It has crisis potential. But crisis need not occur; this form provides no content, no compelling, motivating factor to cause crisis. "The transition" from sale through purchase "may, however, proceed smoothly." SCP-through-MMC therefore "only implies that *the framework* for crisis exists."

The same basic point is made in the following argument:

> The *general possibility* of crisis is the formal metamorphosis of capital itself, the separation in time and space, of purchase and sale. But this is never the *cause* of the crisis. For it is nothing but the *most general form of crisis,* i.e., the crisis in its *most generalized expression.* But it cannot be said that the *abstract form of crisis* is the *cause of crisis.* If one asks what its cause is, one wants to know why *its abstract form,* the form of its possibility, turns from possibility to actuality.[21]

And if one does want to know why crisis "turns from possibility to actuality," one must shift the focus of the analysis from circulation to production or from SCP to capitalist production relations. What one should *not* do is forget that the abstract forms of crisis constitute the framework within which the analysis of production takes place, a framework which is itself transformed in that analysis.

Even this framework is incomplete, however, The completion of the abstract framework for crisis in SCP requires the integration of the remaining functions of money in the model.[22] The incorporation of the function of money as means of payment, MMP, represents the most significant extension of the crisis framework. Theorizing MMP in SCP constitutes a qualitative increase in the analytical power of the framework as a form within which to build a concrete theory of capitalist crisis. And it is with the SCP-through-MMP abstract form of crisis that Marx introduces contracts, commercial credit (and paves the way for the introduction of financial intermediation) into his theory of crisis.

III. b. The Second Abstract Form of Crisis: Money as a Means of Payment or the Contract Economy

In Chapter 17, Marx introduces a second abstract form of crisis in SCP:

> It can therefore be said that the crisis in its first form is the metamorphosis of the commodity itself, the falling asunder of purchase and sale. The crisis in its second form is the function of money as a means of payment, in which money has two different functions and differs in two different phases, divided from each other in time. Both these forms [SCP-through MMC and SCP through-MMP] are as yet quite abstract, although the second is more concrete than the first.[23]

The introduction of money as means of payment—money used by a borrower to fulfill a legally-binding contract—in the theory of SCP is the key analytical step required to demonstrate the basic thesis of this paper that money, commercial credit and financial intermediation play a central role in Marx's crisis theory. With his analysis of MMP in SCP, Marx introduces the concepts of contracts and credit, extends the degree of systematic interdependence of economic agents in SCP, substantially alters the impact of time and the role of history in the model, theorizes the monetary crisis and lays the foundation for the financial crisis, and introduces the essential notion of a contractually rigid or fragile reproduction process. Clearly, the significance of MMP for Marx's crisis theory is more profound than most of the modern Marxian crisis literature acknowledges.

Contracts, Marx tells us, develop naturally out of the evolution of the circulation process. Contractual arrangements arise initially out of regularly repeated transactions between the same buyers and sellers. The first type of contract discussed by Marx is one made to reduce the uncertainty involved in obtaining a given commodity at a given time at a given price. Commodities:

> may . . . be ordered for a future date at which they are to be delivered and paid for. The sale in this case takes place only nominally, i.e., juridically, without the actual presence of commodities and money. The two forms of money, means of circulation and means of payment, are still identical.[24]

The circulation of commodities thus "gives rise to private, legally enforcible contracts among commodity owners."[25] Marx also mentions advance payment, using rental property as an example.

Neither of these contractual arrangements involve credit; contractual commitments clearly are not restricted to credit contracts. It is with commercial or trade credit contracts, however, that money acts as a means of *deferred* payment. In producing trade credit, SCP simultaneously produces another function of money and another time-consuming stage in the circulation of commodities.

> The seller sells an existing commodity, the buyer buys as the mere representative of money, or rather as the representative of future money. The seller becomes a creditor, the buyer becomes a debtor. . . . [Here] money receives a new function as well. It becomes the means of payment.[26]

With credit, the functions of MMV, MMC, and MMP constitute three separate stages that intervene between the direct exchange of commodities.

> 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 a measure of value in the determination of the price of the commodity sold; the price fixed by the contract measures the obligation of the buyer, i.e., the sum of money he owes at a particular time. Secondly, it serves as a nominal means of purchase [or nominal means of circulation]. 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 the seller.[27]

Thus, the addition of the function MMP to the SCP form extends the separation in time between purchase and final sale involved in commodity circulation and makes the process more complex: instead of two separate acts required to complete circulation—C-M and M-C—we now have three—C-D; D-M; and M-D, where D stands for a debt contract. Agent A sells a commodity to agent B on credit; a contract, D alienates his product. Agent B now *must* resell this commodity (or one produced using it as input) to some agent C in order to obtain the money needed as means of deferred payment to fulfill his contract with A.

The time of circulation is extended because the same commodity must be sold twice: once to B and once to C. The circulation process has also become more complex because agent A now depends directly on the behavior and circumstances of *two* other agents to complete the conversion of his commodity into money. Thus, the degree of systematic dependence of each agent on all others is extended by the same conceptual phenomenon that lengthens the time it takes to circulate a given set of commodities.

Note that MMP introduces a new 'motive' for selling a commodity. Initially, with MMC, commodities were sold in order to obtain the use-value associated with the commodities purchased using the proceeds of sale. MH brought with it a new motive: the lust for gold. Now commodities were sold in order to accumulate wealth per se. *With MMP, the borrower sells because he must,* in order to pay off his creditor.

> 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 pay. If he does not pay, his goods will be sold compulsorily. The value-form of his 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.[28]

Note also that, as we shall see below, the compulsion to sell, the forced sale of commodities (and, later, financial assets) by the indebted commodity-owner creates "that aspect of an industrial and commercial crisis . . . known as a monetary crisis" and lays the foundation for the conceptualization of the financial crisis.[29]

The concept of a *contractual commitment,* a legal obligation to engage in some activity, deliver or accept some product or service, and/or pay a specific amount of money at some specific future date adds a whole new dimension to the theory of the crisis potential of SCP. The problem of crisis or incoherence in the SCP form with money as MMV, MMC and MH but not MMP is essentially one of unpredictability. Since purchase and sale, supply and demand are 'independent', no agent can be sure that the labor embodied in his commodities will be exchangeable for an equal amount of the socially necessary labor time of others. The value of his commodities measured in his mind or in his planning when money serves as a measure of value may be much greater than the value he actually receives upon sale. Moreover, there is no mechanism to assure that such deviations will be immediately self-correcting. Nothing guarantees that the next round of commodity circulation won't bring an even greater imbalance of supply and demand, wider relative price changes, and even greater disruption in the reproduction process than the preceeding one. Should the level of unpredictability and incoherence reach a point where a substantial number of agents begin to sell without buying, to hold onto money, a deflationary spiral can develop. Deflation, of course, enriches money hoarders; thus, a downward price spiral can be self-reinforcing and a 'crisis' of reproduction might take place.

