

# MARX'S THEORY OF CRISIS AS A THEORY OF CLASS STRUGGLE<sup>1</sup>

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## I. INTRODUCTION

The debate concerning the origins of the current capitalist crisis has led to intense disagreements concerning the meaning of Marx's crisis theory and of the central categories in his analysis. This essay is a contribution to that debate.

Following a survey of Marx and Engels' major writings on crisis from the early 1840s to the 1860s (Section II) we set out a systematic exposition and interpretation of their theory of capitalist accumulation and its crises (Sections III - VIII). Our principal objective is to show, first, how their theoretical work grew out of, and was integral to, their political struggles; second, how they came eventually to formulate their theories of crisis in terms of class conflict. Our systematic exposition of their theories of crisis offers a new interpretation and demonstrates how that interpretation is both internally consistent and semantically meaningful.

Our analysis differs from the presently competing schools of crisis theory, in understanding the Marxian theories of accumulation and crisis as socio-political theories of the development of the social relations of capitalist society. Within this interpretation, the categories of value, surplus value, variable and constant capital, the organic composition of capital and so on, are all categories of the class relations of struggle. The development of capital is the development of the class relation, not just the development of the capitalists.

What have been called the "laws of motion," or the "objective historical movement," of that development are, in our terms, the unplanned outcome of the conflicts between two antagonistic class subjects. As in physics where two vector forces create a resultant force whose direction and magnitude is distinct from either of the two, so too in the class struggle that constitutes capitalist development, the "laws," of accumulation or of crisis are the unplanned outcomes of confrontation.

Building from an understanding of the fundamental Marxian value concepts, we offer a reinterpretation and synthesis of such traditional themes of "crisis theory" as: the tendency of the rate of profit to fall, underconsumption, disproportionality, and the "contradiction between the forces and relations of production."

The central thrust of our interpretation of Marxian theory is to see accumulation as the expanded reproduction of a fabric of capitalist control that is always tenuous and repeatedly threatened by working class struggle. Crisis is thus, most basically, the rupture of that fabric and a positive consequence of the development of the working class as subject. Within this framework, revolution is to be understood as a "working class produced" crisis to which capital is unable to find an adequate response.

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This is not to deny that there are many-influences within the complex pattern of accumulation that are only indirectly related to workers' struggles. We discuss many of these. We also recognize that struggle takes place in a concrete setting, at a given level of capital's development and within a particular class composition that shape the direction and outcome of struggle. But it is our contention, that from the viewpoint of the working class, every factor related to crisis must be evaluated in terms of the development of sufficient power to overthrow the system. We argue that Marx and Engels' work must be interpreted within the framework of our struggles.

Such a "political reading," of crisis theory eschews reading Marx as philosophy, political economy, or simply as a critique. It insists on reading it from a working-class perspective and as a strategic weapon within the class struggle (Cleaver, 1979).

We have found existing interpretations of Marxist crisis theory unsatisfactory in a number of respects;<sup>2</sup> these crisis theories are variously: (1) understood as theories of the development of capital and capitalists, but not of the class relation; (2) based on the centrality of capitalist competition that is conceptualized in terms of relations among units of capital separate from the class relation; (3) theories that sever the unity of the spheres of production and circulation by privileging the former (falling rate of profit/rising organic composition of capital) or the latter (underconsumption or neo-Ricardianism); or (4) assign the dominant role to the so-called "forces of production," often understood simply as technology; (5) theories that fetishize Marxist categories, including the crisis theory, such that it becomes a theory of investment behavior or mechanical breakdown; or (6) destroy the unity within Marxist crisis theories by asserting the existence of many different strands, or separate theories. (Bell, 1977) We are not concerned here with an evaluation of other interpretations, which we are engaged in elsewhere (Bell and Cleaver, forthcoming). Our reading of the texts is an analysis in the abstract, or within the period in which they were written.

We have concluded that the basic analytical framework worked out by Marx and Engels is still valid and accurately describes many of the fundamental features of capitalist society. Clearly much has changed since they wrote. Capital has expanded its control beyond the factory and integrated within its circuits of reproduction social and cultural institutions (into what has been called the "Social factory"). A concrete analysis of contemporary capitalist society would involve a new elaboration of Marxist theory. While elsewhere we have participated in such efforts (Cleaver, 1979), here we avoid the temptation of "up-dating" the texts, seeking to ground our understanding of the original analysis directly in the texts themselves. It is not enough, but it is one necessary step.

The material is presented first in terms of an historical account of the development of Marx and Engels' analysis of crises. This is divided into two parts: the early period from 1843 to 1856 and a later period from 1857 to 1867. This is followed by a systematic exposition of the crisis theory organized in terms of the following major aspects: the theory of accumulation and crises in general (Section III), the possibility of crises (Section IV), the predisposition to crisis (Section V), offsetting strategies (Section VI), crises as solutions (Section VII), and crises and revolution (Section VIII).

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<sup>2</sup> An exception to this is the recent political reading of the *Grundrisse* by Antonio Negri (*Marx Beyond Marx*). In this collection of lectures Negri explores the emergence and development of the working-class subject that both throws capital into crisis and pursues its own self-valorization. This is an exciting new reading which we highly recommend and whose circulation we have tried to hasten by helping to translate it into English. (Forthcoming, J. F. Bergin Press, Winter 1981 ). We only regret that we obtained Negri's book after this essay was completed and were not able to incorporate many of his insights into our analysis.

## II. MARX & ENGELS' STUDIES OF CRISES, 1843-1867

### A. INTRODUCTION

Karl Marx and Frederick Engels were men of the 19th Century and so were their theories of economic and political crisis. They lived, fought and wrote during fifty years of fairly regular periodical economic crises marked by several major political upheavals in which they participated as militant revolutionaries. Dedicated to active political organization of the growing international proletariat, Marx and Engels studied economic crisis, not as academic theorists but as militants. They studied the periodical crises of capitalist accumulation at the same time that they helped organize and expand — first the Communist League in the period of the Revolutions of 1848 and then, the First International in the period surrounding the Commune of Paris (1870) — both organizations were dedicated to the unification of the proletariat and the overthrow of the bourgeoisie. Their interest in discovering the dynamics of capitalist growth, including those laws or regularities concerning crisis, was an integral part of their attempt to determine optimal working class strategy.

Although concern with crises reappears almost constantly throughout their works, Marx and Engels' studies and writings on this question were concentrated in *two major periods*. The first was *the 1840s* when Marx and Engels both turned from their philosophical studies and critiques of Hegel and the "Young Hegelians" and plunged into the study of political economy and political struggle. This period saw the formulation of the basic approach to capitalist development that was to underlie all their subsequent work: the understanding of capitalism as a class society whose development and ultimate demise was bound up with the class struggles of the proletariat. During this period they formulated a basic view of crises and their relation to the class struggle that would later be elaborated upon but not fundamentally changed. As they moved from study to political action they developed their theory in opposition to various strands of then current socialist thought. Most of their important writings during this period were aimed as much at setting out a political perspective that would influence the direction of workers' organization, as providing a fuller development of their theoretical and historical understanding. The latter objective was explicitly pursued in the interest of the former. This first period can be dated roughly from 1843-45 when Engels wrote *Outline of a Critique of Political Economy* and began work on the *Condition of the Working Class in England*, and when Marx wrote the *Economic and Philosophical Manuscripts*, until 1852, when both Marx and Engels had completed their major works analyzing the forces involved in the Revolution of 1848.

The *second period* begins in the long lull in political activity of the 1850s and 1860s during which Marx left the political arena and returned to his studies of political economy. It was during this interim that he composed the bulk of the work that would contain the fullest elaboration of his theories of capitalism and of its crises.

When we compare the writings of the first period (1840s) with those of the second period (1857 - 67) in the area of crisis theory we discover both continuities and important changes. The most important continuity is the central concern about the relationship between crisis and class struggle. The most important change results from Marx's elaboration of his theories of surplus

value and accumulation that allows him to integrate crisis and class struggle in a way hitherto impossible.

In the first period, although Engels and then Marx examined in some detail the way in which class struggle varies over the cycle of growth and crisis, their analyses of these two phenomena were not integrated. Beginning with Engels' 1843 *Outline* to Marx's 1850 "Review," their analysis of crisis was limited to that of overproduction. They saw in the planless functioning of capitalist markets the tendency for production to drive beyond demand and to result in falling prices and crisis. The only supplementary aspects of this analysis they were able to develop during this period were those of competition and speculation. Competition between the capitalist firms was often pictured as the driving force of rising production, while commercial and financial speculation would weaken the links of capitalist circulation and exacerbate the crisis of overproduction when it arrived.

Alongside this analysis of crisis, but apart from it, we find their developing analysis of working class subjectivity. Both Marx and Engels saw that, although the working class was created and organized by capital, it nevertheless struggled against its exploitation and subordination. For the most part the analysis in this period of those struggles was on a very concrete, historical level. Engels in his *Outline*, and then again in his *Condition of the English Working Class*, examined how workers band together, form combinations and unions, and fight back repeatedly. Marx in the *1844 Manuscripts* and again in the *Poverty of Philosophy* began to deal with these struggles on a more theoretical level. In the *Manuscripts*, we find his theoretical analysis of the working class in its role as living labor power — as living *subject* in a capitalist world dominated by dead labor. This is a theme that will remain with Marx throughout his work, from the 1844 analysis of alienation to that of the labor process and of the working class in general in *Capital*. By the time of the writing of the *Poverty of Philosophy*, the labor subject has become working class for-itself — a self-determining subject at a much more developed level.

However, despite the advances made in the theory of the working class as subject, Marx and Engels continued to discuss the relationship between working class struggle and crisis as if they were two separate phenomena. For the most part accumulation and crisis were characteristics of capitalist development that set the framework and influenced the intensity and scope of working class struggle. During periods of crisis, with falling wages and rising unemployment, they thought that class struggle would intensify as workers fought to resist the worsening of their lot. In most of their comments causality ran strictly one-way: from the pattern of capitalist development to the pattern of working class struggle. There were exceptions, of course. In the *Poverty of Philosophy*, for example, Marx argued that wage struggles could be one source of capitalist development of production. In his 1850 "Review" he pondered on the possible effects of the Revolutions of 1848 in spreading the crisis. But in general the mechanisms of crisis, of overproduction, appeared to be quite "internal," to capital, and independent of working class action. These early works provide plenty of ammunition for those orthodox Marxist theories of capital's natural "laws of motion," originating within capital, often as a result of competition.

Even the analysis of the contradictions between the "productive forces" and the "forms of social intercourse" or "modern conditions of production," which appears in *The German Ideology* and reappears in *The Communist Manifesto* and elsewhere, lends itself to this kind of interpretation. Although these terms remain vague and ill defined in Marx and Engels' writings, for the most part this contradiction appears as one between production and the market, whose result is overproduction/crisis, via commercial and then industrial breakdown.

In the second period that includes the *Grundrisse* and *Capital* we discover an entirely different analysis. Using the concepts of value and surplus value, Marx worked out a theory of capitalist development and accumulation, in which the working class is no longer outside of capital but very much within it. From the period of primitive accumulation when the working class is created, through the manufacturing period when worker and machine are accumulated together capitalist development includes the working class, its struggles and its self-development.

In the exposition of primitive accumulation, of absolute surplus value, of relative surplus value and modern industry, Marx traced how the pattern of development involved the dialectic of the class struggle. As we will show in Sections III-VIII the previous gap between crisis and struggle is eliminated and their integration permits a new theorization of social development and revolution.

Whereas before, overproduction was the unique and only superficially understood theory of crisis, in the *Grundrisse* and subsequently, it is both fully analyzed and allocated a much more limited role in Marx's theory. Where Marx does explore the possibilities of overproduction, we will see that he is primarily interested in that aspect which most closely concerns class struggle: underconsumption and the wage struggle. The methodical working out of the theory of accumulation allows Marx to explore many new possibilities of capitalist crisis, as well as many new forces acting to bring these possibilities into being.

In the light of the tremendous theoretical advances of these later years, it is necessary to give new meaning to many terms that Marx continued to use from the earlier period. One important example is that of the contradiction between the productive forces and the forms of social intercourse, or what Marx came to call the relations of production. By the time we have finished studying the *Grundrisse* and *Capital*, we no longer need translate the term "productive forces" into anything so undefined as "production" or so simple-minded as "technology." Instead, we can recognize with Marx that the most fundamental "productive force" of all is the living labor of the working class with all that it has developed in the way of science, technology, productive organization and so on. The productive forces are the creative energies of the working class! Or as Marx wrote in the *Grundrisse*; "The development of population, in which the development of all productive forces is summarized . . ." (Marx, 1857, p. 605).

Similarly, the "forms of social intercourse" or "relations of production" that earlier appeared in the underspecified form of the market, or perhaps as property relations (a tremendously inclusive term for Marx), now appears as the whole gamut of relations throughout the circular reproduction of capital. Why Marxists continue to give "relations of production" such narrow interpretations when Marx has laid out before us such an analytical feast, rich in determinations, is curious. Most of *Capital* is a discourse on the complexities of the relations of production within which capital tries to bind the working class.

Therefore, when we read Marx's analysis, in both the *Grundrisse* and in *Capital*, of how the surging development of productive capability driven by the class struggle and made possible by human creativity harnessed by capital, undermines the basis of capitalist control, we must realize just how rich the meaning of our "contradiction" has become. It is to this whole complex process of struggle and development that Marx refers when he writes: "The growing incompatibility between the productive development of society and its hitherto existing relations of production expressed itself in bitter contradiction, crises, spasms." (Marx, 1857, p. 749). This is a clear vision of crisis that is inseparable from the development of the class antagonism. It is hardly surprising then to find Marx, a few sentences later, saying: "Yet, these regularly recurring catastrophes lead to their repetition on a higher scale, and finally to its violent overthrow." (Marx,

1857, p. 750). And what is the agent of that violent overthrow? The same agent whose self-development comes into repeated contradiction with capital and has previously thrown it into crises: the working class that embodies all of the vital living force and creativity of the species.

## B. THE EARLY STUDIES; 1843-1850

Marx and Engels began serious studies of political economy and of capitalist crisis before they met, in the period following the massive crisis of 1841-1842, which has been described as “the most catastrophic economic slump in the 19<sup>th</sup> century,” and which neither of them were in any way prepared to understand or interpret. Their studies also followed Marx’s move to Paris following the government-ordered closing of the *Rheinische Zeitung*, which he had edited in Cologne, and Engels’ move to Manchester to work for his family’s cotton business. In Paris Marx came into contact with the ferment of French socialist and communist thought of various kinds. In Manchester Engels found himself in the midst of both the English working class and its major political movement of that time: Chartism. In these differing circumstances it is not surprising that Marx’s studies of political economy were much more thoroughly mixed with the philosophical debates surrounding him; while Engels, mostly freed from such temptations, was drawn to examine closely, and analyze carefully, the development of industrial capitalism that he was confronted with first-hand. As a result while Marx was still struggling with his Hegelian roots and writing his *Critique of Hegel’s Doctrine of the State* (1843) and *Critique of Hegel’s Philosophy Right* (1843-4), Engels was writing his *Outline of a Critique of Political Economy* (1844), his first piece on political economy that set out the elements what would become their common understanding of crisis.

After first developing a critique of some of the economic categories of classical political economy (including private property, trade, value, price, rent, labor and capital) in the *Outline*, Engels turned to a discussion of competition (between capitalists, between workers, and between classes), monopoly and trade crises. He established what would remain as some (but not all) of the basic tenets of Marxist crisis theory:

1. Crises are caused by production outstripping available markets. This was analyzed in simple terms of supply and demand:

If demand is greater than supply the price rises and, as a result, supply is to a certain degree stimulated. As soon as it comes on the market, prices fall; and if it becomes greater than demand, then the fall in prices is so significant that demand is once again stimulated. So it goes on unendingly. . . (Engels, 1843, p. 433).

2. This overproduction was the result of there being no plan to equalize production and demand, but merely the frenzied efforts of different capitalists to keep ahead of both workers and other capitalists:

The law of competition is that demand and supply always strive to complement each other, and therefore never do so. . . (Engels, 1843, p. 433).

The struggle of capital against capital, of labor against labor, of land against land. . .drives production to a fever pitch. . . (Engels, 1843, p. 435).

If the producers as such knew how much the consumers required, if they were to organize production, if they were to share it out amongst themselves, then the fluctuations of competition and its tendency to crisis would be impossible. (Engels, 1843, p. 434).

Beyond this Engels did not explain why, with no plan, production must outstrip demand.

3. The pattern of expansion, overproduction, crisis and recovery was a recurrent one:

. . . trade crises, which reappear as regularly as the comets, and of which we have now on the average one every five to seven years. For the last eighty years these trade crises have arrived just as regularly as the great plagues did in the past . . . (Engels, 1843, p. 433)

4. The crises get progressively worse over time as capitalism developed:

...each successive crisis is bound to become more universal and therefore worse than the preceding one. (Engels, 1843, p. 434).