The agents in the first abstract form of SCP, in other words, are subject to the anarchy of an economy not under their control. Therefore, they are vulnerable to the threat of unforeseeable, unavoidable capital losses caused by an unequal exchange of labor-time as prices fluctuate between production plan and sale. Nevertheless, there is a high potential degree of resiliance, flexibility and adaptability in this theoretical system because there are few transmission mechanisms to infect one cycle of reproduction with the problems of previous cycles. However badly treated an agent may be in one cycle, he enters the next round of circulation as ready to be integrated in an overall 'equilibrium' as he was before; that is, the outcomes of one cycle need not severely restrict the system's potential for coherence in the next cycle. As a general rule, with the important exception that agent expectations must be historically determined and the theoretically trivial exception (trivial with repect to this issue) that wealth is redistributed among agents each period, each round of circulation is analytically independent of the rounds which preceeded it. Reproduction is unburdened by and unconstrained by its past.

With contracts all this changes. In the economic form of SCP theorized to include the function of money as means of payment the reproduction or accumulation process must drag its history with it as burden and constraint. Once future commitments are embedded in the system through contracts, any price vector which would have cleared commodity markets in the absence of contracts will not necessarily produce coherence: only prices that enable most of the contracts to be fulfilled can avoid crisis. *Contracts and credit create a variable degree of rigidity or fragility in the reproduction process.* Future commitments build around any value structure which is maintained for some time; the longer the structure holds, the more extensive the web of interlocked commitments that builds up around it. Moreover, the longer a structure is maintained, the more confident agents become that it will continue to hold. Increased confidence, in turn, leads to longer time horizons on contracts and therefore to more restrictive conditions for crisis avoidance. The precise articulation of the credit-contract linkages connecting economic agents in SCP proper depends on the structure of production (the input-output relations among industries and firms) and the structure of circulation or trade. The more highly developed and complex these underlying structures, the more fragile the

condition of the credit-contract matrix and the greater the crisis potential of the model.[30]

Under such conditions, a significant change in the price-value structure can render contractual commitments unfulfillable. A chain reaction follows: agent A cannot pay agent B, who in turn cannot pay agent C, and so on. A wave of bankruptcies may result. Various markets for commodities and financial assets will come under pressure, and may collapse, because real and financial assets must be sold to fulfill contractual commitments; that is, to raise money as means of payment. *A contract economy is thus qualitatively more fragile, subject to more crises and to deeper crises than an economy without contracts.* It is also capable of longer and more vigorous periods of growth to be sure, but, as we shall see below, this growth only paves the way for future depressions and stagnations.[31]

Marx's discussion in Chapter 17 of the way in which the incorporation of MMP heightens the crisis potential of SCP parallels his Chapter Three treatment but, again, the theoretical structure and location of the argument in his general theory of capitalist crisis is made much clearer in Chapter 17. Consider, for example, the following assessment of the crisis potential of the contract economy:

> The general *possibility* of crisis is given in the process of *metamorphosis of capital* itself, and in two ways: in so far as money functions as *means of circulation,* [the possibility of crisis lies in] the separation of *purchase and sale;* and in so far as money functions as *means of payment,* it has two different aspects, it acts as *measure of value* and as *realization of value*. These two aspects [may] become separated. If *in the interval* between them the value has changed, if the commodity at the moment of sale is not *worth* what it was *worth* at the moment when money was acting as a measure of value and therefore as a measure of the reciprocal obligations, then the obligation cannot be met from the *proceeds of the sale of the commodity,* and therefore the whole series of transactions which retrogressively depend on this one transaction, cannot be settled.[32]

Two central elements are involved in Marx's stress on the significance of MMP in this quotation. First, agents undertake contractual commitments at one point in time to exchange money (or commodities) at a specific time in the future. These contracts are based on estimates or expectations of the prices and values that will prevail at the relevant future date. If relative prices or the absolute price level change in an unexpected way between the time the contract was written and the end-point of the contract, one of the contracting agents—the debtor in a credit contract—may not be able to fulfill his contractual commitment. Of course, there is no way that agents can know what future price structures will be like: the future—especially in anarchic, unplanned market-organized economies—is in principle unknowable. Yet, the "*comparison* of value in one period with the value of the same commodities in a later period . . . forms the fundamental principle of the circulation process of capital."[33]

Second, as we saw above, the contract economy develops not just isolated reciprocal future commitments between pairs of agents, but a complex interdependent *system* of interlocked commitments drawing most agents into its web. The "whole series of transactions which retrogressively depend on this one transaction, cannot be settled." The contract economy, in other words, can evolve into a very rigid, fragile condition, one in which relatively minor unforeseen events can disrupt reproduction through a snowballing, falling-domino process of contractual failures, bankruptcies and their aftereffects.

MMP and the emergence of contractual commitments means that it may not be sufficient for cirisis avoidance for agents to be able to sell their commodities or even to sell them at the right price: they must sell at the required price *within a restricted time period.*

> If even for only *a limited period of time* the commodity cannot be sold then, although its value has not altered, *money cannot function as means of payment,* since it must function as such in a *definite given period of time*. But as the same sum of money acts for a whole series of reciprocal transactions and obligations here, *inability to pay* occurs not only at one, but at many points, hence a *crisis* arises.[34]

Finally, Marx links the second form of crisis potential, SCP-through-MMP, to the particular aspect of crisis known as money crisis or monetary crisis, that phase in the development of an economic downturn in which agents are *forced* to sell commodities to raise the money required to meet contractual commitments. The money crisis is characterized by a collapse in commodity prices and a 'fleeing' to the money-form. When financial intermediation is fully integrated in the model, the money crisis includes falling prices for financial assets, rising interest rates, increasing inability to obtain credit at any price, and a flight from all risky assets, a flight that itself causes assets previously thought of as safe to become classified as risky.

> These are the *formal possibilities* of crisis. The form mentioned first [SCP-through-MMC] is possible without the latter—that is to say, crises are possible without credit, without money functioning as a means of payment. But the second form [SCP-through-MMP] is not possible *without the first*—that is to say, without the separation between purchase and sale. But in the latter case, the crisis occurs not only because the commodity is unsaleable, but because it is not saleable winthin a *particular period of time,* and the crisis arises and derives its character not only from the *unsaleability* of the commodity, but from the *non-fulfillment of a whole series of payments* which depend on the sale of this particular commodity within this particular period of time. This is the *characteristic form of money crisis*.
>
> If the *crisis* appears, therefore, because purchase and sale become separated, it becomes a *money crisis,* as soon as money has developed as *means of payment,* and this *second form* of crisis follows as a matter of course, when the *first occurs*.[35]

It is impossible to miss in these quotations the crucial role the contract economy, or MMP, plays in Marx's crisis theory. Price instability, disappointed expectations and random loss of wealth are possible in SCP-through-MMC, but it is the contractual rigidities of MMP that convert this simple anarchy into a serious potential for economic collapse.

Marx makes the same point about the potential precariousness of the contract matrix using a somewhat more concrete example involving a set of producers whose fortunes are bound together by trade credit relations arising from an integrated structure of production. He concludes his discussion of this example as follows:

> The flax grower has drawn on the spinner, the machine manufacturer on the weaver and the spinner. The spinner cannot pay because the weaver cannot pay, neither of them pay the machine manufacturer, and the latter does not pay the iron, timber, or coal supplier. And all of these in turn, as they cannot realize the value of their commodities, cannot replace that portion of value which is to replace their constant capital. Thus the general crisis comes into being. This is nothing other than the *possibility of crisis* described when dealing with money as a means of payment. . .[36]

Historically there is no doubt that the rigidification of the economic system through a pervasive, complex, interlocking system of contractual obligations is an accomplishment of the capitalist mode of production. But in Marx's method, the general crisis or money crisis is an abstract theoretical attribute of commodity-exchange-in-general, or of SCP, and is thus theorized prior to the analysis of capitalist social relations.

Thus, the step Marx takes when he introduces MMP into SCP is a major step in the development of his crisis theory. Circulation now takes more time and the agents become embedded in more extensive relations of interdependence due to the simple fact that at least two sales are required to complete the circulation of a commodity. Of greater significance, contracts, especially credit contracts, link reproduction cycles together, making reproduction in one period depend on reproduction cycles that took place many periods past: *reproduction is now hostage to its own history*. Time takes on a qualitatively greater significance in the analysis and the concept of increasing fragility or rigidity in the reproduction process now plays a potentially dominating role in crisis theory. For the first time Marx's analysis becomes inherently and fundamentally historical: history and historic time step centerstage into the spot-light of Marx's crisis theory.

We conclude this section by returning to a fundamental point raised earlier. To comprehend Marx's approach to crisis theory, it is essential to understand his abstract forms of crisis in SCP analysis and the role of money and credit therein. But it is just as important to bear in mind that, for Marx, an abstract form has no content, crisis potential is not the same as crisis cause, and a crisis framework is not yet a theory of crisis. To put content in the abstract forms of crisis, to make a crisis theory out of crisis potential, it is necessary to integrate an analysis of the crisis tendencies of capitalist production relations with the abstract forms of crisis of SCP. Thus, the next step in the development of a theory of capitalist crisis is an analysis of the crisis tendencies of capitalist production relations and an examination of the unity and contradiction of the capitalist reproduction process as a whole, integrating the spheres of production and circulation.

IV. Moving From Simple Commodity Production to Capitalism

Marx constructs a four step argument to move from the abstract forms of crisis in SCP analysis to a theory of capitalist crisis. First, he argues that his analysis of the crisis potential of SCP must be incorporated in capitalist crisis theory because capitalism is a commodity exchange mode of production. Second, he argues that the historical development of a complex contract-credit system and the rise of capitalism are simultaneous and symbiotic. Third, he analyzes those aspects of capitalist production relations that cause the rate of profit to alternately rise and fall over time, creating the unstable growth patterns characteristic of capitalist economies. Fourth, he integrates these tendencies or laws of capitalist production relations into the analysis of abstract crisis forms to generate a unified theory of the capitalist reproduction process. We deal briefly with the first three of these steps in this section; the last step is analyzed in section V.

IV. a. The Theory of the Capitalist Mode of Production Incorporates and Transforms the Theory of SCP

Capitalism is a commodity exchange or market-organized mode of production: "The circulation of commodities is the starting-point of capital."[37] Indeed, Marx stresses the fact that capitalism is the only fully-developed or advanced form of commodity exchange that ever existed. Therefore, Marx's analysis of the complete model of SCP—including his theory of its crisis potential—is applicable to capitalism and must, as a model of capitalist commodity circulation, be a constituent element of the theory of capitalism's laws of motion. He is perfectly clear about this:

> The contradictions inherent in the circulation of commodities, which are further developed in the circulation of money—and thus, also, the possibilities of crisis—reproduce themselves, automatically, in capital, since developed circulation of commodities and of money, in fact, only takes place on the basis of capital.[38]

In analyzing capitalist crisis, he tells us:

> To begin with therefore, in considering the *reproduction process* of capital (which coincides with its circulation) it is necessary to prove that the above forms [SCP-through-MMC and SCP-through-MMC] are simply repeated, or rather, that only here they receive a content, a basis on which to manifest themselves.[39]

If some varient of the complete SCP model is applicable to many different social formations, what is it that distinguishes or differentiates them? Marx's answer to this question is self-evident: their relations of production. Until we have theorized the production relations of a particular mode of production and integrated this theory with the SCP model, we cannot develop an adequate analysis of its laws of motion.

> The production and circulation of commodities are however phenomena which are to be found in the most diverse modes of production, even if they vary in extent and importance. If we are only familiar with the abstract categories of circulation, we cannot know anything of their *diffentia specifica,* and we cannot therefore pronounce judgement on them.[40]

So although it was "necessary to describe the circulation or reproduction process before dealing with the already existing capital—*capital and profit*. . ."[41], Marx must now move on to his analysis of capitalism's differentia specifica, its relations of production, in order to establish capitalism's laws of production and investigate the distinguishing characteristics of *capitalist* commodity circulation.

> But now the further development of the potential crisis has to be traced—the real crisis can be educed from the real movement of capitalist production, competition and credit—in so far as crisis arises out of the special aspects of capital which are *peculiar* to it as capital, and not merely comprised in its existence as commodity and money.[42]

IV. b. Capitalism Develops and Perfects the Contract-Credit System

The second point involves the articulation between the theory of circulation and the theory of production. Though it is beyond the scope of this paper to undertake an historical analysis of the development of financial intermediation, it is relevant to point out that the complex contract-credit system as we know it was created as part of the process of the evolution of capitalism. The development of capitalist social relations proceeded historically alongside the evolution of the contract-credit system in a symbiotic relation with it. Thus, although the abstract form of SCP including MMP belongs to Marx's theory of commodity exchange, it is capitalism that deepened, widened and intensified contract-credit relations.