5. Finally crisis accentuated the conflict between the classes and led ultimately to revolution: “and finally causing a social revolution such as has never been dreamt of in the philosophy of the economists.” (Engels, 1843, p. 434)

Engels saw in this the strange contradiction of capitalism that he and Marx would refer to repeatedly in the years ahead:

a stage must be reached in the development of production where in there is so much superfluous productive power that the great mass of the nation has nothing to live on, that the people starve from sheer abundance. (Engels, 1843, p. 435)

Yet he also saw in this growth of productivity the basis of a possible social order in which increased social wealth and less work would go together:

This immeasurable productive capacity, handled consciously and in the interest of all, would soon reduce to a minimum the labor falling to the share of mankind. (Engels, 1843, p. 436)

Thus we have the beginnings of a vision of post-capitalist society based not on utopian speculation of the sort then popular, but on an analysis of the actual pattern of development of capitalism and the possibilities that it creates.

Marx read Engels' *Outline*, which he would later cite as an important influence, in 1844. Interestingly when he made a short, two-page outline of it, he made no mention of Engels' discussion of crises. Nor would he make more than passing reference to this subject in his *Economic and Philosophical Manuscripts of 1844*. These were written during the summer of the year before he met Engels and began to work closely with him. At that time, Marx was preoccupied with his own reading of the classical economists (Physiocrats, Smith, Ricardo, Say, and so forth) and socialists (St. Simon, Proudhon, Bauer, Stirner and so forth). In this way he reworked his understanding of the philosophical questions that had previously preoccupied him and was beginning to question his earlier understanding from the point of view of working class struggle. A thorough understanding of crisis would ultimately be built from his analysis of the basic conceptual framework of political economy and the class relationship. During this time he

wrote number of journal articles mainly attacking those socialists whose ideas and politics he felt were erroneous and dangerous.

In the fall of 1844 Marx and Engels began to collaborate on their first joint project — an attack on the Young Hegelians (Bauer, Stirner, et al) in *The Holy Family*. Yet Engels proceeded on his own once again into a detailed analysis of the actual development of the class struggle and the accumulation of capital. He began work on his authoritative *The Condition of the English Working Class* (1845), which he dedicated to “the working classes of Great Britain.”

Two chapters of this work developed Engels’ analysis of crisis and class struggle. As before, he focused on crisis as a necessary outcome of the “unregulated production” that is part of industrial competition and insisted on the “perpetual” periodicity of the cycle. Once more, he attributed the onset of crisis to the problem of overproduction, or the glutting of the market, although again he failed to explain exactly why markets should be glutted. He implicitly supposed that all markets for particular goods would eventually be glutted and that the problem arose because the capitalist producer cannot judge when that will happen. In this work he detailed the phases of the crisis more systematically than he had done in the *Outline*, and described more completely the process through which speculation and credit act both to stimulate output and to accelerate the collapse.

Engels’ major innovation dealt with the relation between crisis and the class struggle. He formulated more clearly how the maintenance of competition among workers constituted the key to capitalist control and how the generation of a “reserve army” increased divisions upon which competition is based. And yet the rapid growth of the reserve army that occurred during a crisis, while helping to weaken the remaining wage-workers and force down wages, also contribute to the growth in class tensions. Those who lost their jobs:

. . . begged, not cringing like ordinary beggars, but threatening by their numbers, their gestures and their words. . . Here and there disturbances arose. . . The most frightful excitement prevailed among the workers until the general insurrection broke out throughout the manufacturing districts. (Engels, 1845, p. 387)

In his chapter on “labor movements” Engels traced how these tensions grew and were transformed by the workers into combinations and trade unions, whose struggles escalated into a veritable civil war between the classes. In his political analysis of these workers’ struggles, his theory of crisis played a critical role. On the one hand, he argued that the laws of supply and demand would always conquer the unions:

All these efforts naturally cannot alter the economic law according to which wages are determined by the relation between supply and demand in the labor market. Hence the Unions remain powerless against all great forces which influence the relation. (Engels, 1845, p. 505)

But on the other hand, he argued forcefully that the struggles were by no means hopeless, and were indeed absolutely essential. They prevented the capitalists from lowering wages as quickly as they otherwise would during a downturn and “then too, the unions often bring about a more rapid increase of wages after crisis than would otherwise follow.” In this way “the active resistance of the English working-men has its effect in holding the money greed of the bourgeoisie within certain limits.” But more than this, these short-term struggles over wages point in a very important direction: beyond the trades union whose limited power is revealed by the

struggles. These struggles, Engels wrote, constitute “schools of war” for the working class as its struggles grow toward revolution:

These strikes, at first skirmishes, sometimes result in weighty struggles; they decide nothing, it is true but they are the strongest proof that the decisive battle between bourgeoisie and proletariat is approaching. They are the military school of the workingmen in which they prepare themselves for the great struggle which cannot be avoided. (Engels, 1845, p. 512).

Because of the crisis reappears constantly; the struggles reappear:

Stagnation in business and the want consequent upon it engendered the revolt at Lyons in 1834 . . . in 1842 at Manchester, a similar cause gave rise to a universal turnout for the Charter and higher wages. (Engels, 1845, p. 512)

The crisis of 1842 came on. Agitation was once more as vigorous as in 1839. (Engels, 1845, p524).

On the basis of this pattern Engels predicted not only the subsequent crisis of 1847 — which in fact occurred — but also a renewal of struggle — that also occurred, though not as successfully as he hoped.

The approach to Socialism cannot fail, especially when the next crisis directs the workingmen by force of sheer want to social instead of political (parliamentary action) remedies. And a crisis must follow the present active state of industry and commerce in 1847 at the latest . . . The working men will carry their Charter. . . (Engels, 1845, p. 524)

In these arguments Engels was doing more than simply laying out a description and a theory of crises and of the class struggle. He was also doing more than simply affirming the necessity of the struggle. He used his analysis as the basis for an explicit attack on the bourgeois socialists of his day (such as the English Owenites and the French Utopians). His support for strikes and wage struggles was a support for the Chartists whose cause he openly endorsed. This was a position that he and Marx would continue to hold through the forties as they broadened their writings to develop these views, that is, in *The German Ideology* (1844-45), *Poverty of Philosophy* (1847) (against Proudhon), and in the *Communist Manifesto* (1848).

If Marx and Engels’ first joint work, *The Holy Family*, was primarily concerned with their critique of the Young Hegelian socialists, the same was true of their second, *The German Ideology*. Although *The German Ideology* represented a distinct advance in the development of their perspective, especially the first section on Feuerbach where they set out their view of history, it had virtually nothing to add to the work Engels’ had already done on crisis. The major thrust was to set out their views on the centrality of class conflict in the development of society and to distinguish the class struggles of capitalism from earlier class societies. As the basis of a view of history they developed the distinction between the “productive forces” whose development is at first stimulated by, but then constrained by, the “forms of social intercourse” or, as they would later say, by the “relations of production.” This situation they saw as the key to the collapse of one social order and the transition to the next. In this sense their work did contribute to the theory of crisis, at least with respect to the fundamental forces acting to undermine capitalism as a system:

Thus all collisions in history have their origin, according to our view, in the contradiction between the productive forces and the form of intercourse. (Marx and Engels 1846, p. 74)

The concrete specificity of this development, however, remains even less clear in *The German Ideology* than it was in Engels' works, where the periodical contradiction between the productive forces (as production/output) and the forms of intercourse (the market) was defined as a contradiction leading to an overproduction crisis and accentuated working class struggle on the path to revolution. Much of Marx and Engels' subsequent work on crisis in which the forces and dynamics of this process are developed more fully, can be seen as the elaboration of the concept of the "forms of intercourse" acting as fetters on the productive forces. As we will discover in Section III, this reaches its fullest development in Marx's "mature" works where the "forms of intercourse" are grasped in terms of the necessary imposition of labor, value and the surplus value relations of capital; all of which become harder and harder to impose as production and productivity expand.

Marx first used the analysis of crisis that Engels had already employed in the *Outline and The Condition of the Working Class* in political organizing in 1846-47. Expelled from Paris by the Guizot government, Marx moved to Brussels, where after working with Engels on *The German Ideology*, they decided to launch a Communist Correspondence Committee to broaden their contacts and expand the number of adherents to their analysis before engaging directly in any existing political movement. Through exchanges of letters and meetings they sought to link together, through themselves, working class militants in Germany, France and England. Their major effort in his project was directed toward the League of the Just — a clandestine organization based in London among German émigrés, which was beginning to move away from both Blanqui and utopian socialism towards the Chartists. As we have mentioned, Engels had already established close ties with the Chartists and had written several articles for their journal. Having failed to attract Proudhon to their committee, they began to attack the French socialist movement that he was organizing. Proudhon was excoriated by Marx in his polemical *Poverty of Philosophy* (1846-47). Here, as in the *Communist Manifesto* (1848), the theory of crisis bolstered their advocacy of working class wage struggle and revolution against both utopian (Owenites, and so forth) and bourgeois (Proudhonists, and so forth) socialists, and others.

In *The Poverty of Philosophy* Marx scathingly criticized Proudhon's economic analysis, his method and his politics. He used arguments similar to those laid out earlier by Engels in *The Condition of the English Working Class* to attack Proudhon's opposition to wage struggles. Proudhon had argued against them on the grounds that wage increases could only lead to higher prices and hence scarcity.

Marx argued against this view by pointing out that not only do wage struggles lead to price increases, but to the development of production, as the capitalist are forced to develop new machines to replace troublesome workers. This important point is taken up in detail in the next section). Again, like Engels, he argued that worker combinations and strikes had been growing constantly:

In spite of both of them [economists and socialists], in spite of manuals and utopias, combination has not ceased for an instant to go forward and grow with the development and growth of modern industry. (Marx, 1847, p. 210)

Why was this? Because Marx said, of the very dynamic of industrial organization and the exploitation of workers:

Large-scale industry concentrates in one place a crowd of people unknown to each other. Competition [between workers] divides their interests. But the maintenance of wages, this common interest which they have against their boss, unites them in a common thought of resistance-combination. (Ibid., p. 210)

This transformation of permanent combinations such as trades unions spreads, Marx notes, until it assumes the general character of a struggle in which the working class affirms itself as a class:

If the first aim of resistance was merely the maintenance of wages, combinations, at first isolated, constitute themselves into groups as the capitalists in their turn unite for the purposes of repression, and in face of always united capital, the maintenance of the association becomes more necessary . . . In this struggle — a veritable civil war — all the elements necessary . . . for a coming battle unite and develop. Once it has reached this point association takes on a political character . . . In the struggle, of which we have pointed out only a few phases, this mass becomes united, and constitutes itself as a class for itself, the interests it defends become class interests. (Ibid., p. 210-211)

As in Engels' "schools of war," Marx argued that only through combinations and strikes does the working class really become a class capable of overthrowing the bourgeoisie. He said little about the relation between crises and the class struggle, but where he did mention it, he implied that the struggles were often less intense during periods of prosperity, thus apparently agreeing with Engels' linking of crises with periods of more intense class struggle:

If in 1844 and 1845 strikes drew less attention than before, it was because 1844 and 1845 were the first two years of prosperity that English industry had had since 1837. Nevertheless none of the trades unions had been dissolved. (Ibid., p. 208)

Written at the end of 1847 and in January of 1848, primarily by Marx, but drawing on a manuscript "The Principles of Communism," by Engels, the *Communist Manifesto* was developed as the political statement of the newly formed Communist League that Marx and Engels forged out of the League the Just. The *Manifesto* was written during a major economic crisis and just before the anticipated upheavals of 1848, the bourgeois revolutions that swept Europe. The *Manifesto* was thus at once an analysis of the development of capitalism — including its crises — and a prescription for action in the forthcoming social conflict.

At last Marx began to integrate Engels' work on crisis in an important way into their joint works, and to use it to support their political position. He was able to more thoroughly develop that theory in the light of the work just completed on *The German Ideology*, where he based the discussion of crisis on "the history of the revolt of modern productive forces against modern conditions of production," or what he calls forms of "social intercourse." Which is to say that crises emerged from the inability of bourgeois society to control the productive forces it had developed.

It is enough to mention the commercial crises that by their periodical return put on trial, each time more threateningly, the existence of the entire bourgeois society. (Marx and Engels, 1848, p. 489)

So the contradiction between the forces and relations of production lead to revolution via the path of Engels' recurrent, worsening crises. What is the origin of these crises? What exactly is meant by the inability to control the productive forces? Marx sees the meaning in the tendency for production to outstrip the bourgeois ability to handle it:

In these crises there breaks out an epidemic that, in all earlier epochs, would have seemed an absurdity — the epidemic of over-production. . . there is too much civilization, too much means of subsistence, too much industry, too much commerce. . . The conditions of bourgeois society are too narrow to comprise the wealth created by them. (Ibid., pp. 489-90)

But if Marx meant more by the phrase “too narrow to comprise the wealth” than commercial breakdowns, he did not specify it here. Nor would he set out a systematic explanation for some years. But if he did not explain the forces involved in this loss of control, he did see clearly how capital deals with the problem:

And how does the bourgeoisie get over these crises? On the one hand by enforced destruction of a mass of productive forces; on the other by the conquest of new markets, and by the more thorough exploitation of the old ones. (Ibid., p. 490)

And yet these measures cannot solve the problem permanently because the same forces that have led to the development of the productive forces will do so again with the same result:

That is to say, by paving the way for more extensive and more destructive crises, and by diminishing the means whereby crises are prevented. (Ibid., p. 490)

How are these crises of capitalism linked with the rise of the proletariat and the class struggle? The growth of industry and trade tend to unite the working class secularly in their wage struggles with capital, as they become “concentrated in greater masses,” and crises aggravate those struggles by increasing the fluctuations of wages:

The growing competition among the bourgeois, and the resulting commercial crises, make the wages of the workers even more fluctuating . . . the collisions between individual workmen and individual bourgeois take more and more the character of collisions between two classes. There upon the workers begin to form combinations (Trade Unions) against the bourgeois; they club together in order to keep up the rate of wages. (Ibid., pp. 492-493)

Although he is not very clear, Marx again seemed to agree with the view that working class struggles — which are aimed at “keeping up” wages in the face of fluctuations — would be particularly intense during periods of downturn and crisis. Certainly this was consistent with Marx and Engels' experience in 1846 to 1848 and with their observations on the rise of the Chartists after the crisis of 1836.

Beyond these general observations and endorsements of wage struggles, Marx and Engels also focused on the historical specificity of the crisis of 1846-48 that they saw leading toward the Revolutions of 1848. They argued against the views of petty-bourgeois, “true” bourgeois, and critical utopian socialists that working class struggle was absolutely necessary. They saw the coming upheaval in Germany as a bourgeois revolution and called for the working class to use its struggles in support of that revolution as a necessary step (the removal of absolutism) before turning its struggles against the bourgeoisie itself, a position they would later judge in the light of the events, to have been ill-advised.

When the continental upheavals of 1848-49 finally exploded with the February Revolution in France and the March Revolution in Germany, and the uprisings in Italy, Austria, and so on, Marx and Engels joined in the struggle. They returned first to Paris where they set up a new Central Committee of the Communist League and then to Cologne in Germany. In Cologne they created a “*Neue Rheinische Zeitung*” through which they carried on their propagandist work. When conflicts in the Communist League led Marx to dissolve its Central Committee in May of 1848 the *Zeitung* became the focal point for their organizational work as well as their propaganda.

During this period of almost a year, Marx and Engels worked, through their paper and political co-workers, to influence the direction of the struggle. In the beginning they forcefully pursued the strategy developed in the *Manifesto*: the subordination of working class struggles to the bourgeois revolt against absolutism. But by late autumn of 1848 Marx and Engels were forced to modify their position by the overwhelming evidence that the bourgeoisie was not taking sufficient action or leadership to ensure the success of what was basically its own revolution. If, during most of 1848, the *Neue Rheinische Zeitung* had played down the class conflict between workers and capital, the abandonment of leadership by the bourgeoisie caused them to begin to re-emphasize the autonomy of the working class and support independent action on its part as the only way to avoid catastrophe. To spell out their analysis of this abdication by the Prussian bourgeoisie of its role, Marx wrote a series of articles: “The Bourgeoisie and the Counter-Revolution” in December. To bring back the working class-capital conflict to the center of the arena Marx wrote, delivered, and later published in the *Zeitung*, a series of lectures: *Wage Labor and Capital* (1847).

As the Revolution collapsed, Marx and Engels were forced to leave Cologne. Marx went to Paris where he was expelled again; he moved on to London. Engels joined the insurrection in Baden to give the popular army military advice. He stayed until the revolt collapsed in July when he fled to Switzerland and then back to London.