Marx makes this point in many occasions. "Credit," he tells us, "is both the result and the condition of capitalist production . . ."[43] The "development of the credit-system . . . necessarily runs parallel with the development of large-scale industry and capitalist production. . ."[44] And again: Credit "as an essential, developed relation of production appears *historically* only in circulation based on capital or on wage labour."[45]

Marx emphasizes the fact that capitalist accumulation not only increases the volume of commercial credit, it widens and deepens the credit matrix as well because as it raises the scale of production, it simultaneously lengthens the time of the production cycle, widens the span of the market geographically and makes credit inherently more speculative:

> It is clear, however, that with the development of labour productivity and hence of production on a large scale [in capitalism], (1) markets expand and become further removed from the point of production, (2) credit *must* consequently be prolonged, and (3) as a result, the speculative element *must* come more and more to dominate transactions. Large-scale production for distant markets casts the entire product into the arms of commerce; but it is impossible for the nation's capital to double, so that commerce would purchase the entire national product with its own capital before selling it again. Credit is thus indispensable here, a *credit* that *grows in volume* with the increasing value of production and *grows in duration* with the increasing distance of markets. A reciprocal effect takes place here. The development of the production process expands credit, while credit in turn leads to an expansion of industrial and commercial operations.[46]

The analysis of the credit-accumulation nexus that Marx describes here is clearly dialectical in that credit facilitates and even accelerates reproduction—"credit is thus indispensable here"—at the same time that it obviously increases the vulnerability or fragility of the entire process. The consequence of a disruption in the pace of accumulation on the one hand, or of an increase in the cost or decrease in the availability of credit on the other is obvious: crisis! The laws of development of capitalism raise the crisis potential of the contract-credit system substantially beyond that attained by the SCP-through-MMP form.

IV. c. Capitalist Production Relations, Crisis, and the Multicausal Tendency of the Rate of Profit to Fall

The rate of profit is the key variable in the Marxian theory of the dynamics of accumulation and crisis in capitalism. The traditional Marxist literature analyzes capitlaist production relations in order to establish laws or tendencies governing the behavior of the profit rate. Its concerns are symmetric in that it both investigates the capacity of the capitalist economy to endogenously regenerate a high rate of profit and a resultant high rate of growth in the aftermath of an economic downturn, and studies endogenously generated impediments to sustained accumulation. Crisis theory proper, our major concern in this paper, concentrates on the second of these issues; it analyzes systemic forces in the capitalist accumulation process that tend to lower the profit rate and eventually transform growth into crisis and collapse.

It is not our purpose here either to review the crisis theory literature or to critically evaluate it. Rather, we wish only to establish its appropriate location in Marx's theoretical analyses of capitalist crisis. The major issues debated in this literature—disproportionality between departments I and II, underconsumption problems, the decline in the rate of exploitation (and thus ceteris paribus, in the rate of profit) associated with a shrinking industrial reserve army of unemployed, and the tendency of the rate of profit to fall based on the tendency of the organic composition of capital to rise—are familiar to anyone with a passing knowledge of Marxian theory. The logical position they occupy in

Marx's theoretical structure, however, is not necessarily familiar, even to sophisticated Marxists.

With respect to crisis theory and the central concern of this paper, there are two especially significant results of Marx's analysis of capitalist production relations (and of his analysis of those aspects of the unified system of production and circulation—such as interest-bearing capital and financial intermediation—that can be theorized only after the analysis of production has taken place). First, it enriches the previously theorized crisis potential of commodity exchange: *Volumes Two* and *Three* of *Capital* deal with the transformation of the theory of simple commodity circulation into the richer, more complex theory of capitalist commodity circulation. Second, it generates a series of complementary foundations underpinning a tendency for the rate of profit to fall as accumulation proceeds over time. Whatever the source of this tendency in any particular era of growth—be it a declining reserve army, a rising organic composition of capital and/or a problem of underconsumption—the important point is that accumulation, which requires some historically specific minimum rate of profit to sustain itself, eventually causes the rate of profit to decline, thus destroying its most important condition of existence. The tendency for accumulation to eventually lower the profit rate is the crucial link that ties Marx's analysis of capitalist production relations to the previously theorized model of the abstract forms of crisis in commodity exchange (as augmented and transformed by capitalist development), making it possible to construct a unified theory of capitalist crisis. The major shortcoming of the traditional crisis theory literature is its failure to comprehend the existence and significance of the theoretical articulation of the laws and tendencies of the rate of profit deduced from the sphere of production with Marx's analysis of monetary and financial phenomena conducted both earlier and later in *Capital*.

V. The Unity of Circulation and Production

Perhaps the simplest way to summarize Marx's view of the role of financial phenomena in the accumulation process is as follow: credit and, to a lesser extent, nonfinancial contracts are important and often dominating accelerators and destabilizers of accumulation. The contract-credit system feeds the accumulation process in the upswing, driving it at a pace it could not possibly otherwise attain, while it simultaneously gives to accumulation the fragile, rigid character we have stressed: it creates what Marx calls an "oversensitivity" in the process. Adverse nonfinancial developments which would have caused only a mild and temporary hesitation in an ongoing expansion in the absence of a fragile financial environment can generate a crisis and collapse in its presence. Moreover, semiautonomous disturbances in the financial sector can themselves initiate a disruption of accumulation, creating a crisis. And an overextended, over-sensitive, contract-credit system can turn what might have been a mild downturn into a panic and collapse of epic propostions. A complete integration of the spheres of circulation and production in the theory of accumulation and crisis would have to consider all four effects of the contract-credit system: (1) the overextension of the expansion; (2) the increasing vulnerability of the expansion to adverse financial or nonfinancial developments; (3) the codetermination of the timing of the crisis; and, (4) the deepening and widening of the contraction.

A full treatment of Marx's analysis of the relationship between commercial credit and financial intermediation and capitalism's laws of motion in either the short or long-run is well beyond the scope of this paper.[47] However, we would like to highlight some conclusions of that analysis which reinforce our main theme concerning the crucial importance of money, contracts, credit and financial intermediation in Marx's crisis theory.

V. a. Overheating the Expansion

We stated that Marx's theory of accumulation and crisis centers on the rate of profit: in fact, there are two different profit rate variables in Marx's macrotheory. The gross rate of profit is the ratio of interest plus rent plus the profit of industrial and commercial enterprises to invested capital. The net rate of profit is the ratio of industrial and commercial profits after the deduction of interest and rent—what Marx called profit of enterprise—to invested capital.

The gross rate of profit is important because, on the assumption that savings come from property income, it is a crude index of the maximum potential rate of capital accumulation. Net profit is important for two reasons. First, it is the source of internal funding for investment: corporate cash flow consists of profit of enterprise minus dividend payout (plus depreciation allowance if a tax system is relevant). Moreover, a satisfactory net rate of profit is an essential precondition for obtaining external funding on reasonable terms. Second, the net rate of profit that industrial capitalists *expect* to prevail in the intermediate future is the key determinant of their demand for investment goods or their desire to accumulate capital. And the net rate of profit that financial capitalists *expect* industrial capital to yield in the intermediate future is a determinant of their willingness to lend money because it measures the cushion of security that they think will be available to protect their financial investment.