In London Marx and Engels set about two urgent tasks. The first was the rebuilding of the Communist League. They felt that the defeats on the Continent would soon be followed by a new round of revolution and they wanted to be organizationally prepared. This new upheaval they expected to envelope both England and the Continent, as the end of British prosperity of 1848-49 would coincide with crisis across the channel:

. . . as this crisis will inevitably coincide with great clashes on the Continent, it will bear fruit of a very different type from all preceding crises. Whereas hitherto every crisis has been the signal for further progress, for new victories by the industrial bourgeoisie over the landowners and financial bourgeoisie, this crisis will mark the beginning of the modern English revolution. . . . (Marx, 1848, pp. 274-275)

The results of the commercial crisis now impending will be more serious than ever before . . . For the first time England is experiencing at the same time an industrial and agricultural crisis. This dual crisis in England will be accelerated, widened in scope and made even more explosive by the convulsions which are now simultaneously imminent on the Continent; and the continental revolution will take on an unprecedented socialist character as a result of the repercussions of the English crisis on the world market. (Ibid., pp. 282-283)

Political events on the Continent are likewise daily forcing matters to a head, and the coincidence of economic crisis and revolution which has already been mentioned several times in this Revue, will become more and more inescapable. (Ibid. p. 284)

These comments, written in the spring of 1850, reflected both a continuing optimism that all was not lost and an analytical link between prosperity and crisis, and the pattern of working class revolt.

The major thrust of their autocritique and planning for the future that was undertaken during that spring was, firstly, a reaffirmation of Marx's new belief in the necessity of autonomous working class action even within an essentially bourgeois revolution. Marx and Engels' position, in the discussion and debate within the re-established Communist League, argued for this autonomy as a necessary prerequisite for the working class-capitalist conflict which would follow the bourgeoisie victory in the revolution. The maximization of working class strength in the struggle against absolutism, including the maintenance of its own armed strength after victory and the creation of working class organizations and alternative state functions, was put forward as the only possible way to avoid subsequent defeat. (*March and June Addresses*).

Secondly, they undertook an extensive analysis of the experience of their own activity (that is in the Communist League) and of the course of the Revolution in general. Removed from the heat of the conflict for the first time in a year, they had time to reflect and to try to grasp the general forces which had shaped the Revolutions and that would shape the future. In this reflection they leaned heavily on their analysis of economic crisis and its relation to the class struggle.

This initial optimism, however, did not last. During the summer of 1850 as the counter-revolution was secured across Europe, Marx returned to his studies of political economy and a closer examination of the pre-1848 economic crises and their relation to the 1848 revolutions. The results of these studies were published as articles in the *New Rheinische Zeitung Revue* (1848-1849); they are integral parts of the attempt to reassess the period. The most important of these articles, from the point of view of studying Marx's evolving theory of crisis and class struggle was the "Review (of international economic and political development): May-October 1850," which appeared in the last issue of the *Revue* (excerpts of which appeared as Chapter 4 of *Class Struggles in France, Marx, 1850*).

In this "Review" Marx and Engels traced the emergence of crisis in England as a product of the industrial and commercial expansion of 1843-45, and the spread of that crisis to the Continent. There is no major change in their interpretation of the causes and nature of crisis. They attribute its source to the emergence of overproduction despite the opening of new Far Eastern markets and new trade and investment outlets in the New World. There is no new explanation as to the reason why this overproduction is inevitable, but there is considerable analysis of the role

played by speculation in accentuating its developments and effects. They analyze the development of speculation in railways, cotton, corn, and foreign trade — the expansion of credit and the creation of false ventures (designed purely to make quick profits through stock issues on non-existent companies, for example) — a process which Marx would later analyze under the title “fictitious capital” (See Section VI).

On the basis of the actual extension of the English and continental railway system and the speculation that accompanied it, there gradually arose in this period a superstructure of fraud reminiscent of the time of Law and the South Sea Company. Hundreds of companies were promoted without the least chance of success, companies whose promoters themselves never intended any real execution of the schemes, companies whose sole reason for existence was the directors’ consumption of the funds deposited and the fraudulent profits obtained from the sale of stocks.” (Marx, 1848, p. 280)

When this superstructure of speculation and fraud collapsed it led quickly to the restriction of the production on which it had been based:

Speculation regularly occurs in periods when overproduction is in full swing. It provides overproduction with temporary market outlets, while for this very reason precipitating the outbreak of the crisis and increasing its force. The crisis first breaks out in the area of speculation; only later does it hit production. What appears to the superficial observer to be the cause of the crisis is not overproduction but excess speculation, but this is itself only a symptom of overproduction. (Marx, 1848, p. 285)

It was from this capitalist crisis at the English heart of the European economy that subsequent crises on the Continent sprang: “As early as October (1847) the crisis caused the first setback on the Continent . . . While the crisis eased in England, it increased in intensity on the Continent. . . .” (Ibid., p. 291). By the time that the Revolutions broke out in France in February 1848 and in Germany in March, the crisis in England was over, and the crisis in those countries well under way. Marx and Engels grappled with the problem of trying to sort out the direction of causality in the relationship between this economic crisis and the political upheavals that swept Europe, and they found causes running each way. With respect to, “The Panic which broke out in Paris after February and swept across the whole Continent together with the Revolution” (p. 291), they found the causes indeterminate:

As far as the banking and commercial bankruptcies in other parts of the Continent were concerned it is impossible to determine to what extent they resulted from the duration and gradual spread of the commercial crisis . . . and how far they were really the result of losses caused by the panic atmosphere of the revolution. (Marx, 1848, p. 292)

Nevertheless, they did offer the general reflection that:

At any rate, it is certain that the commercial crisis contributed far more to the revolution of 1848 than the revolution contributed to the commercial crisis. (Marx, 1848, p. 292)

This same reasoning is used to understand how returning prosperity cut short class conflicts in England. They trace the numerous beneficial effects of the Continental upheaval on the economies of England and the United States. In both cases, new prosperity was partly built on

the capital that flowed out of the area during the upheaval, and partly on the elimination of outlets for speculation which forced capital into productive enterprise. They argued, that although the crisis had begun in England, its circulation to Europe had contributed to English prosperity thereby helping to undercut all revolutionary movement there (that is, the Chartists), “The French Revolution of 1848 saved the English middle class” (Engels, 1892, p. 365), where capital’s power and thus its ability to cope was greatest:

So although the crisis produces revolution on the Continent . . . they nevertheless have their roots in England. These violent, convulsions must necessarily occur at the extremities of the bourgeois organism rather than at its heart, where the possibility of restoring the balance is greater (Marx, 1852, p. 131).

The return of prosperity to England, they went on to show, was soon followed by the defeat of the revolutions and the spread of prosperity to the Continent in its turn-lagging in recovery as in crisis. Faced with this widespread recovery during the summer of 1850, Marx and Engels were forced to the conclusion that this development would undermine any quick return of a revolutionary situation.

At the same time they began to look at the European situation within the framework of their analysis of the contradiction between the forces of production. They began to think that perhaps the development of the forces was not as advanced as they had previously thought — that there was still room for further development before the crisis. The new soberness in their assessment of the situation was accompanied by the conviction that crisis must eventually return and through it the revolution:

While this general prosperity lasts, enabling the productive forces of bourgeois society to develop to the full extent possible within the bourgeois system, there can be no question of a real revolution. Such a revolution is only possible at a time when two factors come into conflict: the modern productive forces and the bourgeois forms of production . . . A new revolution is only possible as a result of a new crisis; but it will come, just as surely as the crisis itself. (Marx, 1852 p. 131)

The upshot of this analysis was the conviction on the part of Marx and Engels that the revolutionary possibilities, which they had soon expected to re-emerge, would be much longer in coming. They gave reasons in the *Review* to think that a crisis might reoccur as early as 1852, but they apparently did not put much faith in this prediction. They were soon embroiled in political infighting within the Communist league over the proper course of action.

The change in their views was evidenced in their opposition to others who desire to continue to organize as if a new revolutionary surge was imminent. As a result of this conflict the League split. With the continuing success of reaction on the continent, especially the successful destruction of the League’s organization in Germany in 1851 by the Prussian policies, Marx and Engels decided to officially terminate the organization in 1852.

This brought to a close their active participation in the political struggles of the period, as they both turned to research, writing, and making a living. For the next decade they would think, study and write in more or less complete isolation from active political movement. In this they were not simply abandoning the field of action, but following the only realistic course open to them in the light of the defeat suffered by the working classes in England and Europe, and their

belief that major political movement would only be generated by another round of major crises. Their return to research was part of the general movement of the working class in this period to relinquish the initiative in the class struggle, and heal its wounds in preparation for struggles to come.

It was during this long decade of relative working-class quiescence that Marx was able to return to his studies of political economy and work on the development of the basic theoretical framework necessary to a more precise understanding of the class relations of capitalism. Here he went back to the early efforts of Engels' *Outline* and of his own *Poverty of Philosophy* to critique the categories and theories of political economy; and began to reshape them into a meaningful and consistent form. It was during this period that his conceptualization of how the labor theory of value could be used as the key to a quantitative and qualitative analysis of capitalist relations took shape. This was a work of many years interspersed with his job as a journalist for the *New York Herald* and other papers, and carried out under conditions of much personal poverty and ill health.

When the crisis of 1851-52, which Marx and Engels had predicted, finally arrived, it was of considerably less amplitude — a “minor trade crisis” — and was accompanied by no significant resurgence of working class struggle. In the continuing atmosphere of industrial prosperity and the rapid growth of European capitalism that characterized the next five or six years Marx and Engels carried on their solitary efforts. It was only slowly that they came to recognize that the crisis of the late 1840s was not a prelude to a final massive upheaval of capital and the revolution that they had expected, but rather a prelude to a long period of capitalist expansion: “The revival of trade, after the crisis of 1847,” Engels would later write “was the dawn of a new industrial epoch.” (Engels, 1845, p.22)

### C. THE LATER YEARS, 1857-1867

The first few years of the 1850s, after the split in the Communist League, were politically quiet ones for Marx. His endless studies in the British Museum were interrupted only by the difficulties of his financial situation. These studies came to an end in 1857 when the outbreak of a major crisis provoked Marx to set down his results. On the one hand, the onset of crisis came as a personal blow when the *New York Tribune* put Marx on half-pay, worsening his already dismal situation (Mehring, 1962, p. 255). On the other hand, Marx was excited and elated as he had been anticipating the return of crisis since the beginning of the decade. “I have not felt so happy since 1849 as I do today in face of this eruption,” he wrote to Engels. (Ibid, p. 254). In a tremendous burst of energy Marx worked night after night for months, synthesizing his new ideas that he had been pulling together over the past several years. The result was the massive and, until recently, unpublished notebooks: the *Grundrisse*, which represents the first moment in the production of Marx's so-called “mature,” works. Although unpolished, they embodied a tremendous leap forward in Marx's theoretical work.

Beginning with an analysis of the debates concerning the role of money in the crisis of 1857, the notebooks also contain much of the material later reworked into *Capital* and *Theories Of Surplus Value*, and much more besides. Written during a crisis, excited by its revolutionary potential, the *Grundrisse* probably contains more systematic, organic development of crisis theory than any other moment of Marx's work.

In 1859 Marx published *A Contribution to the Critique of Political Economy* that was largely a rewrite of the first part of the *Grundrisse*, which dealt with value and money. In 1861 he

began work on the elaboration of the *Grundrisse* into the three volumes of *Capital* and *Theories of Surplus Value* that were largely completed by 1865. By the time the first volume of *Capital* appeared in 1867, Marx and Engels had re-entered the political arena.

The expansion of capital in the decade 1852-62 brought with it a rapid expansion of the industrial proletariat and a resurgence of workers' struggles. Their return to active political life was prompted by the formation in 1864 of the International Working Men's Association (the First International). This Association was formed by English and French workers to coordinate activities in supporting strikes and preventing the international use of scab labor to break strikes. Marx and Engels were invited to join the Association and quickly moved to prominence through their ability to prepare the Inaugural Address and Provisional Rules, and to mediate the conflicts between the different groups of workers involved: British Chartists, French Proudhonists, Italian Mazzinists, and so forth.

Once the International was launched Marx and Engels set to work, as they had in the Communist League, spreading their views among the membership and undermining opposing tendencies, first the Proudhonists, and later the Bakuninists. It was as part of this educational propaganda effort that Marx delivered his two lectures to the General Council in June of 1865 that were later published as *Wages, Price and Profit*. These lectures, which set out in capsule form the theory and arguments in *Capital*, were written during the "real epidemic of strikes, and a general clamor for a rise of wages," that swept Europe shortly before the crash of 1866. Their political purpose was to refute the arguments of another member of the International, the Owenite John Weston, who had argued that workers should abandon wage struggles because inflation and recession would always undermine the gains made. Marx vehemently attacked this position arguing that it would have disastrous economic and political consequences for the working class. Drawing on his studies of crises, he argued that while it was true that crises would limit the gains workers could make, their situation would be even worse without those struggles. Basically he was repeating the arguments he had used a decade earlier.

Wages (the price of labor power) fluctuated above and below its average value over the course of the business cycle like other commodities. But, he argued, it is because of this fluctuation that wages have a tendency to fall during crises. It is therefore all the more important that workers struggle to force them up during periods of expansion:

If during the phases of prosperity, when extra profits are made, he did not battle for a rise of wages, he (the working man) would, taking the average of one industrial cycle, not even receive this average wage, or the value of his labor. It is the utmost height of folly to demand that while his wages are necessarily affected by the adverse phases of the cycle, he should exclude himself from compensation during the prosperous phases of the cycle. (Marx, 1865, p. 69)

Marx's advocacy that the International strongly support workers' wage struggles was based not only on the need of workers to protect their average income, but also because he saw those struggles as constituting an indispensable means for the workers to organize themselves as a class which could ultimately overthrow the system as a whole:

By cowardly giving way in their every-day conflict with capital, they would certainly disqualify themselves for the initiating of any larger movement. (Marx, 1865, p. 77)

These lectures, it must be remembered, were written after the completion of Marx's vast work on *Capital* and thus founded its politics on that basis. Although he did not expand his theory of crisis, he maintained the same political conclusions and strategies that he had held in the earlier period of the 1840s. He again supported wage struggles as a necessary step in working class development and as a prelude to the abolition of the wage system itself: the revolutionary overthrow of capital. Given this political framework we now turn to Marx's completed work on crises, work which would stand as virtually his final position until he died.

### III. MARX'S THEORY OF ACCUMULATION AND CRISES

#### A. INTRODUCTION

This section begins the second part of this essay in which we present a synthesis of Marx's writings on crisis in his major works: (Sections IV - IX) the *Grundrisse*, *A Contribution to the Critique of Political Economy*, *Capital*, and the *Theories of Surplus Value*. We begin this synthesis by presenting Marx's analysis of the nature and functioning of capitalist accumulation when it is *not* in crisis. This theory of accumulation can be thought of in two ways. First, it theorizes the way in which capital tries to organize and reproduce society on an ever-larger scale; in other words, the "rules of the game" that capital tries to impose. Second, Marx's theory is a working class perspective on the capitalist accumulation process. Capital has its own views — embodied in bourgeois economics, sociology and so on. Marx's theory, although a theory of capitalist society, is formulated in terms of what is most important to the working class.

Once we have presented — ever so briefly — the theory of accumulation, we turn to the theory of crisis, emphasizing again that Marx's theory embodies a working-class vision of the fragility and potential mortality of capital. Capital has its business cycle theory; Marx has a theory of crisis. They are not comparable because they are designed for different purposes. Business cycle theory is designed to facilitate capitalist policy formulation and intervention to "manage" the cycle. Marx's crisis theory, as we will show, is designed to reveal to the working class the forces that can throw capital into crisis and whose development can lead to revolution. Our presentation of Marx's widely scattered discussion of crisis is organized in the following sections:

*IV. The possibilities of Crisis.* This section brings together the passages where Marx points out the various moments at which it is possible that the processes of production and circulation could be interrupted. We regroup his comment into the stages of the circuit of capital.

*V. The predisposition to Crisis.* The existence of possibilities for breakdown does not mean that it will in fact occur. Marx also examines the forces within the accumulation process which may lead to the actualization of the possibilities; in other words, the forces which establish various predispositions to crisis. It is here that we regroup Marx's analyses of many frequently discussed "causes" of crisis, for example, the tendency of the rate of profit to fall, tendencies to underconsumption. As in Section V, these forces are analyzed in terms of the stages of the circuit of capital.

*VI. Offsetting Tendencies.* Because Marx's analysis of crisis is framed in terms of the forces that tend to undermine accumulation, he also includes some of the forces, or strategies that capital uses, to offset the tendencies to crisis.

*VII. Crisis Solution.* For Marx "the" crisis (when it does not lead to revolution and the overthrow of the system) really has two moments. In the first moment, the crisis is the emergence of interruptions and breakdowns in the reproduction process. This is the crisis for capital. As we will see it is also often a conquest for the working class. In the second moment, crisis is the process by which capital uses crisis to overcome the interruptions and restore the conditions of reproduction. In this way crisis becomes for capital an equilibrating moment in a reproduction process that has certain predispositions to disequilibrium. There is a sense then in which this is an offsetting tendency, but it is one that is unique and important enough to deserve separate treatment.

*VIII. Crisis and Revolution.* Crisis becomes revolution when capital fails to realize the second moment of crisis, when it fails to turn the crisis against the working class. In other words, when the working class defeats it.

## B. THE THEORY OF ACCUMULATION:

Marx's theory of accumulation is a theory of how capitalist society is reproduced on an expanded scale. Capitalist society is understood as a class society or a society based on the antagonistic relations between the capitalist class and the working class. The theory of accumulation is a theory of the capitalist class attempts to expand its dominance over the working class, and thus over society. Accumulation, in other words, is most basically accumulation of the classes in their antagonistic relation of struggle.

Once this is understood, we can see that *Capital* is an exposition of the most important relations between the classes, and of the ways those relations are reproduced. The core of the class relation, Marx located in the way the capitalist class, through its monopoly over the means of producing the necessities of life, forces the rest of society to work for it in order to live — thus to become a working class. The distinctive feature of capitalism, as opposed to other societies where forced labor existed, he shows to be the indirectness of the force — the way need for subsistence rather than (for the most part) direct coercion forces the propertyless mass of the population to sell its capacity to work in exchange for access to those goods. This relationship was established through the process of "primitive" (original) accumulation through which owners of labor power came to confront owners of capital, means of production, and means of subsistence in the market place. The sale of labor capacity for money, which is in turn exchanged for the means of consumption, reveals that at the core of the class relation is the imposition of work and the form of that imposition is exchange. Since labor power or the capacity to work is sold like other goods, it is itself a commodity. Thus the social relations of classes in capitalist society may be defined as (1) the imposition of work by the capitalist class on the working class through the commodity form, and (2) the struggles of the working class against that imposition and for its own ends. (Cleaver, 1979, Ch. 2)

Because the working class is forced to sell its labor power as a commodity in an exchange relationship, so too must the form of all production in capitalism take the form of commodities in order to exchange with that class. Capital is thus a social system of commodity

exchange in which the key commodity is labor power and in which all production takes the commodity form.

On the basis of this definition we can already identify the variables that form the basis of Marx’s analysis of capitalist accumulation:

MP — the means of production which the capitalists monopolize as a class and sell to each other.

LP — labor power, or the capacity to work, which capital forces workers to sell to it in order to acquire M and MS.

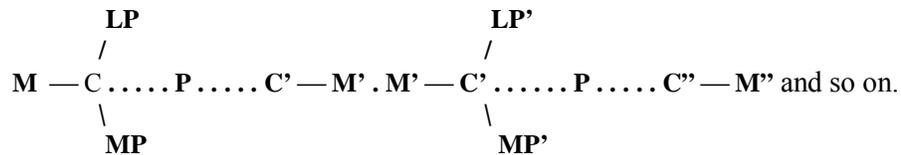
P — production, or the activity into which the capacity to work is converted.

C — commodities (other than labor power), which are produced by workers who work, and then sold to them by the capitalist as MS, or to other capitalists as MP.

M — money, the universal equivalent of all commodities, which is often exchanged for labor power, and then exchanged by workers for the means of subsistence (MS).

MS — means of subsistence: commodities necessary to the production and reproduction of LP (food, clothing, housing, and so on), bought by the working class in exchange for LP.

Marx systematized these relationships that capital seeks to constantly repeat, in the “circuit of capital”:



The meaning of this sequence of relations is simple enough. A capitalist (if in the individual case), or capital in general, by controlling the means of production (MP) forces the working class to sell its labor power (LP) in exchange for money (M — LP). The labor power is then put to work (P) in combination with the means of production to produce commodities C, which are then either sold to the working class as means of subsistence or to other capitalists as means of production in exchange for money (C’ — M’). Because the conditions of the classes have not changed at the end of the circuit — the capitalists still control all the means of production, and the workers still have only their labor power to sell, which has been itself reproduced by the consumption of the means of subsistence, the class relation is reproduced and society is maintained in the same form, that is, capitalistic society.

This reproduction, it must be emphasized, is no smooth simple matter, and much of *Capital* consists of analyzing how each of these steps involves an often times arduous struggle between the classes. For example, the separation of the masses of population from the means of production required an extended “primitive accumulation,” through which peasants were forced off their land and artisans were stripped of their tools, forcing both into the labor market — that is, to sell their labor power to capital. All of this occurs through much violent conflict and bloodshed — the “rosy dawn” of capitalism.

But even once the separation has been made, and capital monopolizes the means of production, the struggle continues. In the sale of labor power there is the struggle over the terms of sale (M — LP), how much money for how much work, under what conditions, and so on. And even once the sale is made the struggle continues during work itself — struggle against that work (P) by the workers, and the striving of capital to obtain the maximum amount of work. Finally, not even the disposition of the final product (C — M) runs smoothly. Rather, there is a wide variety of struggles ranging from direct working-class appropriation to struggles over international trade — what will be allowed to be sold where and at what price. In this way, each moment of the circuit, whether in the sphere of production (work) or in the sphere of exchange, is not only a moment of the class relation but carries in it the fundamental character of that relation, an antagonistic conflict. In this way we can see how the class relation — the class struggle — contains each of the variables: LP, M, C, MP, P as elements, or moments, of its existence. The class struggle for Marx was not something outside the labor-capital exchange and work relations (either a cause or a consequence of it). The class struggle is rather the very subject of *Capital* itself. The self-reproduction or accumulation of the society as a set of class relation means, therefore, the reproduction and accumulation of all of these antagonistic elements of that relation:

Capitalist production . . . under its aspect of a continuous connected process, of a process of reproduction, . . . produces and reproduces the capital-relation; on the one side the capitalist, on the other the wage laborer. (Marx, 1867, p. 578)

Of the many conditions of this reproduction that Marx discussed, perhaps the most obvious is the criteria of “proportionality.” The production of means of production (MP) and means of subsistence (MS) must be in such proportions as to meet the requirements for the replacement of depleted means of production, on the one hand; and for the reproduction of the working class, via consumption goods, on the other. We saw that production P brings together LP and MP. But this always occurs in a certain proportionate relation, a certain technology, therefore production must not be lopsided or disproportionate in such a way that either too little or too much MP or means of subsistence are produced. Marx formulated this by dividing production into two basic departments one producing MP, and the other means of subsistence MS.

Department I:  $LP_1 + MP_1$  produces  $MP^*$   
 Department II:  $LP_2 + MP_2$  produces  $MS^*$

In these circumstances, the necessary conditions of proportionality are that the total MP produced ( $MP^*$ ) must be sufficient to replace the MP in each department, while the total MS produced ( $MS^*$ ) must be enough to feed, clothe, and so on, and thus reproduce the labor power in each department:

$$\begin{aligned} MP^* &= MP_1 + MP_2 \\ MS^* &= LP_1 + LP_2 \end{aligned}$$

If this occurs, and the commodities MP and MS are correctly allocated, then the system will be self-reproducing and the class relations will be maintained. Once again these relations are not simple technical relations, but are an intrinsic part of the struggle between the classes. Clearly the working class is mainly interested in the output of MS, whereas capital’s major concern is having enough MP in order to keep control of the workers — hence a conflict over the allocation of resources between departments. The working class wants to see Department I production geared to support Department II production, while capital must try to restrict the availability of wealth to workers (Department II production) if it is to maintain control and force workers to

work. If Department II production was such as to supply workers with vast quantities of means of subsistence their need to sell their labor power to capital would be much lessened, and scarcity no longer a universal phenomenon.

So far we have simply looked at the basic class relation, how it is organized by capital and imposed on workers, how workers struggle over each aspect of this organization, and some of the basic conditions of its reproduction that must be met if capitalist control is to be reproduced and the system maintained. But accumulation is more than simple reproduction — it is expansion. Accumulation is *expanded reproduction* of the social relations of society. Accumulation is *growth*. But expanded reproduction is not simply something added. It is a necessary characteristic of capitalism. The source of this necessity of growth lies in the dynamic of the class struggle itself. Basically it is only through growth that capital can maintain control. Why? For one thing the continuous and successful struggle for more income by workers (for more Department II production), forces capital to raise productivity and relative surplus value or go out of business. For another, the successful struggles against work, that is, to shorten the working day, again forces capital to raise productivity to even maintain the existing level of consumption. Again the self-organization of workers in their struggles occurs on these bases of given technology and organization of work, which capital must continually revolutionize to break up workers' power and thus retain control. All of these things require a continual expansion both of Department II production to meet the needs of a growing and more demanding population, and of Department I to underwrite the needed rise in productivity.

But expansion, or expanded reproduction, also means expanded work. To keep control over the *growing population*, capital must put it to work: to raise productivity often means raising the intensity of labor, more work must be squeezed out of the working population. It thus becomes absolutely vital for capital to keep account of every aspect of social relations to know whether it is successful in achieving an expansion or not. The tool for keeping these accounts is money. But for Marx, money must be related to the social relations it is to measure. Therefore he calls money, "the universal form of labor in bourgeois society." (Marx 1859, p. 98) In the *Grundrisse*, Marx began with the analysis of money and delved beneath it to discover the social relations of labor that defined it. Those social relations of labor he chose to analyze directly, in terms of "value." In *Capital* he began with the social relations of labor as "value" and showed how money was the most fully developed and appropriate form of those relations. The endless debate over the Marxist concept of value has ignored the substance of value, which is imposed work (Cleaver 1979). Given that value is an accounting tool to keep track of whether or not capital is successfully expanding its social control through the imposition of work, it should be hardly surprising that Marx's "theory of value" is a "labor" theory. For Marx, the object of the value analysis, and thus its substance, is *work* (in its quality as means of social control or "abstract labor"); its measure is time (socially necessary labor time); and its form is exchange (exchange value). The value concept allows the comparison and measure of all kinds of work, by abstracting from specific differences. Yet this is not merely a conceptual abstraction but denotes the real abstractness of labor that obtains, as capital achieves the malleability of labor necessary to its control:

Indifference towards any specific labors corresponds to a kind of society in which individuals can with ease transfer from one labor to another, and where the specific kind of labor is a matter of chance, of indifference to them. . . . (Marx, 1857, p. 104)

labor is not this or another labor, but labor pure and simple, abstract labor; absolutely indifferent to its particular specificity, but capable of all specificities. (Marx, 1857, p. 296)

Being able to use imposed work to organize society means being able to manage the allocation of work, being able to shift it from one kind of production to another. To do this capital must keep workers divided. In other words, it reduces all specific labor to abstract homogeneous labor, by imposing both a complicated division and re-division of labor that guarantees its control. Under these circumstances the measure of labor, or work, is simply the time it is imposed, “socially necessary” or average labor time.

Finally, as we saw in the circuit of capital above, work is organized by capital into the production of commodities, either LP or C, and thus takes the commodity-form and exchange-value. In this way we can theoretically measure each of the variables in terms of value and labor time and achieve quantitative comparisons that permit the determination of whether or not growth is achieved. If we return to the circuit:

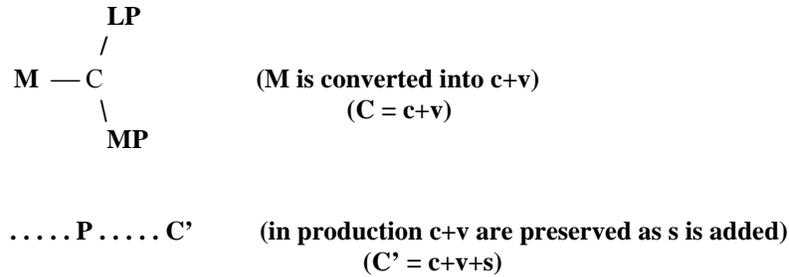
$$\begin{array}{c}
 \text{LP} \\
 / \\
 \text{M} - \text{C} \dots \text{P} \dots \text{C}' - \text{M}' \\
 \backslash \\
 \text{MP}
 \end{array}$$

we see that when the capitalist begins with a certain amount of money he begins with a certain value. Money is the “universal equivalent” of all commodities, all of which have value. Thus in a society the value of money is determined by the value of commodities and an aliquot portion of money represents a given amount of the value. On the assumption that exchange is equal value for value, we can see that total value represented by M is converted into an equal value of LP + MP in some proportion, depending on the value per unit of LP and of MP and the technology used in P. Since the substance of value is work (abstract labor), the aim of capital, if it is to expand, is to create more value (work), and this is exactly what it seeks when it converts LP into living labor in the production process. The object is to impose enough additional work so that the labor incorporated in the product C' has a greater value than the original value M, or the equivalent commodities C (LP + MP). In order to be able to continue the process, this commodity (of expanded value) C must be converted into money (M'), the universal equivalent, or most general form of value, which can then be reconverted into new LP and MP and so forth.

Each of the variables is now measured in common terms by value. The value of labor power Marx calls variable capital (v), and the value of the means of production he calls constant capital (c). The aim of expanding value (getting more work) thus translates into converting the original investment of M into c+v and then managing production so as not only to preserve the original value embodied, but to enlarge it as surplus value (surplus labor), or s.

To survive and reproduce on an expanded scale the value of the original C is c+v, while the value of the new C' is c+v+s. S (surplus labor) is thus the *measure of success* as well as the condition for expansion.

How is s the condition of expansion? Simply, this excess surplus value, when it takes the money form in C' — M' can be converted into new LP and MP. This process we can represent as follows:



In the next period, the s is reinvested in new c and new v, thus

$$\begin{array}{ll}
 \text{at t = 1} & \text{C}' = \text{c+v+s} \\
 \text{and at t = 2} & \text{C} = \text{c+v} + \text{new c}' + \text{new v}'
 \end{array}$$

In this new period of production c + c' is combined with v + v' to produce a new excess s+s'. The result of this continual reinvestment process is thus a growth in each of the variables — all of which are elements of the capital - working class relation. Accumulation is the accumulation of the working class and capital, and as such is the accumulation of money, of commodities and of the means of production. At each stage in this process each element and relation is an object of struggle, and *since everything is growing it is a struggle on an every larger scale*. As capital expands, bringing more and more of the world's population and means of production under its control, the class confrontation becomes global and every element is a moment of that struggle.

Again, as in the case of simple reproduction, certain conditions have to be met, one of which is the proportionate allocation of resources; in this case new resources to each of the Departments. Surplus value must buy new c and new v so that the expansion of the MP and LP proceed in the needed proportions to allow continued expanded reproduction or accumulation.

Therefore total production in each department must be just adequate to meet the expanded needs of both:

$$\begin{array}{l}
 \text{Dept I} \quad \text{MP}^* = \text{MP}_1 + \text{MP}_2 + \text{new MP}_1 + \text{new MP}_2 \\
 \text{Dept II} \quad \text{MS}^* = \text{LP}_1 + \text{LP}_2 + \text{new LP}_1 + \text{new LP}_2
 \end{array}$$

In simple reproduction the c+v is reinvested to recreate the same amount of MP and LP. In expanded reproduction the surplus labor in its monetary form buys more MP and MS — the surplus labor in the embodied form of new products.

Now if these are the basic processes of accumulation, and if this accumulation reaches world dimensions, the further development of the theory of accumulation is a detailed study of the way in which these various moments of expanded reproduction are organized, and of how that reproduction breaks down. This latter is the theory of crisis. It includes (1) the repeated collapse and recovery that we know as cycles, (2) the deeper historical crises that have characterized major turning points in the organization of capitalist reproduction, and (3) the ultimate crisis through which the system as a whole is abolished.

#### IV. THE POSSIBILITIES OF CRISIS

The possibilities of crisis mean possible interruptions in the reproduction process resulting from a failure of the different moments of the reproduction process to follow each other smoothly in a unified cycle. This possibility exists in the fact that the process as a whole is made up of several different moments that are often separate in time and place; yet each must occur in proper relation to the others in order for the unity of the whole process to be realized. If we return to the circuit of capital we can see that it can be broken down into three distinct processes:

$M - LP$

$M - MP$

$\dots P \dots C'$

$C' - M'$

(1)

(2)

(3)

The first is the buying of LP and MP that must take place before the second process, production, in which LP and MP are combined to produce the new product  $C'$ ; the third, the sale of that product, can only take place after it has been created. There is thus a temporary separation between the different moments and the successful completion of one process does not ensure the completion of the other two.

Workers and means of production may be hired, but the production might never be finished due to strikes, catastrophe and so on. Alternatively, the product may be produced but never sold, or sold below its value, and hence part of the value lost. There are two kinds of processes here:  $M - C$ ,  $C' - M'$  in the sphere of circulation, and  $P \dots C'$  in the sphere of production. Marx examined each of these different moments of the circuit of capital to determine any possibilities that they might not be accomplished.