Since expectations of future profit rates will, at least in 'normal' times, be determined by the path taken by the actual rate of profit in the relevant past up through the current period, the realized gross and net rate of profit are the prime movers of capital accumulation. Attractive profit rates induce a vigorous demand for investment at the same time that they stimulate the funding needed to finance the investment; disappointing profit rate developments produce the opposite results. In Marx's accumulation theory, in other words, the profit rate is the bottom line.

An expansion, therefore, requires the existence of an "attractive" rate of profit. Moreover, a profit rate considered to be attractive by the capitalist class of any particular historical period will, if maintained for some period of time, generate confident expectations that satisfactorily profitable conditions will continue to prevail for the foreseeable future. This confidence, in turn, will lead industrial capitalists not only to reinvest retained earnings but to seek external investment funding as well. The same climate of confidence will induce financial intermediaries to expand credit aggressively; credit will be made available at moderate rates of interest. Vigorous capital investment will initially increase profits; in turn, sustained high profits will serve to increase confidence and improve the business climate.[48] Assessments of the risk involved in real or financial investment will diminish with each profitable period that passes, leading to the use of greater debt leverage all around. Businessmen in all sectors will want to get their piece of the profitable action or will be forced into aggressive expansion by competitors less conservative than themselves. Competition for markets, raw material supplies and credit reinforces the forward monementum of the expansion.

Trade credit will be readily granted to buyers and readily taken from sellers. The desire to take maximum advantage of the high profits of the period and to reduce the risk of losing supplies or markets to competitors will stimulate firms to make long-term contracts with those from whom they buy and to whom they sell. Capital investment will be debt-funded to an ever-increasing extent: enterprises will seek additional debt as long as the interest rate remains sufficiently below the expected gross rate of profit. In the rose-colored perspective of the expansion, not only do profit expectations become more bouyant, the required margin of safety between the expected gross profit rate and the rate of interest narrows as well.[49]

In short, what might have been a moderate expansion in the absence of cheap and available credit may become a runaway boom when superheated by the credit system. Of course, *it must be emphasized that in Marx's theory the high profit of the expansion is attainable only because the underlying production relations make it possible*. But it is the credit and financial system that accelerates the forward motion of the system, thereby helping transform boom-induced confidence into euphoria. As Marx wrote of the credit-fueled boom of 1844-46 in England:

> The enticingly high profits had led to operations more extensive than the liquid resources abailable could justify. But the credit was there, easy to obtain and cheap at that. . . . All domestic share prices stood higher than ever before. Why let the splendid opportunity pass? Why not get into the swing of it?[50]

Why not indeed! It is the capitalist credit system according to Marx that is "the principal lever of overproduction and excessive speculation in commerce.[51] "Banking and credit," he tells us "become the most powerful means for driving capitalist production beyond its own barriers and one of the most effective vehicles for crisis and swindling."[52]

V. b. The Crisis and Contraction

The over-heated expansion erupts into crisis when two conditions hold simultaneously. First, combining his analysis of the abstract forms of crisis associated with commodity-exchange with the analysis of the role of credit and financial intermediation in capitalist accumulation, Marx theorizes the increasing fragility, vulnerability or sensitivity of the contract-credit system in the mature expansion. As the expansion overheats the ability to fulfill contractual obligations will be increasingly threatened by any significant decline in the gross rate of profit. Second, Marx's analysis of the laws of motion of capitalist production relations, conducted under the conditional assumption that there are no impediments to accumulation in the sphere of circulation, generates multicausal tendencies of the gross rate of profit to fall at some point in every expansion. The integration of these two phenomena is Marx's theory of crisis. Neither one theorized in isolation from the other adequately reflects Marx's understanding of the unity and contradiction of circulation and production in capitalism.

We have already presented Marx's analysis of the way in which accumulation creates a fragile contract-credit system whose rupture in any key sector can lead to systemic crisis. All that remains is to tie that analysis to the gross rate of profit, the variable around which accumulation theory is constructed, and to integrate the interest rate on loan-capital into the crisis picture.

The critical step in this regard is the recognition that *the trend or average gross rate of profit in any historical period is the center of gravity around which the contract-credit system develops*. On the one hand, the average rate of profit is a codeterminant of the structure of relative prices which, in turn, influence the structure of contractual relations. More important, as accumulation proceeds the trend gross profit rate acts a a magnet attracting the rate of interest. In the early expansion the gross rate of profit rises while the interest rate remains stable, opening up a gap between them which fuels the investment boom. As the gross profit rate peaks, however, the interest rate rises to narrow that gap; the interest rate is both pulled-up by the strong demand for loanable funds by businesses lusting to take maximum advantage of the high profits of the period, and pushed up by the increasing illiquidity of the economy. As the expansion matures, the interest rate creeps up on the gross profit rate. In other words, the net rate of profit rises dramatically in the early-to-mid-expansion and declines thereafter.

In the following passage Marx describes the erosion of the net profit rate by the interest rate in the course of the expansion:

> If the reproduction process has reached the flourishing stage that preceeds that of over-exertion, commercial credit undergoes a very great expansion, this in turn actually forming the 'healthy' basis for a steady flow of returns and an expansion of production. In this situation, the rate of interest is still low, even it has risen above its minimum . . . The ease and regularity of returns, combined with an expanded commercial credit, ensures the supply of loan capital despite the increased demand and prevents the interest level from rising. . . . Added to this 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 paralyzed and . . . there is an almost absolute lack of loan capital alongside a surplus of unoccupied industrial capital.[53]

Thus, a web of financial and other contractual commitments will be woven ever tighter around the gross profit rate as long as it does not fall, or as long as reductions in it are seen as temporary deviations around a stable or rising long-term trend. Of central importance, the margin of safety or margin of error separating gross profit flows from required interest payments and principal repayments tends to decline as the expansion matures. ''[I]t is precisely the development of the credit and banking system which . . . seeks to press all money capital into the service of production . . . that makes the entire [economic] organism *oversensitive*.''[54]

With reproduction in this ''oversensitive'' or fragile condition, either of two developments can trigger a crisis and subsequent collapse. On the one hand, a semiautonomous monetary and financial crisis can produce a sharp drop in the availability of credit and an equally sharp rise in its cost. This can be enough to rupture an accumulation process so dependent upon credit. In *Volume One* of *Capital* Engels argues that a financial crisis ''may appear independently of [industrial and commercial crises] and only affects industry and commerce by its back wash. The pivot of these crises is to be found in money capital, and their immediate sphere of impact is therefore banking, the stock exchange and finance.''[55]