##### A. THE FIRST STAGE OF THE CIRCUIT

In the first moment of the circuit ( $M - C$ ), the possibility exists that the conversion of money into means of production, or into labor power, or of both into the proper proportions, may not take place. Although the capitalist may desire to convert his money, LP or MP may either not be available at all, or in the proper proportions, or at too high a price. Responses to this continuing and central problem for capital have included: the enclosure movement, slavery in the New World, the use of immigrant labor and so on. There is also the problem of skill availability as capital expands, particularly in the short run. Also questions of labor turnover, the avoidance of work by staying on welfare, on the farm, and so forth. There is also the issue of the price of labor relative to other costs and revenue. In many ways, the very problem of availability is the question of price: does the cost of LP prevent the purchase of necessary complementary inputs (MP) or negate the possibility of earning a surplus (or profit) after the sale of the final product ( $C' - M'$ ). Marx analyzed this in terms of the ratio  $s/v$ , the rate of exploitation. If  $M - LP$  is such that  $v$  (the

value of labor power) is equal to the total value produced, then no profit will be earned, and the whole process will break down. This question of  $s/v$  and the associated problem of the rate of profit  $s/(c+v)$  involves many more factors than the relation  $M — LP$ , but the determination of the size of  $v$  is an essential part.

Similar problems may arise over  $M — MP$ ; there may be difficulties either in simply acquiring raw materials and machinery, or at a price,  $c$ , such that the investment can be made at all.

The same hold up could occur for the opposite reasons, if the *real prerequisites* of reproduction were missing (for instance, if grain became more expensive or because not enough constant capital had been accumulated in kind). There occurs a stoppage in reproduction and thus in the flow of circulation. (Marx, 1862-3, 11, p. 494)

One historical example that Marx often discussed was the crisis of the English textile industry brought on by a cotton famine due to the U.S. Civil War, and so on. Under conditions of expanding reproduction ever more means of production must be available to fuel growth, and if for some reason they become unavailable or too expensive, then regardless of how much money is available, investment cannot be undertaken.

A struggle may be present between the classes in both LP and MP. In the first it is over whether labor power will be sold, or how much (length of work day, intensity, and so on), or at what price (wages and benefits). In the second, the control of access to sources of raw materials often had as much to do with struggles over land as it did with availability of labor. Peasants fought for their land to maintain their possibilities of independent production; capital needed the grass, or minerals, and so on, as well as their labor.

## B. THE SECOND STAGE OF THE CIRCUIT

In the second moment of the circuit (. . . P . . . C'), production, the possibility exists that the two elements of production LP and MP once acquired and brought together may fail to be transformed into the final product C'. This possibility of the breakdown of the production process involves virtually every aspect of it — ranging from the “natural conditions,” to most importantly, the relations between capital and labor. It is one thing to buy workers' capacity to work (LP), but it is quite another to convert the labor power into enough actualized embodied living labor to not only preserve the original value, but to produce a surplus value upon which profit and accumulation are based: “Inside the production process realization appeared totally identical with the production of surplus labor . . .” (Marx 1857, p. 404)

“Natural” interruptions, although exogenous to the production process, may induce breakdowns in the circuit of capital. In the *Grundrisse*, Marx mentions the crop failures in France, and the failure of the silk harvests in China and their role in the crisis of 1855.

More importantly, and clearly endogenous, are the conflicts between workers and capital over production that occur after an agreement is made about  $M — LP$ , for example, strikes, absenteeism, loafing on the job and sabotage. These struggles are over the amount of work that workers will do in exchange for income; thus in value terms they are over the total amount of value added ( $v + s$ ) by the workers to the means of production ( $c$ ). Because ostensibly the contract is made about how much income ( $v$ ) the workers will receive before they enter into production, it is in their interest to work the minimum necessary to get paid. On the other hand,

for the capitalist, it is essential to make them work as much as possible to realize some  $s$  in excess of  $v$ . It is because of these struggles that the capitalist aim of production may not be realized and the accumulation process interrupted. A breakdown in capital's power of command over labor, occurs if it fails to force workers to present themselves for work at low, profitable wages.

### C. THE THIRD STAGE OF THE CIRCUIT

The third moment of the circuit ( $C' — M'$ ), which, like the first, is in the sphere of exchange, requires for its realization not only the production of the commodity  $C'$  but the existence of someone willing and able to buy it with the equivalent  $M'$ . Because the producer and buyer are separate they may not find each other or be able to do business.

The possibility exists that the output  $C'$  might not be realized due to the separation of investment,  $M — MP$ , from the sale,  $C' — M'$ . Marx argued that because production was carried on by independent capitalists making their own decisions about investment and production (reaching separate deals with workers, and negotiating separate sales agreements with consumers and/or other capitalists), there was no overall plan to coordinate supply and demand. Thus the proportionate division of capital investment in  $c$  and in  $v$  might well be incompatible with the actual amounts produced of  $MP$  and  $MS$ . From this perspective the possible inability to realize the sale of  $MS$ , ( $C' — M'$ ) is part of a larger problem.

Questions of proportionality are not simply technical or planning problems. There is a class struggle over the proportionate allocation of resources to the two departments, and the struggles within other parts of the circuit can impinge on both the production of  $MP$  and  $MS$ , and on the allocation of  $v$  and  $c$ , so as to affect proper proportionality.

We can see that the possibilities of breakdown exist at many points in the accumulation process. Wherever there exists a separation within the overall unity, there is the possibility of the unity not being achieved. These possibilities exist in both the process of circulation and in the process of production, and while some are apparently exogenous, most are directly related to the internal class conflict of which the whole process of accumulation is the resolution.

From this we can draw the most important lesson, namely that the *origin of the possibility of crisis lies*, not in some mysterious inner laws of capital conceived as one side of the class relation, but rather *in the internal workings of capital conceived as the total social relation of the two classes*. Innumerable interruptions may occur, plunging capital into crisis. The possibility of crisis is, above all, the possibility the working class has of disrupting and ultimately destroying the system.

Faced with all these possibilities of breakdown, capital has evolved a great many additional mechanisms that do not, however, eliminate that possibility. In this context, *credit* was most discussed by Marx as a specific mechanism for dealing with problems of exchange. Credit has been developed in the form of specific financial institutions at every point of the reproduction of capital where exchange occurs. For example, *industrial credit* allows the capitalist to overcome the barrier of inadequate investment funds in the initial phase of the circuit  $M — c$ , by buying  $MP$  on credit. Repayment occurs after the sale of the final product and interest is paid out of surplus value. In the case of  $C' — M'$ , *commercial credit* can be drawn upon to finance the costs of circulation during the sale of product by either the producer or a commercial intermediary. The intermediary either borrows to buy  $C'$ , which will be resold, or buys  $C'$  on credit. In the first case

the industrialist loses nothing and can payoff any industrial borrowing he might have done. In the second case his extension of credit further delays the realization of his own profit. Finally, in the case of workers (LP — M — C), there is *consumer credit* to finance the acquisition of C when money is not immediately available. In all these cases the commodities are exchanged first and payment is made later. As Marx says “alienation of commodities becomes separated, by an interval of time from the realization of their prices.” So that while credit allows the exchange to occur where it otherwise might not, there is still a sharp separation and opposition between the exchange of goods and the exchange of money, just as there is between the creditor and the debtor. Because in each case there is the possibility that the debtor may fail to secure the necessary means of payment, that is, fail to sell C’ or to sell LP, the possibility of crisis persists. If such a breakdown should occur Marx speaks of them as he does of C’ — M’, more generally as a *commercial crisis* or as a *monetary crisis*, when the major aspect is the collapse of a set of monetary (credit) relations. These two often go together, but are differentiated from *industrial crisis*, in which the breakdown occurs in the sphere of production: The interrelation of these crises will be discussed below when we examine Marx’s analysis of how crisis can circulate from one aspect of accumulation to another.

Without discussing the relation between crises in the difference spheres of production and circulation, we must note that the credit relation, like the other aspects of the reproduction system, is an element of and is shaped by the class relations. This is perhaps most obvious in the case of consumer credit where struggles occur over both the conditions and price (interest) of credit as well as whether it is ever repaid (bankruptcy or default by consumers). In this the class relations of credit are similar to those which existed in other societies where credit was developed.

The class struggles of the ancient world took the form chiefly of a contest between debtors and creditors, which in Rome ended in the ruin of the plebian debtors. They were displaced by slaves. In the Middle Ages the contest ended with the ruin of the feudal debtors. . . . Nevertheless, the money relation of debtor and creditor that existed at these two periods reflected only the deeper-lying antagonism between the general economic conditions of existence of the classes in question. (Marx, 1867, pp. 135-6)

And so too today. Yet even in the case of industrial and commercial credit there is very much an element of the class struggle, albeit in an indirect way. If credit is a way to overcome barriers (possible breakdowns) the allocation of credit depends on relative “credit worthiness” among capitalists, industrial, or commercial. The most important measure of “credit worthiness” is the ability of capitalists to control their workers so that they can make a profit. The prime interest rate to large corporate lenders (or to national state borrowers) is that accorded to those firms that earn the highest rate of profit, which presupposes a high rate of exploitation,  $s/v$ . In this way capital is allocated efficiently from the capitalist viewpoint supporting those who are more capable of controlling the working class.

These possible interruptions of the reproduction of capital have effects on accumulation, which from the capitalist viewpoint, are measurable in common terms of value. And the one key measure of interruption and crisis, whatever the cause, is profit: the index of capitalist success and the means of future growth. Any breakdown at any point in the reproduction of capital, whether in LP — M — C, or in M — LP, M — MP, . . . P . . . C’, or C’ — M’ will result in a partial reduction or total collapse of capitalist profits. Therefore from the capitalist point of view all fluctuations must be grasped in terms of the value components of cost:  $c$  and  $v$  and in the absolute realized surplus value  $s$ , and thus in the rate of profit  $s/(c + v)$ . Although the rate of exploitation plays a critical role in the determination of the rate of profit, it is not a common business statistic, and thus not visible to the capitalist except as the division of value-added

between profits and wages. The possible interruptions or breakdowns, which if realized can cause crisis, can also be interpreted in value terms:

1. The unavailability of M simply means no investment and no profit at all. The price of M, if borrowed, is a deduction from S and thus a reduction of the rate of profit; the rates can be compared to see the effect.

2. M — LP, this is the contract over v, and if it cannot be made, no production can take place, no matter how much MP may be purchased. The higher v, either through the initial deal or in added expenditures necessary to make LP function, the less s, given a total added value of v + s. Or a rise in v means a fall in s/v and  $s/(v + c)$ .

3. M — MP, this is the cost c; while the value expended is transferred to the final product and has no effect on rate of exploitation, it does have an effect on the rate of profit: the higher c the lower  $s/(v + c)$  (*ceteris paribus*). Like LP, if MP cannot be obtained, then no production, and profit = 0.

4. LP — M — C, while a low v means a higher s/v and higher rate of profit, a v which is too low can cut into labor productivity reducing the total value produced (v + s) and thus s is lower than it might otherwise have been. This is the failure of labor to be reproduced on the same scale or the same quality, thus a higher v under certain circumstances may produce a higher s — what is known today as investment in “human capital.” The inadequacy of M in exchange for LP we have also seen may mean a problem of realization of Department II production, which would be a collapse of C' — M' that would at least reduce s, and if bad enough, could cut into v thus reducing profit and even simple reproduction. The same with theft, which bypasses M in LP — M; this too means an attack on C' — M' in Department II and thus a fall of the rate of profit in that sector.

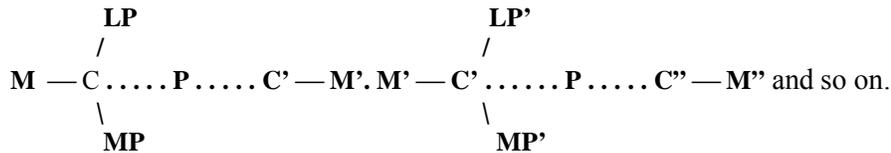
5. . . . P . . . C', all of the various possible breakdowns in the production process have a direct effect on the value components c, v, and s. Inefficient production (including sabotage) can greatly increase the cost of c through waste and so on, reducing the rate of profit. Absenteeism loafing, and so on, can increase the costs of labor (v) by increasing the costs of turnover, supervision, and so on. All reductions of work length, or intensity, can cut into surplus value as can reductions of productivity by raising costs per unit, and even globally raising v. All lengthening of the production period can raise finance costs of borrowing, and so on, increasing interest payments and reducing industrial net profit, and thus rate of profit. Strikes have similar effects as well resulting in raising v directly when successful, thus cutting s either immediately, or through rise of v during the next contract M — LP.

6. C' — M', any failure to realize sale of final product at value means a reduction of total value, and thus of surplus value, and thus of s/v and of  $s/(c + v)$ . This regardless of reasons: from theft, to disproportionality between departments, to the collapse of trade.

7. Credit, any interruption in credit is reflected, at the least, in a rise in the rate of interest if not in the partial or total failure to realize expected profit. As credit rises net industrial profit falls and with it the rate of profit.

V. PREDISPOSITION TO CRISIS

Just as Marx saw many points at which there was a possibility of interruption and crisis in the reproduction process, so too did he see a wide variety of reasons why those possibilities might become reality through a variety of possible *causes* or *forces* that tended to produce interruption and *predisposed* the system to break-down. Because his comments on such predisposition are scattered throughout several of his works, deal with many aspects, and are in no way integrated by Marx into a reasoned whole, we divide his comments into three groups: (1) those dealing with the predisposition to interruption at various points *within individual units or circuits of capital*; (2) those dealing with the way interruptions in one point within a circuit *circulate* within a circuit or to other circuits, thus generalizing the breakdown; and (3) those dealing with forces acting *at the level of capital as a whole*. At this point we must remember that capital as a whole consists of more than the sum of the individual circuits (it also includes the reproduction of labor power). So that despite the fact that the behavior of forces at the level of the whole will include that of the circuits, it is not identical with them. Because of this the circulation of breakdown between industrial circuits does not lead directly to the totality though it is a part of it. If we treat the reproduction of labor power in terms of the circuit LP — M — C and the sum of those circuits as the sum of all the reproduction processes, the behavior of the total social capital is more closely approximated by the sum of the behavior of  $\Sigma k_i$  and  $\Sigma h_i$  (Where  $k_i$  = industrial circuit  $i$ ;  $h_i$  = reproduction circuit  $i$ .) Let us begin therefore with an examination of the various ways in which Marx sees that there are forces acting to interrupt the smooth reproduction of the individual circuit of capital. Returning to the individual circuit



The process is one of *expanded* reproduction, and thus one in which the smooth reproduction of the circuit is one of growth in which each element of the circuit grows. In the above representation the second turnover involves quantities of labor power and means of production as well as final product and money capital that are greater than in the first turnover. For a smooth passage from one turnover to another, that growth must be maintained. Our presentation of Marx’s comments on the predispositions to breakdown will follow the outline of Section IV. We examine, in sequence, Marx’s analysis as it pertains to each stage of the circuit.

A. THE FIRST STAGE:



We saw in the previous section at this point in the circuit, the possibility of interruption in the exchange process whereby money capital is converted into labor power and the means of production. Among the possible difficulties are that (1) LP and MP might not be absolutely available with the proper characteristics, or (2) that they might not be available in the necessary amounts to continue expanded reproduction.

In the case of means of production we have here the possibility of “running out,” in one location, especially of raw materials. In the case of labor power we have the key question of whether labor power can continue to be forced to present itself for work and/or whether new sources of labor power can be brought into the market as the need for it grows.

More generally, any reduction in supply or increase in demand for the particular labor power or means of production used by a given circuit will reflect itself in price increases. Similarly, changes in prices may reflect changes in the value of labor power or of the means of production. In these cases it may become impossible to convert money capital  $M$  into  $C$ , given the proportions indicated by the technology. In terms of labor power the most important sources of increase in value is the struggle of workers to raise the price of their labor power. Changes in the value of raw materials, machines and so on, may arise from diminishing returns. In both cases of LP and MP, the value or price changes are compared not only to the scale of production, but to the expected selling price of  $C'$  and thus judged in terms of expected profits.

If these are possible sources of breakdown, the question here is whether there are forces that tend to undermine the smooth expansion of all the aspects of the reproduction in unison. It is important here to remember that Marx is speaking of “tendencies.” “Predisposition” is a tendency. A predisposition to crisis is a force pushing in that direction; it may be offset by other forces such that a crisis does not occur. Thus to designate such predispositions is not to imply that crises will in fact occur. This point should be clear in the following example.

If we look at the *exchange*  $M — LP$ , we know from our exposition of the dynamic of accumulation that we are dealing here with *a struggle between the classes*, even in the case of an individual unit/circuit of capital. Whether in the first investment of his capital, or in any subsequent expanded reinvestment, the individual capitalist is confronted with the problem of whether he can, in fact, acquire workers in sufficient numbers with the necessary skill mix who will sign a contract to work for a wage in terms, which when combined with the cost of means of production and the expected revenues of the sale of  $C'$  at expected prices, will achieve an average profit. This problem has always faced both the individual capitalist and the class as a whole. It has been marked by more or less intense and violent struggle — from the violence of the enclosures and colonialism, to the strikes and the riots of the unemployed/welfare reserve army refusing to sell their labor power at the factory. Thus forces that tend to predispose the relation  $M — LP$  to breakdown result from the ever-present tendency for the working class to struggle against its own exploitation.

For Marx the struggle against the domination of life by capital was so omnipresent throughout the history of capital that he studied, he felt no need to explain the phenomenon — only how it was modified through the changing balance of power between the classes: all forces that tended to unite and strengthen the working class tended to reinforce its struggles, and all those that undermined that unity and weakened its strength tended to reduce its ability to struggle to the level of passive resistance.

In the case of the workers of an individual capital, either actual or potential (new workers brought in during expansion), their strength and hence their tendency to struggle and cause a breakdown in  $M — LP$  will be affected by both the changing situation within their own unit of production and changes in the overall relation between labor and capital. This involves the relation between different parts of the circuit and other circuits and the whole.

Leaving aside the inherent predisposition of the exchange M — LP to break-down due to the antagonistic nature of the class relations embodied in it, there are other forces that tend to interrupt its completion, for example the very process of expansion itself. The continual reinvestment of capital for growth increases each turnover the demand for labor. If during any period the reserve army diminishes, workers may be in a position to struggle for higher wages. (Marx, 1867, I, Ch, 25) The degree to which these forces affect individual groups of workers depends on outside factors such as immigration, but the tendency will be there as it will be for capital as a whole. Thus expansion, which in Marx's view was rarely planned, may lead to a rise in  $v$ , and thus a fall in  $s/v$  and hence  $s/(c + v)$  (*ceteris paribus*). Any fall in the rate of profit, of course, tends to lead to a breakdown. For the individual capital, Marx often noted the continual ebb and flow of investments, the rapid changes in circumstances that might lead to at least a temporary shortage of LP, and/or an increase in its price.

Another sort of force whose existence predisposes the system to breakdown, and that operates partly through the M — C relation, are changes in production, which cause a shortage of MP or MS (raising price of LP) that originate in changes in nature — in productivity, rainfall, richness of mineral deposits, and so on. Because these properly fall within the sphere of production they will be discussed below. The effects, however, may be reflected in either M — LP or M — MP. For example, Marx cites:

A crisis can arise . . . through changes in the value of the elements of productive capital, particularly of raw materials. for example when there is a decrease in the quantity of cotton harvested. Its value will thus rise. . . . (Marx, 1862-63, II, p. 515)

As a result, this implies:

The proportion in which money has to be reconnected into the various component parts of capital in order to continue production on the former scale are upset. More must be expended on raw materials, less remains for labor. (Marx, 1862-63, II, p. 515)

Therefore part of the fixed capital stands idle and a part of the workers are thrown out of production and onto the streets. Similarly, a bad harvest of means of subsistence can mean a rise in the value of MS and thus a “revolution” in the value of variable capital (Marx, 1862-63, II, pp. 517, 533), which leaves less for MP. On price fluctuations:

This shows how a rise in the price of raw materials can curtail or arrest the entire process of reproduction if the price realized by the sale of the commodities [assume it constant) should not suffice [given the higher input prices] to replace all the elements [MP] of these commodities. Or it may make it impossible to continue the process on the scale required by its technical basis, so that only a part of the machinery will remain in operation, or all the machinery will work for only a fraction of the usual time. (Marx, 1894, p. 109)

and again,

If the price of raw materials rises, it may be impossible to make it good fully out of the price of the commodities after wages are deducted. Violent price fluctuations therefore cause interruptions, great collisions, even catastrophes, in the process of reproduction. (Marx, 1844, p. 117)

One had also to take into account the fact that the exchange M — MP, and M — LP , takes place across national boundaries. Thus international trade is a part of the predispositions to breakdown.

... foreign trade influences the rate of profit, regardless of its influence on wages through the cheapening of the necessities of life. The point is that it affects the prices of raw or auxiliary materials consumed in industry and agriculture ... This makes clear the great importance to industry of the elimination or reduction of customs duties on raw materials. . . (Marx, 1844, p. 107)

So that all forces which tend to pit national groups of individual capitals against each other and to use export/import controls of various sorts may well tend to disrupt the reproduction of  $M - C$ .

Similarly *changes in technology* employed in production, which is a tendency we will discuss below, may change the requirements for either labor power or means of production in such a fashion that problems are created in obtaining the right mix at the right price without any breakdown in the ability to fully employ the available capital.

To summarize the causes of breakdown:

1. The class struggle over the price of labor power and the existence of labor power.
2. The process of expansion and expanding demand for labor power — or for means of production which expands faster than supply.
3. Fluctuations in the price of MP and MS due to fluctuations in natural productivity.
4. Changes in technology and hence in the absolute demand for and proportionate demands for MP and LP.

Changes in  $M - LP$  and  $M - MP$  are changes in the magnitude of  $v$  and  $c$ , and hence in  $s/v$  and in  $s/(c + v)$ . Any tendencies to change the magnitudes of the former will change the magnitude of the latter, and hence the willingness of the capitalist to continue his operations. A fall in profit below the average implies abandonment of activity.

## B. THE SECOND STAGE: . . . P . . . C'

Turning to the *second stage of the circuit*: we can now examine directly the forces tending to lead to a breakdown in the capitalist production process itself. Marx identifies the possibilities of breakdown in terms of the failure to complete the transformation of the two elements of production MP and LP into the final product  $C'$ . The breakdown here must involve either the means of production, which do not hold up, or the labor power which capital fails to convert into living labor to transform the MP. Since in the process of production the means of production are set in motion and ultimately controlled by the workers the latter are the principal actors, thus the greatest source of possible difficulty.

### 1. BREAKDOWN IN THE MEANS OF PRODUCTION

However, let us look first at the means of production and the sense in which they may be “responsible” for a breakdown. Because most of the means of production are manufactured, even raw materials that are worked up from the soil, there is an assumption that the rate of depreciation and waste is constant and an integral part of the “quality” of the MP, and therefore irrelevant to the question of breakdown. What this leaves are those forces and tendencies in “nature,” not

primarily the product of production, which may lead to breakdown — especially weather, soil fertility, and so on. Agriculture is the most vulnerable to such changes:

It is especially agricultural produce proper, i.e., raw materials taken from organic nature, which is subject to such fluctuations of value in consequence of changing yields, etc. Due to uncontrollable natural conditions, favorable or unfavorable seasons, etc., the same quantity of labor may be represented in very different quantities of use-values. . . . (Marx, 1894, pp. 117-8)

Given that these kinds of interruptions occur within an expanding system the natural time constraints of agriculture also cause problems about expanding the system:

It is in the nature of things that vegetable and animal substances whose growth and production are subject to certain organic laws and bound up with definite natural time periods, cannot be suddenly augmented in the same degree, as for instance, machines and other fixed capital, or coal, ore, etc. . . . It is therefore quite possible, and under a developed mode of capitalist production even inevitable, that the production and increase of the portion of constant capital consisting of fixed capital, machinery, etc. should considerably outstrip the portion consisting of organic raw materials, so that demand for the latter grows more rapidly than their supply, causing their price to rise. . . . (Marx, 1894, p. 118)

With all the consequent problems discussed above, in the stage of M — MP, Marx goes on to note that these tendencies are accentuated during “times of prosperity.”

. . . the more rapid the accumulation (particularly in times of prosperity), so much greater the relative over-production of machinery and other fixed capital, so much more frequent the relative underproduction of vegetable and animal raw materials, and so much more pronounced the previously described rise of their prices and the attendant reaction. And so much more frequent are the convulsions caused as they are by the violent price fluctuations of one of the main elements in the process of reproduction. (Marx, 1894, p. 119)

Again, the natural limits to the rate of expansion of one process lead to problems of realizing the proper proportion between LP and MP in M — C. Marx noted also the tendency for capitalist agriculture to have ecological effects that undermine expanded reproduction:

Capitalist production, by collecting the population in great centers, and causing an ever-increasing preponderance of town population, on the one hand, it disturbs the circulation of matter between man and the soil, i.e., prevents the return to the soil of its elements consumed by man in the form of food and clothing; it therefore violates the conditions necessary to the lasting fertility of the soil. . . . all progress in capitalistic agriculture is a progress in the art, not only of robbing the laborer, but of robbing the soil; all progress in increasing the fertility of the soil for a given time, is a progress toward ruining the lasting sources of that fertility. . . . Capitalist production, therefore, develops technology, and the combining together of various processes into a social whole, only by sapping the original sources of all wealth — the soil and the laborer. (Marx, 1867, pp. 505-7)

This must, however, be set against Marx’s analysis of the way capital invests in the improvement of the soil which he discussed at length in the last part of *Capital*, Vol. III. He gave enough importance to this investment and to the declining role of “natural” fertility (fertility which was not the outgrowth of such investment) that he accorded a far lesser role to diminishing returns in agriculture as a source of breakdown. Ricardo, on the contrary, saw therein (via rent) the source of capitalist decline and the origin of the stagnant society. We can thus see that Marx saw the occurrence of “natural” catastrophies in production, especially in agricultural production, as only partly exogenous to the system. The degree of accidentality declines as the system grows

and achieves greater control over nature, and as we take into account such long-term forces such as those acting to undermine the fertility of the soil.

Marx paid a great deal of attention to these sources of breakdown in production. In *Capital* in the chapter on “The Effect of Price Fluctuations,” he analyzes at length the role of agricultural production failures in causing crises. In the discussion in the *Grundrisse*, he treats international and local phenomena in similar fashion.

This distinction between domestic and foreign, incidentally, is altogether illusory. The relation between the nation which suffers a crop failure and another nation where the former makes purchases is like that between every individual of the nation and the farmer or grain merchant. The surplus sum which it must expend in purchasing grain is a direct subtraction from its capital, from its disposable means. (Marx, 1896, pp. 128-129)

## 2. BREAKDOWN IN LABOR-POWER

Turning to the predisposition to breakdown in the production process attributable to labor power, here, as in the case of M — LP, we must recognize that we are dealing with a fundamental and direct aspect of the class relation, and hence of the class struggle. The negotiation of a contract, formal or informal, between capital and workers, wherein workers sell their labor power, by no means guarantees, as Marx shows repeatedly in Volume I of *Capital*, that labor power will actually be converted into work. And this is true of both sides of the question — both of work as the production of use-values and of work as the production of value — surplus value. The working day, Marx shows, is one in which each side has certain aims about how long, how intensely and under what conditions, the work will be performed. The capitalist seeks more work while the workers seek less work. There is thus a struggle that takes many forms. Against capital’s techniques of control such as the wage hierarchy, despotic oversight, and piece wages, the working class pits absenteeism, sabotage, loafing on the job, strikes, and so on. As in the question of whether the working class can be forced to sell its labor-power at all (M — LP above), we see that “predisposition” to crisis means the predisposition of the working class to struggle against capital’s domination and exploitation.

Beyond this general conflict that predisposes the production process to breakdown, Marx analyzes in great detail specific tendencies that have emerged within this conflict. For example, in the struggle over the length of the working day, he shows how the balance of power shifted from capital to workers as workers not only checked any lengthening, but ultimately decreased the length of the working day and thus undermined capital’s absolute surplus value strategy. This historical tendency, which capital has failed to reverse, has a tendency to undermine the profitability of the system and throw it into crisis.<sup>3</sup> These struggles have been carried on at both the level of the individual capitalist and at the level of social capital through laws limiting the workday.

There is a similarity in the struggle against work — to shorten the working day — and the previously discussed struggle for higher wages: M — LP. From capital’s point of view they are similar in value terms. Both struggles tend to reduce the rate of exploitation  $s/v$ , and hence the rate of profit  $s/(c + v)$ ; the struggle against work by reducing  $s$  and the struggle for more wages by

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<sup>3</sup> In 2002 we can see that our assessment of this failure was correct but unfortunately temporary. As Juliet Schor has documented in her book *The Overworked American* the period of neoliberalism has witnessed considerable capitalist success on the terrain of absolute surplus value in recent years.

raising  $v$ . Both of these struggles, one in the sphere of production and one in the sphere of circulation, have historically forced capital into adopting certain production strategies that have created further tendencies to crisis.

### 3. RISING ORGANIC COMPOSITION OF CAPITAL

By far the most important of these strategies has been the substitution of less troublesome, more productive machinery for workers. Faced with a declining work day and rising wages, and unable to increase the total amount of work and hence value being produced, capital is forced to find some way to redistribute value to itself, that is, from  $v$  to  $s$ . The substitution of productivity-raising constant capital allows this to happen.

So soon as the gradually surging revolt of the working class compelled Parliament to shorten compulsorily the hours of labor, and to begin by imposing a normal working-day on factories proper, so soon consequently as an increased production of surplus value by the prolongation of the working day was once for all put a stop to, from that moment capital threw itself with all it might into the production of relative surplus value, by hastening on the further improvement of machinery. (Marx, 1867, p. 409)

In the struggle of capital and land against labor, the first two elements enjoy yet another special advantage over labor — the assistance of science, for in present conditions science, too, is directed against labor. Almost all mechanical inventions for instance, have been occasioned by the lack of power-power; in particular Hargreaves', Crompton's and Arkwright's cotton-spinning machines. There has never been an intense demand for labor which did not result in an invention that increased labor productivity considerably, thus diverting demand away from human labor. The history of England from 1770 until now is a continuous demonstration of this. The last great invention in cotton-spinning, the self-acting mule, was occasioned solely by the demand for labor, and rising wages. It doubled machine-labor, and thereby cut down hand-labor by half; it threw half the workers out of employment, and thereby reduced the wages of the other half; it crushed a plot of the workers against the factory owners, and destroyed the last vestige of strength with which labor had still held out in the unequal struggle against capital. (Engels, 1843, pp. 442-3)

For the individual capitalist the higher productivity accomplished with the new technology allows him to produce his products at a lower per unit value than other producers, and hence to sell them at a price below average value. In this way he gains more surplus value and reduces  $v$  relatively. As the use of the new technique is generalized, the per unit value of the output declines universally. Where that output is either  $MS$ , or contributes to production of  $MS$ , there is a consequent decline in the value of variable capital, which can be reproduced more cheaply. Thus, of the total  $v + s$ , the capitalists get a relatively higher share.

This tendency Marx identifies as “relative surplus value,” a strategy fundamental to capital in dealing with workers. He represents this symbolically as a rise in a ratio, which he calls the *technical composition of capital*:  $MP/LP$  — which is simply a vector of machines and raw materials compared to the vector of various qualities of labor being used. Since capital is interested in the impact of such changes on profits, this ratio must be measured in value terms. When it is, he calls it the *organic composition of capital*:  $c/v$ . This is a very particular ratio — one which explicitly reflects the changes in the technical composition. Since the issue is the strategy of substituting constant for variable capital, or machines for workers ( $MP$  for  $LP$ ), clearly the organic composition of capital can only change if the technical composition changes. This is important because the value composition taken simply as the value of  $MP$  over the value of  $LP$  or  $c/v$  can change without a change in the technical composition, for example, due to a sudden drop

in the value of MS  $v$  could fall and hence  $c/v$  rise, with no change in MP/LP. In both Volumes I and III Marx uses very precise language to explain this. He says that:

. . . I call the value-composition of capital, *in so far as* it is determined by its technical composition and *mirrors the changes* of the latter, the organic composition of capital. (Marx, 1867, p. 612)

The value composition of capital, *inasmuch as* it is determined by, and *reflects*, its technical composition of capital, is called the organic composition of capital. (Marx, 1894, pp. 145-6)(Emphasis added)

Using Marx's language therefore we can call this tendency, which is an integral part of the relative surplus value strategy, the tendency of the organic composition of capital to rise. We can also see how it grows out of the class struggle both in the sphere of production and in the sphere of circulation, and how it therefore becomes an integral part of those struggles.

#### 4. THE FALLING RATE OF PROFIT TENDENCY

The impact on profits of this tendency of the organic composition to rise, and hence on the predisposition to crisis, was worked out first in the *Grundrisse*, and then in *Capital* Volume III. The argument is a simple one, but one with the most profound consequences. Let us outline it briefly: *first*, the rate of profit whose fall would cause a breakdown in the reproduction of capital, is given by the formula:  $s/(c + v)$ . (Note: the variables here are value variables, not monetary variables. The ratio is surplus labor over labor invested, not monetary profit over money costs).

*Second*, if increases of productivity can lower  $v$  toward zero, such that  $s/v$  rises toward infinity, there is still an upper limit on the possible value of  $s$  given by the number of workers, the length of the working day (which cannot even approach 24 hours), and the upper limit on intensity of physical and mental endurance. Therefore, with a rise in  $s/v$  brought on by an extension of the working day, rising intensity, and mainly by rising productivity, the ratio  $s/(c + v)$  will tend, not to infinity, but to  $s^*/c$  where  $s^*$  is the upper limit on the possible value of  $s$ , and  $v$  has gone to zero.

*Third*, the relative surplus value strategy that raises productivity and lowers  $v$  is based on a rise in the organic composition of capital, which, being based on MP/LP, knows no theoretical limits. Therefore, the  $c$  in  $s^*/c$  will rise continuously. Since  $s^*$  is limited,  $s^*/c$  will tend to fall. (Note: the distinction between the organic and value compositions of capital is critical here. Rising productivity in production of MP could lower the value composition, but not the organic composition that is tied to MP/LP.) In short, the outcome of the tendency of the organic composition of capital to rise is an increasing difficulty in extracting surplus value. It takes a larger and larger investment to impose a given amount of surplus labor.