In other words, the speculation, stock market euphoria, outright swindling and gernal casino atmosphere of the overheated boom can create a financial structure vulnerable to the exposure of fraud, the disappointment of unfulfillable expectations and the collapse of Ponzi-like financial pyramiding even in the absence of a prior collapse in the industrial and commercial sectors. Marx makes a similar argument:

> In the period of over production and swindling, the productive forces are stretched to their limit.
>
> . . .
>
> In a system of production where the entire interconnection of reproduction 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.[56]

On the other hand, with the contract-credit system in a fragile condition any substantial decline in the gross rate of profit will bring on a crisis. It is at this point of the analysis that the problems in the sphere of production emphasized in the traditional crisis theory become most important. When one or more of the various tendencies for the gross rate of profit to fall theorized by Marx finally takes hold, the contract-credit system may rupture. The tighter the contractual web, the quicker the rupture. The system of interlocking commitments may be more or less sensitive, more or less robust, more or less fragile; the gross profit rate therefore has some variable degree of downward flexibility it can experience before contract-credit structures are threatened. *But the condition of the contract-credit system establishes a floor below which the gross profit rate cannot fall in any particular period without triggering a general crisis;* that is, a commercial-industrial crisis accompanied by a monetary and financial crisis.

Should the gross profit rate fall too fast or too far, contractual obligations cannot be fulfilled, the credit system comes under duress, confidence shatters, interest rates soar, risk-aversion rises dramatically and the forced sale of real and financial assets caused by a desperate effort to obtain money as a means of payment sends commodity and financial asset prices into a tailspin. *The crisis is triggered or caused by the union of a falling rate of profit and an oversensitive contract-credit system.*

The following quotation from Marx highlights the way in which monetary and financial developments during the crisis contribute to the economy's collapse:

> 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. . . The value of commodities is thus sacrificed in order to ensure the fantastic and autonomous existence of this value in money . . . This is why 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. In former modes of production, this does not happen, because given the narrow basis on which these move, neither credit nor credit money is able to develop. 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.[57]

At the end of his treatment of the "Law of the Tendency of the Rate of Profit to Fall" in Part Three of *Volume Three* of *Capital* Marx links the rupture of the contract-credit network directly to the falling profit rate in forceful, colorful language. When the profit rate falls:

> . . . since certain price relationships are assumed in the reproduction process, and govern it, this process is thrown into stagnation and confusion by the general fall in prices. This disturbance and stagnation paralyzes the function of money as a means of payment, which is given along with the development of capital and depends on . . . presupposed price relations. The chain of payment obligations at specific dates is broken in a hundred places, and this is still futher intensified by an accompanying breakdown of the credit system, which had developed alongside capital. All this therefore leads to violent and acute crises, sudden forcible devaluations, an actual stagnation and disruption in the repoduction process and hence to an actual decline in reproduction.[58]

We cannot present here a complete discussion of the varous ways in which a fragile contract-credit system can generate a crisis in the face of a falling profit rate. However, it should be clear that a massive wave of bankruptcies need not take place for a downturn to occur. The mere existence of the potential for financial crisis will induce risk-averse business behavior as soon as the *threat* of bankruptcy makes itself clear. The fall in the gross profit rate will shatter the rosy expectations of industrial and financial capitalist; their confidence will turn into caution or perhaps even fear. Interest rates, as we have seen, will continue to rise even as the gross profit rate falls due to distress borrowing by those firms whose actual net profit rate has turned negative, and to the forced sale of financial assets by those individuals and firms that unexpectedly need cash to meet contractual commitments they had thought they could finance from projected income-flows that failed to materialize. The commitment of future expected cash-flows required by long-term investment projects will now make them appear too risky to undertake. Real investment *will* decline; it could collapse.

The decline of investment will drag overall economic activity down with it; the gross rate of profit will fall even further. The drive for liquidity or safety will accelerate. And so on. Although the ensuing economic downturn may actually ruin or bankrupt only a modest subset of the most exposed firms, it will be enough to make corporate and bank executives cautious, if not frightened: stagnation follows.[59]

On the other hand, *if* a major fall in the gross profit rate occurs within a very complex, highly rigid, very fragile matrix of contractual commitments built up over an extended period of time, a major economic collapse, general or universal crisis, or massive depression is likely to result. A major monetary and financial crisis may be the sine qua non of a "great" depression. *The condition of the contract-credit structure is a prime codeterminant of the depth and duration of the economic downturn in Marx's crisis theory. It is the severity of the decline in the gross profit rate in combination with the condition of the contract matrix that dictates the dynamics of the crisis, downturn and stagnation.*

Vi. Conclusion

In summary, we have argued that the theory of money, contracts, commercial credit and financial intermediation is of central importance in Marx's theory of accumulation and crisis; it is neither subsidiary to, a 'mere reflection' of, or less important than the theory of production proper. As we have seen, the contract-credit system facilitates and accelrates accumulation, pushing it far beyond the limits it could otherwise attain at the same time that it makes the accumulation process fragile, unable to withstand a substantial decline in the gross rate of profit. It codetermines the timing of the crisis as well as the depth and duration of the depression. Here is Marx on the overriding significance of the credit and banking system for accumulation and crisis:

> If the credit system appears as the principal lever of over production 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. . . This only goes to show 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. The credit system hence accelerates the material development of the productive forces and the creation of the world market. . . At the same time, credit accelerates the violent outbreaks of this contradiction, crises, and with these the dissolution of the old mode of production.[60]

Several critics of Marx's crisis theory have argued that, paradoxically, it has no theory of the crisis itself. They claim that Marx presented no answer to such questions as: Why doesn't the decline in the profit rate cause a lower rate of balanced growth rather than a crisis?; Where is the analytical mechanism that connects a decline in the profit rate to a recession or depression?

The traditional crisis theory literature either fails to answer these questions or gives a different answer than the one Marx gave. The reason for this, we believe, is that this literature does not understand Marx's methodology as we have explained it in this paper. Marx, as we have seen, begins *not* with production, but with circulation or exchange. Only after an extensive discussion of the crisis potential of the SCP-through-MMP form has been conducted are the crisis tendencies of capitalist production relations analyzed: and these tendencies are embedded in the abstract crisis form of SCP-through-MMP as transformed by capitalist production relations. We know before entering an analysis of the sphere of production that "certain price relationships are assumed in the reproduction process, and govern it." We know that money as a means of payment—the contract-credit system—"which is given along with the development of capital . . . depends on those presupposed price relationships." If the presupposed price relationships unravel, if the average gross profit rate declines, the "chain of payment obligations at specific dates is broken in a hundred places, and this is still further intensified by an accompanying breakdown of the credit system . . . All this leads to violent and acute crises . . . and hence an actual decline in reproduction."