This tendency, which Marx called the most important in the capitalist process of accumulation, is not simply a mathematical formalism, but a social process inherent in the class relation of developing capitalism. There has been so much confusion about this that we will attempt to bring out these aspects more clearly. In *Capital* Volume III, where the most rigorous, mathematical exposition of the tendency is given, Marx gives some indication of the dimension of the problem. He insists repeatedly that:

The progressive tendency of the general rate of profit to fall is, therefore, just an expression peculiar to the capitalist mode of production of the progressive development of the social productivity of labor. (Marx, 1894, p. 213)

Speaking of the source of this movement which lies in the tendency for the organic composition of capital to rise:

This continual relative decrease of the variable capital vis-à-vis the constant . . . is likewise just another expression for the progressive development of the social productivity of labor. . . . (Marx, 1894, p. 212)

Behind the movement of the value relations is the movement of the real relations of production. This is why the organic composition must never be confused with the value composition because it alone reflects the real moment represented by the technical composition.

The most detailed and profound discussion of the real processes involved in the tendency of the organic composition to rise is contained in the *Grundrisse*. There are two points that are very relevant here. (1) The first, which he makes just about everywhere, is capital's "general tendency to drive beyond every barrier to production" (Marx, 1857, p. 415); its "tendency to expand them [labor and value creation] boundlessly" (Marx, 1857, p. 421); "the necessary tendency to raise it [the productive force] to the utmost" (Marx, 1857, p. 422). This emphasis on the endless expansion of capital, its quest for infinitude, is inherent in the class relations. It is neither an *a priori* assumption nor a crude observation. It is the product of capital's need to raise productivity and expand production in the face of workers' struggle.

Secondly, the relatively surplus value strategy necessarily becomes central; the ever greater investment in constant capital, especially labor-replacing machinery, becomes a measure of the development of capital. Symbolically we can see that the technical composition and thus the organic composition of capital,  $c/v$ , become virtual indexes of the degree of development of capital, which is to say of the class relation:

. . . the quantitative extent and the effectiveness (intensity) to which capital is developed as fixed capital indicate the general degree to which capital is developed as capital, as power over living labor. . . . (Marx, 1857, p. 699)

But if the development of science and machinery measure the development of capital, how does the ever-greater employment of these elements of constant capital lead to crisis? Formally, we saw that the crisis, in the form of a tendency for the rate of profit to fall, grew out of the inability to compensate for a rising organic composition,  $c/v$ , by a sufficiently rising  $s/v$ . But the real meaning of this formalism is simple enough. The only way you can get  $s$  in  $s/(c + v)$  to rise with a limited rate of exploitation  $s/v$  is to increase the number of workers; and it is for that reason that capital must expand the mass of  $s$  to compensate for the fall in  $s/(c + v)$ . Yet it is the result of the tendency of the organic composition of capital to rise that the number of laborers tends to be reduced as they are replaced by machines. Certainly workers thrown off in one circuit may be absorbed in another, but the overall tendency remains. Therefore, even the rise in the mass of  $s$  is undermined by this process. What Marx is getting at here is the very observable tendency of capital to create ever larger, more complex production processes, controlled by relatively smaller numbers of workers:

Labor no longer appears so much to be included with the production process; rather, the human being comes to relate more as watchman and regulator to the production process itself. . . . No longer does the worker insert a modified natural thing as middle link between the object and himself; rather he inserts the process of nature, transformed into an industrial

process, as a means between himself and inorganic nature, mastering it. He steps to the side of the production process instead of being its chief actor. (Marx, 1857, p. 705)

The result is that in its efforts to control workers by substituting machinery, capital is ultimately undermining an even more fundamental control mechanism: work itself. If the tendency is for every production process to be automated, human work is decreasingly needed and becomes unimportant in the production of social wealth:

But to the degree that large industry develops, the creation of real wealth comes to depend less on labor time and on the amount of labor employed than on the power of the agencies set in motion during labor time, whose 'powerful effectiveness' is itself in turn out of all proportion to the direct labor time spent on their production, but depends rather on the general state of science and on the progress of technology, or the application of this science to production. (Marx, 1857, pp. 704-5)

But if the production of social wealth is increasingly independent of labor, then capital is undermining its ability to impose work as a condition of social wealth and thus as value:

In this transformation, it is neither the direct human labor he himself performs, nor the time during which he works, but rather the appropriation of his own general productive power, his understanding of nature and his mastery over it by virtue of his presence as a social body — it is, in a word, the development of the social individual which appears as the great foundation- stone of production and of wealth. The *theft of alien labor time on which the present wealth is based* appears as miserable foundation in face of this new one, created by large-scale industry itself. As soon as labor in the direct form has ceased to be the great wellspring of wealth, labor time ceases and must cease to be its measure and hence exchange value (must cease to be the measure) of use value. . . . With that, production based on exchange value breaks down. (Marx, 1857, p. 705)

This is a vivid exposition of the concrete processes expressed by and producing the rise in the organic composition of capital and the tendency for the rate of profit to fall, and also a vision of how this tendency must ultimately undermine the fundamental basis of capitalism, as a system based on the imposition of work through the commodity form.

The process being analyzed here is by no means a mystical one. The crisis results from the reduction of labor power to an inconsequential place in the production process — as capital develops it must invest more and more in order to keep people at work. It is increasingly difficult to convert the time freed from production by the rise in labor productivity, into work (value). On the one hand:

It is thus, despite itself, instrumental in creating the means of social disposable time, in order to reduce labor time for the whole society to a diminishing minimum, . . . But its tendency always, on the one side, to create disposable time, on the other, to convert it into surplus labor. (Marx, 1857, p. 708)

The manifestation of the failure to make that conversion is an increase in the proportion of workers who cannot be employed despite their ability and availability to work. Marx clearly thought that the development of this tendency, which went with the growth of production, would lead the working class to overthrow a system for which they no longer had any need:

Forces of production and social relations — two different sides of the development of the social individual-appear to capital as mere means, and are merely means for it to produce on its limited foundation. In fact, however, they are the material conditions to *blow this foundation sky-high*. (Marx, 1857, p. 706, Emphasis added)

Which is to say capital created the material foundations for its own overthrow by eliminating the need for work in society:

The more this contradiction develops, the more does it become evident that the growth of the forces of production can no longer be bound up with the appropriation of alien labor, but that the mass of workers must themselves appropriate their own surplus labor. Once they have done so — and disposable time thereby ceases to have an antithetical existence — then on one side necessary labor time will be measured by the needs of the social individual, and, on the other the development of the power of social production will grow so rapidly that, even though production is now calculated for the wealth of all, disposable time will grow for all. . . . The measure of wealth is then not any longer, in any way, labor-time, but rather disposable time. (Marx, 1857, p. 708)

In other words, once freed from the need to develop production in such a way that labor and surplus labor are necessary components in order to keep control, production can be developed so as to minimize work; and the tendency toward infinite work, dictated by capital's need for surplus labor, can be replaced by the working class' tendency toward zerowork, infinite free time for the "free development of individualities." (Marx, 1857, p. 708) Thus the paradox that the end of capital will mean both the expansion of production and the reduction of work. It will mean the end of "the positing of an individual's entire time as labor time, and his degradation therefore to mere worker. . . ." (Marx 1857, p. 708)

This contradiction, Marx emphasizes, is a fundamental one in the system:

The contradiction, to put it in a very general way, consists in that the capitalist mode of production involves a tendency towards *absolute development of the productive forces*, regardless of the value and surplus-value it contains, and regardless of the social conditions under which capitalist production takes place; while on the other hand, its aim is to *preserve the value of the existing capital and promote its self-expansion* to the highest limit. . . . (Marx, 1896, p. 249) (Emphasis added)

And it leads directly to interruption of the smooth reproduction process:

From time to time the conflict of antagonistic agencies finds vent in crises. The crises are always but momentary and forcible solutions of the existing contradictions. (Marx, 1894, p. 249)

### C. THE THIRD STAGE OF THE CIRCUIT: C' — M'

Let us now turn to the *third stage* of the circuit of capital and examine Marx's discussion of the predispositions to crisis which lie therein. As in the previous analysis of the forces that predispose the production process to crisis, Marx always supposed that the other stages of the circuit were being completed without difficulty unless otherwise indicated. In the present case he takes as given both the first stage (that MP and LP have been obtained at profitable prices — given the expected price of C') and the second stage (the actual production stage). The third stage C' — M' is again the sphere of exchange. Breakdown occurs if the seller of C' fails to discover buyers with both the desire and the money (M') necessary to purchase C' at prices that will realize the full value of C', and thus the surplus value over the cost-price (c + v) incurred in its production. Among the specific *possibilities* associated with this situation, we discussed (1) the possibility that either the working class or other capitalists may *steal* C' thus undermining its exchange for M' — the working class mainly in the case of MS and capital mainly in the case of MP; (2) the possibility that a C' may be produced that has no use-value and thus no interested

buyer; (3) the possibility that those for whom  $C'$  is a potential use-value fail to have an equivalent (money) equal to its value. This includes the possibility that the production of use values  $C'$  (the proportion of MP and MS) and the distribution of the monetary equivalent  $M'$  (say between buyers of MP and MS) may not be in the same proportion. In that case some buyers will hoard their money and some sellers will fail to complete  $C' — M'$ .

1. In the *first* case we can ask whether there are any forces that tend to lead to theft in the system and the answer is obviously a double yes. The working class' struggle with capital over whether, and at what price it can be forced to work is conditional upon capital forcing it to work for subsistence goods, that is, to accept the mediation of work between themselves and social wealth (a social wealth that we just saw to be decreasingly dependent on work for its production). Thus just as the working class struggles to get higher wages for less work, it often struggles for the direct appropriation of wealth by stealing the  $C'$  it has produced, via on-the-job theft, shoplifting, or appropriation (looting in riots, and so on). To prevent such direct appropriation capital requires the state police apparatus to impose the price-form on workers. The second tendency that predisposes the system toward a breakdown in  $C' — M'$  is in the relation between firms. Competition may include industrial espionage — the theft of products and ideas before they can be sold, of final goods as in highjacking, and of theft by which a  $C'$  which serves as MP is acquired for another capital's production process. Although Marx never integrated these aspects of the breakdown of  $C' — M'$  into his theory of crisis he was very much aware of it and some of his earliest analyses of the class struggle dealt with this. (Linebaugh 1975)

2. The second possibility — that the product may have no social use-value, is inherent in the production of every product:

Use-value in itself does not have the boundlessness of value as such. Given objects can be consumed as objects of needs only up to a certain point. (Marx, 1857, p. 405)

So for any “specific product” there will be a limit to its realization — “as *use value* the product contains a barrier.” (ibid., p. 405) It may be impossible to sell the ever increasing quantity of that product at its value because the need, and hence the demand for it, has declined. Such a decline can obviously occur more or less quickly. When it does occur, this results in overproduction, falling prices, falling profits and crisis — at least for the individual capitalist. Faced with this situation the individual capitalist must either divert his resources into the production of some other good for which there is a need and demand, or go out of business.

3. To divert ones resources into the production of a good for which there is a need, however, would hardly be an adequate response as is indicated by the third possibility of breakdown — namely that need is never equivalent to demand — there must be an equivalent as well as a need. So the question is: is there ever any limit to the availability of an equivalent — money — to buy products that do in fact have a social value? “As new value and as value as such” Marx says, it must have the proper “magnitude of available equivalents, primarily money . . . the surplus value. . . . requires a surplus equivalent.” (Marx, 1857, p. 405) In order to realize surplus value in the accumulation process there must be expansion at several points:

The *surplus value* created at one point requires other points: creation of surplus value at *another* point, for which it may be exchanged; if only, initially the production of more gold and silver, more money. . . . (Marx, 1857, p. 407)

Will such different points be realized — that is, come into existence? Discussing absolute surplus value, Marx indicated some of the ways in which the expansion of production is also simultaneously an expansion of the market:

The creation by capital of absolute *surplus value* — more objectified labor — is conditional upon an expansion, specifically a constant expansion of the sphere of circulation. . . . A precondition of production based on capital is therefore the *production of a constantly widening sphere of circulation*, whether the sphere itself is directly *expanded or whether more points within it are created as points of production* . . . to create more points of exchange; i.e. here seen from the stand point of *absolute* surplus value or surplus labor, to summon up more surplus labor. . . . The tendency to create the world market is directly given in the concept of capital itself . . . to subjugate every movement of production itself to exchange. . . . (Marx, 1857, pp. 407-408)

The expansion of capital, which involves the expansion of the first stage of the circuit M — C(LP,MP) (in other words, the exchange of money for labor power and for means of production), also involves the creation of new points of exchange for the final product, that is points of LP ready to exchange M for MS, and points of capital ready to convert the M obtained for their C' back into more MP. Marx noted that the growing number of wage workers are themselves “independent centers of circulation.” (ibid., p. 419)

He made the same kind of observation concerning the need for an expansion in the case of relative surplus value:

The production of *relative surplus value* . . . requires the production of new consumption; requires that the consuming circle within circulation expands as did the productive circle previously. (Marx, 1857, p. 408)

But if the expansion of capital based on absolute and relative surplus value strategies results in a growth of points of exchange, and in an expansion of the money available to buy the output, there is no reason to think that money will be less than the value of the commodities to be sold. A predisposition to the failure to realize C' — M' has yet to be established.

Not surprisingly the source of the most important tendency, which does establish a predisposition to a realization problem in C' — M' that Marx did discuss, is one that is most directly related to the relation between the classes; namely the tendency for there to be an overproduction of means of subsistence viz not the need, but the ability of the working class to buy them — thus a tendency to underconsumption. On this he approvingly quotes Malthus against Ricardo:

Malthus and Sismondi have likewise correctly remarked that (e.g.) the workers' consumption is in no way in itself a sufficient consumption for the capitalist. (Marx, 1857, p. 413) The demand created by the productive laborer himself can never be an adequate demand, because it does not go to the full extent of what he produces. If it did, there would be no profit. . . . The very existence of a profit upon any commodity presupposes a demand exterior to that of the laborer who has produced it. (Marx, 1857, p. 418)

Although it is true that the expenditure of  $v$  for LP in the first stage of capital creates new points of exchange, the total new value created which must find an equivalent is not  $v$  but rather  $v + s$ . The expansionary process necessary to surplus value and the restricted consumption of the working class predisposes the system to overproduction and to breakdown in C' — M'. Marx here integrates the previous analysis of the drive to expand production through rising productivity

associated with the rising organic composition of capital. Capitalists producing consumer goods (MS) produce under an illusion: each capitalist sees that the working class as a whole constitutes a consuming class, and: “would like the workers of other capitalists to be the greatest consumers possible . . . the whole remaining working class confronts him as consumer.” At the same time: “Every capitalist knows this about *his* workers, that he does not relate to him as producer to consumer and (he therefore) wishes to restrict his consumption, i.e. his ability to exchange, as much as possible. “ (ibid., p. 420) And when each capitalist does this, capital does it collectively — minimizing wages and working class demand and expanding output to realize more profit.

These two tendencies clearly contradict each other, the first gives rise to the illusion that the working class is mainly a consumer: “It seems to the individual capital that the demand of the working class posited by production itself is ‘adequate’ demand,” and so we find that production is driven forward by this illusion. It “must drive it forward beyond the proportion in which it would have to produce with regard to the workers. Now this contradiction and this tendency is accentuated by the dynamic of relative surplus value, in which the value of labor power is driven down at the same time that production is expanded through productivity raising investments in constant capital: “By its nature therefore, it (capital) posits a barrier to labor and value creation in contradiction to its tendency to expand them boundlessly. “ (ibid., p. 421) That barrier is the limitations on: “consumer power based on antagonistic conditions of distribution, which reduce the consumption of the bulk of society to a minimum varying within more or less narrow limits.” (Marx, 1894, p. 244)

This analysis of the tendency to underconsumption, via the breakdown of C’ — M’ is carried on without any reference to the fact that workers also produce industrial goods that capitalists, not workers, buy. Also that workers who produce MP add their demand for consumption goods to that of workers who produce MS. These facts are, however, very much recognized by Marx and dealt with. He does not take all facets into account at once, but rather discovers the existence of predispositions to crisis in various parts of the system, underconsumption is one part of that larger analysis.