This is *Marx's* answer to the question of why a decline in the rate of profit leads to a crisis rather than a mere slowing down in the rate of accumulation. The integration of his analysis of capitalist commodity circulation, of the contract-credit system, with traditional theories of the tendency of the rate of profit to decline at some point in every expansion changes the essential condition for crisis-avoidance. From the analysis of production relations alon, a non-negative gross profit rate may be required, but with the production sector integrated with the contract-credit system, the economy must maintain the "normal," "usual," or expected profit rate to avert a crisis. This is the language Marx himself uses:

> In [simple] reproduction, just as in the accumulation of capital, it is not only a question of replacing *the same* quantity of use-values of which capital consists, on the former scale or on an enlarged scale (in the case of accumulation), but of replacing the *value* of the capital advanced along with the *usual* rate of profit (surplus value).[61]

Similarly, in the section of Chapter 17 entitled "On the Forms of Crisis" Marx states:

> The rate of profit falls. . . . The fixed charges—interest, rent,— which were based on the anticipation of a *constant* rate of profit and exploitation of labour, remain the same and in part *cannot be paid*. Hence *crisis*. Crisis of labour and crisis of capital. This is therefore a disturbance in the reproduction process. . .[62]

Here, then, is the integration of the crisis potential of capitalist commodity-exchange and the crisis tendencies of capitalist production relations. The contract-credit system, through a multiplicity of transmission mechanisms that we have only touched on in this paper can accelerate accumulation and extend its life, but it also creates a crisis trigger that detonates when accumulation falters. Marx's analysis of the sphere of production explains why the profit rate must eventually fall, but it is his analysis of the abstract form of crisis, SCP-through-MMP, that explains why and when a falling-but-positive profit rate generates a crisis. On the one hand, the abstract form has no content; it does not explain why a crisis must occur. On the other hand, a tendency for the rate of profit to decline does not explain why and when a crisis will erupt. Together, as the contradictory unity of production and circulation, they provide both form and content for crisis theory.

Notes

1. It is interesting to note that the work of Keynes and of a number of economists substantially influenced by him stands in sharp contrast to Marxian theories of accumulation and crisis on this point. Whereas the Marxian tradition has an underdeveloped theory of money and finance but a rich literature devoted to the sphere of production, the Keynesians have produced interesting and important work on monetary and financial aspects of capitalist instability while almost totally neglecting production relations, the labor process, and the class structure. The writings of Hyman Minsky are especially important in this regard. See for example, Minsky, *John Maynard Keynes*, New York: Columbia University Press, 1975, and *Can It Happen Again: Essays on Instability and Crisis*, Armonk, New York. M.E. Sharpe, 1982. Charles Kindleberger's work is also relevant here: Kindleberger, *The World In Depression: 1929-39*, Berkeley and Los Angeles: University of California Press, 1973, Kindleberger, *Manias, Panics and Crashes*, New York: Basic Books, 1978, and Kindleberger and J.P. Laffargue, editors, *Financial Crisis: Theory, History and Policy*, Cambridge: Cambridge University Press, 1982.
2. The following "Reviews of the Month" in *Monthly Review* represent but a sample of the articles on the state of the economy by Magdoff and/or Sweezy in which

money and finance play an important role: "The Long-Run Decline in Liquidity" (September 1970, 1-17); "Keynesian Chickens Come Home to Roost" (April 1974, 1-12); "Banks, Skating on Thin Ice" (February 1975, 1-21); "Capital Shortage: Fact or Fancy?" (April 1976, 1-19); "Keynesianism: Illusions and Delusions"(April 1977, 1-12); "Emerging Currency and Trade Wars" (February 1978, 1-7); "Debt and the Business Cycle" (June 1978, 1-11); The U.S. Dollar, Petrodollars and U.S. Imperialism" (January 1979, 1-13); "Inflation Without End?" (November 1979, 1-10); "The Deepening Crisis of U.S. Capitalism" October 1981, 1-16); "International Economic Distress and the Third World"(April 1982, 1-13); and "Full Recovery or Stagnation?" (September 1983, 1-12).

3. See, for example, the survey article on crisis theory by Erik Olin Wright, "Alternative Perspectives in the Marxist Theory of Accumulation and Crisis," *The Insurgent Sociologist,* Volume 6, number 1, (Fall, 1975), pp. 5-40. In this article Wright argues that "monetary instability, credit imbalances, and other problems strictly in the sphere of circulation . . . will not be discussed in this paper since, while such problems are important, there is a theoretical priority to analyzing the impediments to accumulation in terms of contradictions in the sphere of production" [pp. 12-13].
4. In this paper we will generally follow tradition and refer to the model of simple commodity circulation or commodity exchange developed in Part One of *Volume One* of *Capital* as "simple commodity *production*" or (SCP). However, it should be understood that in Part One Marx deliberately abstracts from the specifics of production relations precisely in order to focus on those characteristics of capitalism that derive from the fact that it is organized through commodity circulation rather than by deliberate planning. Thus, while it would be appropriate to label this model "simple commodity *circulation*" (or SCC) rather than SCP, the traditional usage will be maintained throughout the paper.
5. Ernest Mandel, "Introduction" to Karl Marx, *Capital I* (Translated by Ben Fowkes), New York: Random House (Vintage Books Edition), 1977, p. 32.
6. Part one of *Volume One* of *Capital* does not contain a detailed analysis of production; Marx merely asserts that the law of value guides the economy. Indeed, he refers in passing to the fact that "as yet" there is a "lack of clarity in the concept of value itself," *Ibid.,* p. 199.
7. We do not mean to imply that Marx developed a complete seamless theory of accumulation and crisis: he did not. The point here is that his basic approach itself is fundamentally flawed unless viewed as an attempt to analyze the laws of motion of capitalism as the contradictory unity of its spheres of circulation and production.
8. Marx also distinguishes between the nature or quality of crisis in SCP and in capitalism by referring to the 'potential' for or 'possibility' of crisis in the former and the 'inevitability' of crisis in the latter. Our distinction between the crisis 'potential' in SCP and the crisis 'tendencies' of capitalist production relations reflects our attempt to capture Marx's distinction between the two while avoiding the ambiguity associated with the concept of "inevitability."
9. After the body of this paper was completed an interesting and informative essay by Peter Kenway entitled "Marx, Keynes and the Possibility of Crises" [*Cambridge Journal of Economics,* Vol. 4, 1980, 23-36 was called to my attention. Drawing upon the material of Chapter 17 of *Theories of Surplus Value,* Kenway discusses the importance in Marx's crisis theory of the distinction between the analysis of the 'possibility' of crisis in SCP and what he calls "actuality theory" or the analysis of capitalist crisis. To some extent, then, the papers overlap. However, our interpretations of Chapter 17 are different and there are many important topics analyzed in this paper (for example: the organization of crisis theory in *Capital;* the relation between the different abstract forms of crisis in SCP and the various functions of money; and the importance of contracts, credit and financial intermediation in Marx's crisis theory) that are not addressed by Kenway.
10. Karl Marx, *Theories of Surplus Value: Volume Two,* Moscow: Progress Publishers, 1968, pp. 508-509.
11. Marx, *Capital I,* p. 207.
12. Marx, *Theories of Surplus Value: Volume Two,* p. 502.
13. Marx, *Capital I,* p. 209.
14. *Ibid.,* p. 217. It should be noted that Marx uses the term "form" in two closely related yet distinct ways. First, he refers to different value-forms. Commodity, money and financial asset are all forms through which value (or embodied labor time) may pass in the reproduction or circulation process. Second, this paper stresses the concept of abstract forms of crisis. Here, the model of commodity circulation changes its form or structure as the various functions of money are sequentially incorporated within it.
15. Marx, *Theories of Surplus Value: Volume Two,* pp. 504-505.
16. Marx *Capital I,* p. 188.
17. *Ibid.,* pp. 189-190.
18. *Ibid.* , p. 196.
19. Marx, *Theories of Surplus Value: Volume Two,* p. 509.
20. *Ibid.,* p. 509.
21. *Ibid.,* p. 515.
22. World money, Marx tells us, "serves as the universal means of payment, as the universal means of purchase, and as the absolute social materialization of wealth as such (universal wealth). Its predominant function is as means of payment in the settling of international balances." [*Capital I,* p. 242] The integration of the function of money as world money into the theory of capitalist crisis constitutes an essential step in its development. However, this step is well beyond the scope of this paper. Needless to say, its integration would reinforce our main argument concerning the importance of monetary and financial phenomena in Marx's crisis theory.
23. *Ibid.,* p. 510.
24. Karl Marx *A Contribution to the Critique of Political Economy,* Moscow: Progress Publishers, 1970, p. 142.
25. *Ibid.,* p. 140.
26. Marx, *Capital I,* p. 233.
27. *Ibid.,* p. 234.
28. *Ibid.,* p. 234.
29. *Ibid.,* p. 236.
30. The term "financial fragility" is borrowed from Minsky's elaboration of his financial instability hypothesis.
31. Our discussion to this point stresses the vulnerability or crisis-prone nature of an

economy with a complex contract-credit network. It should be understood, however, that the introduction of MMP, and, later, financial intermediation has both positive and negative effects on accumulation. Contracts and credit help resolve or eliminate impediments to realization and circulation of commodities even as they heighten the crisis potential of the system. The impressive growth of the capitalist world system and of its constiuent national economies could not have occurred in the absence of the development of complex financial intermediation: financial intermediation is both a necessary condition for the successful reproduction of the capitalist economy as well as a major impediment to it. In other words, it has a contradictory relation to accumulation.

32. Marx, *Theories of Surplus Value: Volume Two*, pp. 513-514.
33. *Ibid.*, p. 495.
34. *Ibid.*, p. 514.
35. *Ibid.*, p. 514.
36. *Ibid.*, p. 511.
37. Marx *Capital 1*, p. 248.
38. Marx, *Theories of Surplus Value: Volume 2, p. 512.*
39. *Ibid.*, p. 510.
40. Marx *Capital 1*, p. 209.
41. Marx, *Theories of Surplus Value: Volume Two*, p. 513.
42. *Ibid.*, p. 513.
43. *Ibid.*, p. 211.
44. Marx, *Capital 2*, (Translated by David Fernbach) London: New Left Books, 1978, p. 261.
45. Marx, *Grundrisse*, (Translated by Martin Nicolaus) New York: Random House (Vintage Books Edition) 1973, p. 535.
46. Marx, *Capital 3*, (Translated by David Fernbach) New York: Random House (Vintage Books Edition) 1981, p. 612. Emphasis added.
47. This discussion will deal with the general categories of accumulation, crisis and collapse; we will abstract to the maximum feasible extent from the important distinction between business cycles, on the one hand, and long-swings, structural or institutional change and the periodization of the history of capitalist social formations on the other. We merely note that the study of the institutional structure of (domestic and international) financial intermediation must be an integral component of a Marxian theory of structural change in capitalism. See, for example, Marx's emphasis on financial intermediation and the centralization of capital in his discussion of accumulation.
48. We abstract here from an analysis of the various ways in which a period of recession or depression helps to create conditions in the sphere of production and the sphere of circulation that contribute to the rising rate of profit in the subsequent expansion. Our discussion in the text takes for granted the appropriate cyclical behavior of non-financial determinants of the profit rate.
49. Hyman Minsky has written lucidly and insightfully about the way in which complex financial intermediation destabilizes the growth process of the modern capitalist economy. Though based on, or inspired by, Keynes' speculations on the destablizing properties of financial intermediation in *The General Theory* and elsewhere, Minsky's formulation of the financial instability hypothesis is, in many ways, richer and more complete than was Keynes'. For an informative discussion of financial aspects of cyclical instability see, for example, Minsky's *John Maynard Keynes* and "The Financial Instability Hypothesis" and "Finance and Profits" in his *Can It Happen Again?*
50. Marx, *Capital 3*, p. 534.
51. *Ibid.*, p. 572.
52. *Ibid.*, p. 742.
53. *Ibid.*, pp. 619-620.
54. *Ibid.*, p. 706. Emphasis added.
55. Marx *Capital 1*, p. 236.
56. Marx, *Capital 3*, p. 621.
57. *Ibid.*, p. 649.
58. *Ibid.*, p. 363.
59. Although Marx uses the term crisis to describe both a phase of the normal business cycle and a system-shaking collapse of the accumulation process, the tenor of his language is usually more appropriate for the latter case: 'collapsing' commodity and financial markets and spreading 'panic' among businessmen and financiers are not aspects of all industrial cycles, at least not in modern capitalism. Marx's use of colorful and dramatic language may be explained by the historical novelty of the industrial cycle in the first half of the nineteenth century and by the absence of government policy institutions charged with attempting to limit the severity of economic downturns. Each downturn in that era *was* an occasion for panic; only some are today.
60. Marx, *Capital 3*, p. 572.
61. Marx, *Theories of Surplus Value: Volume Two*, p. 494. Emphasis on the word "usual" added.
62. *Ibid.*, p. 516.