His recognition of industrial demand is quite straightforward even while discussing consumption:

Storch, for example, remarked quite correctly against Say that a great part of consumption is not consumption for immediate use, but consumption in the production process, e.g. consumption of machines, coal, oil, required building etc. (Marx, 1857, p. 412-3)

His comments on the production of, and demand for, the means of production are similar to his treatment of consumer goods:

It is quite the same [to be points of centers of circulation] with the demand created by production itself for raw material semi-finished goods, machinery, means of communication, and for auxiliary materials . . . This effective, exchange-value positing demand M-MP is adequate among themselves. Its inadequacy shows itself as soon as the final product encounters its limit in direct and final consumption. (Marx, 1857, p. 421)

This seems to assume correct proportions in industrial demand, yet: “The correct (imaginary) proportions in which they must exchange with one another in order to realize themselves at the end as capital lies outside their relation to one another.” This means, as with the production of consumption goods, the capitalists cannot know as individual buyers and sellers; they cannot see the overall picture. Thus, since the proportions can be wrong; there is a predisposition to be wrong. Once again we see how individual capitalists are driven to expand production despite the inevitable limit to the social use-value of their product, and perhaps even

to the demand, because they cannot see and plan the overall pattern of distribution of consumption and production.

Marx integrated his discussion of the realization problems of both consumer goods and industrial goods with his reproduction schemes. Recall that the division of production into two departments, or the regrouping and summation of the individual capital production MP and MS, gives a condition of equilibrium in expanded reproduction:

**Dept I:** total product value  $C' = C_1 + C_2 + C_1' + C_2'$

**Dept II:** total product value  $C' = V_1 + V_2 + V_1' + V_2'$

The condition of equilibrium shows only that there can be a distribution of production and of demand between the two sectors such that  $C' = M'$  is realized completely in both. It does not however provide any reason to expect that this will happen. In the schemes we see, Marx explicitly recognized that the consumption demands of the workers in Dept II, which are necessarily less than the total value of MS, are complimented by the demands of the workers in Dept I, similarly with capital's demand for MP. This is the desired equilibrium that capital would like to achieve, but which it may not since capitalists act more or less independently.

Are there any forces tending toward disequilibrium? Marx rejects Ricardo's assertion that while there may be overproduction in one branch of production (or departments), there can be no general overproduction because: "if one branch of production does not realize itself then capital withdraws from it to a certain degree and throws itself on another point where it is needed." This important adjustment process is discussed in the formation of the general rate of profit, as capital flows in response to profit differentials:

For this adjustment to take place at all: . . . apart from the fact that this necessity of evening-up already *presupposes* the unevenness, the disharmony and hence the contradiction . . . between capital as directly involved in the production process and capital as money existing (relatively) outside tendency to distribute itself in correct proportions, but labor, surplus productivity, surplus consumption etc. to drive beyond the proportion. (Marx, 1857, p. 413)

Also:

Capital is just as much the constant positing as the suspension of proportionate production. The existing proportion always has to be suspended by the creation of surplus values and the increase of productive forces. But this demand that production should be expanded simultaneously and at once in the same proportion, makes external demands upon capital which in no way arise out of it itself." (Marx, 1857, p. 414)

Again attacking Ricardo:

Thus allegedly there is no general overproduction but merely overproduction of one or a few articles, as against underproduction of others. This again forgets what the reproducing capital demands is not a specific use-value, but value itself i.e. money . . . as a general form of wealth. (Marx, 1857, p. 412)

In other words overproduction in one sector is not compensated for by underproduction in another. Any over production is "production which cannot be transformed into money, into value, production which does not pass the test of circulation," (ibid p, 412) As such it is an interruption in the circuit of capital and a divergence between production and realization,

Elsewhere Marx also speaks of such partial interruption — of some circuits — and of the process of adjustment which overcomes crisis:

It goes without saying that, in the whole of this (observation) it is not denied that too much may be produced in individual spheres and therefore too little in others; *partial crisis* can thus arise from disproportionate production is, however, always only the result of disproportionate production on the basis of competition.

. . . the rise or fall of market-value which is caused by this disproportion, results in the withdrawal of capital from one branch of production and its transfer to another, the migration of capital from one branch of production to another. This equalization itself however already implies as a precondition the opposite of equalization and may therefore comprise crisis; the crisis itself may be a form of equalization. (Marx, 1862-63, II, p. 521)

One can only speak, Marx insisted repeatedly, of the equilibrium tendencies in capital, the adjustments by which proportionality is restored, by recognizing that these tendencies are correctives to other tendencies to disequilibrium or disproportionality. These he located in the fundamental tendency of the system and all its parts (individual capitals) to drive production forward without regard to demand: “It is thus in the nature of capitalist production to produce without regard to the limits of the market.” (ibid p, 522) This is because of both the illusions produced by the system and the associated inability of capital to plan the total distribution of production and demand. These tendencies constitute basic predispositions towards overproduction, which occur concretely only in particular circuits.

This last point leads to the question of the effects of the appearance of overproduction in a given circuit. On the one hand, Marx agreed with Ricardo that capital will respond to the drop in profits by reorienting investment to other lines. But does the breakdown stop there? Is the crisis limited to these scattered interruptions if first one, then another unit of capital drives production beyond either need or demand? Marx argued that it is not. On the contrary, he showed how the breakdown of C’ — M’ reverberates through the system, causing other breakdowns, and how it is generalized to cause a so-called “general overproduction.”

We find a sense of this in Marx’s discussion of how the growth process and the extension of the market pushes out the time lag between production and sale and introduces the space for multiplication of breakdown:

Further, since the circulation process of capital . . . extends over a fairly long period . . . great upheavals take place in the market . . . it is quite clear, that between the starting point, the prerequisite of capital, and the time of its return at the end of one of these periods, great catastrophes must occur and elements of crises must have gathered and develop. (Marx, 1862-3, II, p. 495)

#### D. THE CIRCULATION OF BREAKDOWN

This notion of elements “gathering and developing” was not elaborated, but clearly involves a chain of events between circuits — a circulation of interruption (the “must occur” is a predisposition). Elsewhere he was more precise about these actual mechanisms:

If for instance C’ — M’ stagnates as far as one part is concerned, if the commodity cannot be sold, then the circuit of this part is interrupted . . . the succeeding parts, which emerge from the process of production in the shape of C’, find the change of their functions

blocked by their predecessors. If this lasts for some time production is restricted and the entire process brought to a halt. Every stagnation in succession carries disorder into co-existence, every stagnation in one stage causes more or less stagnation in the entire circuit.” (Marx, 1893, p.103)

This circulation of stagnation and breakdown within the circuit is accentuated by the fact that production and circulation, (P and C' — M') are often carried out by different people. A breakdown in C' — M' is thus not immediately apparent to the producers (P), making the problem of over production worse:

if C' continues to circulate for instance in the hands of the merchant who bought the yarn, this at first does not in the least affect the continuation of the circuit of the individual capital which produced the yarn and sold it to the merchant. This point is important in a discussion of crises. . . . the commodities have entered into consumption only apparently, while in reality they may still remain unsold in the hands of dealers. . . . Now one stream of commodities follows another, and finally it is discovered that the previous streams had been absorbed only apparently by consumption. The commodity-capitals compete with one another for a place in the market. Latecomers to sell at all, sell at lower prices. . . . Then a crisis breaks out. (Marx, 1893, pp. 75-76)

In *Theories of Surplus Value*, in a section called “Overproduction of the Principal Consumer Goods Becomes General Overproduction,” Marx explained in detail how such circulation of interruption may occur. He gave an example of how a breakdown in C' — M' in one circuit would reduce the money of the laid off workers and hence the demand for other goods, including, perhaps, the C' in question:

Now let us return to our example of calico. The stagnation in the market, which is glutted with cotton cloth, hampers the reproduction process of the weaver. This disturbance first affects his workers. Thus they are now to a smaller extent, or not at all, consumers of his commodity — cotton cloth — and of other commodities which entered into their consumption. It is true, that they need cotton cloth, but they cannot buy it because they have not the means, and they have not the means because they cannot continue to produce because too much has been produced, too much cotton cloth is on the market. . . . They now form a part of the temporary surplus population. . . . (Marx, 1862-63, II, p. 522)

But the breakdown in C' — M' meant not only a reduction in LP and hence in LP — M — C, it also meant a reduction in the demand for MP for calico production and thus a reduction in the ability of the suppliers of MP to convert their product C' into M':

But apart from the workers who are directly employed by the capital invested in cotton weaving, a large number of other producers are hit by this interruption in the reproduction process of cotton; spinners, cotton-growers, engineers (Producers of spindles, looms, etc) iron and coal producers and so on. Reproduction in all these spheres would also be impeded because the reproduction of cotton cloth is a condition for their own reproduction. This would happen even if they had not over-produced in their own spheres. . . . (Marx, 1862-3, II, p. 523)

And all of the workers laid off in these industries have their income reduced. Thus LP — M — C is restricted, the failure of calico sales is further accentuated, and problems are caused for other consumer goods producers trying to achieve C' — M'.

Their means for buying calico and other articles of consumption shrink, contract, because there is too much calico on the market. This also affects other commodities (articles of consumption). They are now, all of a sudden relatively overproduced, because the means with which to buy them and therefore the demand for them, have contracted. Even if there has

been no over-production in these spheres, now they are overproducing. “ (Marx, 1862-3 II, p. 523)

In these ways he demonstrated how the interruption of C' — M' could not only move from the sphere of circulation to the sphere of production within that circuit, but to other circuits, and thus circulate the breakdown and generalize the crisis:

If over-production has taken place not only in cotton, but also in linen, silk and woolen fabrics, then it can be understood how over-production in these few, but leading articles calls forth a more or less general (relative) over-production on the whole market. On the one hand there is a superabundance of all means of reproduction and a superabundance of all kinds of unsold commodities, on the market. On the other hand bankrupt capitalists and destitute, starving workers. (Marx, 1862-63, II, p. 523)

Also on the crisis of 1855:

The surplus used to purchase [extra] grain [due to the crop failure] must correspond to a deficit in the purchase of all other products and hence already a decline in their prices. . . . the nation would find itself in a crisis not confined to grain, but extending to all other branches of production. . . . Quite apart from the role of money the nation would thus find itself in a general crisis. . . . A crisis caused by a failure in the grain crop is therefore not at all created by the drain of bullion. . . . (Marx, 1857, p. 129)

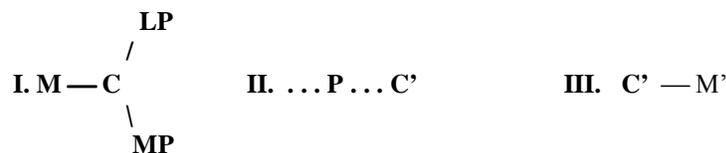
But this is not the only way in which the circulation of breakdown can take place. If we return to the discussion of predisposition to breakdown in the sphere of production, we see that the predisposition to produce boundlessly (derived from the rise in the organic composition of capital and workers struggles), is linked to C' — M' by pushing C' beyond M'. Also breakdowns in production caused by “natural failure” (for example, crop failures) cause interruptions not by making C' greater than M' — but by reducing C' such that M' is not large enough to give an average profit. Such restrictions in the production of C', if C' is an MP, (intermediate good) will cause an impact on all other circuits that use that good as a means of production. Those circuits will be faced with either absolute or relative unavailability, which we discussed with respect to M — C, and thus a shortage of MP, and/or C', or profits (as the price of MP rises):

There are, however, also cases where the over-production of non-leading articles is not the result of over production, but where, on the contrary, under-production is the cause of over-production, as for instance when there has been a failure in the grain crop or the cotton crop. (Marx, 1862-63, p. 531)

Looking at the different sources or predispositions to crisis that Marx analyzed at both the level of the firm and of social capital at the different stages of the circulation of capital, we can now see their interrelatedness. They are not simply an aggregate of tendencies, or worse, an aggregate of theories of crisis, as they are sometimes treated.

### E. LINKAGES

To recall the organization of these tendencies according to the circuit:



The first, and most fundamental, connection between all the stages of the circuit and between several of the tendencies to breakdown is their *common element as a moment in the class struggle*. Sometimes this is straight forward, sometimes less so. In the first stage there is the struggle over whether, and at what price, workers will work and/or give up their means of production. In the second stage there is the struggle over how much work will, in fact, be done. The interconnections of the struggles of these first two stages should be clear both for the workers, and in the way upheaval in one area usually accompanies upheaval in the other. In the third stage we have the inverse of the first, namely whether capital can maintain its control over the product and impose the price form on the working class, as a condition to the renewal of stage one. Most basically then, the most fundamental threat to the breakdown in the system comes from the loss of control over the working class due to the latter's struggles.

The *second* important interconnection is also in the realm of the class struggle, but is less frequently recognized as such. This concerns the way those struggles in both stages I and II, by attacking the basis of profit in the rate of surplus value  $s/v$ , forces capital to constantly expand. This is as true for the individual capital as for capital as a whole. The reduction of absolute surplus value resulting from a shortening and less intensive working day and rising wages, forces capital to use the relative surplus value strategy based on rising productivity, and hence expanding output. Thus both the tendencies to boundless expansion of output and to the rising organic composition of capital are integral parts of the class struggle. This tendency to expand boundlessly to keep ahead of the working class, we have seen affect both stages II and III. In stage II the limits on rising  $s/v$  and endlessly expanding  $c$  (MP) results in the tendency of the rate of profit to fall, and constant production of a redundant population that undermines the work-based system. In stage III the tendency to expand production comes up against the limits of the market, as the patterns of expansion depend on the relative success in stage II of the various capitals in various branches and departments.

Thus the so-called predisposition to disproportionality is linked to the predisposition to expand boundlessly and the tendency of the rate of profit to fall, although the latter may occur without the former and vice-versa. Both stem from the same sources: the expansion of production irrespective of circulation, that is, the expansion of the "substance" of value (work), irrespective of the "form" of value "exchange value." Both are thus aspects of a "plethora of capital" or an "overproduction of capital."

The so-called plethora of capital always applies essentially to a plethora of the capital for which the fall in the rate of profit is not compensated through the mass of profit. . . . This plethora of capital arises from the same causes as those which call forth relative overpopulation, and is, therefore, a phenomenon supplementing the latter, although they stand at opposite poles — unemployed capital at one pole, and unemployed worker population at the other. Over-production of capital, not of individual commodities — although over-production of capital always includes over-production of commodities — is therefore simply over-accumulation of capital. (Marx, 1894, p. 251)

Over-production of capital is never anything more than over-production of means of production — of means of labor and necessities of life-which may serve as capital. . . . (Marx, 1894, p. 255)

Indeed to be comprehensive Marx might well have said that overproduction of capital inevitably includes overproduction of all of its elements: money capital, labor power, commodities, and means of production. The common source of the tendency of the rate of profit

to fall, and of  $C'$  to outstrip  $M'$ , thus lies in the boundless expansion of production, driven on within the dynamic of class confrontation.

At the same time we can see how the relative surplus value strategy, which gives rise to this expansion of production, affects the first stage of the circuit by the particular way in which it achieves that expansion. Because it is based on both a replacement of LP and MP and a cheapening of the elements of LP (that is, MS), the struggles of capital and labor in the sphere of exchange ( $M - LP$ ) are directly affected. On the one hand if the value of LP is going down then it is possible for wages to fall without affecting the reproduction of labor power — if capital has the power to achieve it. On the other hand that power is directly affected by the growth in the unemployed, redundant population that divides workers against each other and puts more pressure on those who are still waged. Moreover the reorganization of reproduction that accompanies the change in technology necessary to the expansion of productivity, also results in a break-up and re-division of the work force in production and thus perhaps in the pattern of workers hired; some are laid off and replaced — irrespective of a decline in the absolute number. In this way the organization of workers and the source of their power based on a certain composition of the work force is undermined through re-division. The same is true with respect to divisions among units of capital and among branches and departments of production. The expansion of capital, as we have seen, takes place unevenly with new branches arising and old ones declining with the change in technology. Thus the overall pattern of the division of labor is changed and any organization of workers based on it undermined. Looking at the same phenomenon from the workers' point of view we can see that the tendencies that Marx describes in the production process: the elimination of workers and the increasing difficulty of converting disposable time into surplus labor time, clearly works to the workers' advantage, not only in giving them more opportunity to organize but also in clarifying their lack of need for the system. In this way the expansion of production effects circulation both fore and aft, both in stage I and stage III.

In this way we can see how not only the motivation for a certain kind of capitalist accumulation is generated within the class struggle but also how the working out of that accumulation process, and its resultant tendencies, is also integral to the struggle. It is shaped by the pattern of relative power between the classes in various circuits, sectors, branches, and departments. Where working class pressure is strongest, and yet capitals' flexibility is sufficient to allow it to develop and adopt new productivity-raising technologies, the expansion will proceed rapidly. Where either the working class is weak, providing no motivation to capital to innovate, or it is strong and capital fails to do so, expansion will be slower. This is the underlying dynamic to the process of *competition* to which Marx has often referred as allocating the various tendencies and effects. Competition is based on profit, and profit for Marx was basically determined by the organic composition of capital and the rate of exploitation — both of which are changed within the struggle between the classes. The capitalists who prove their ability to manage — by keeping profits up — win the competitive battle, expand, and take over more managerial responsibility for a larger number of workers.

And this ability to maintain profits involves both the ability to manage the rise in productivity (increase in  $c/v$ ) and an ability to expand markets, so as to sell all of the product produced. Given the various predispositions for this expansion of production at average profit to break down, then the success of the competitive capitalist (as of capital in general in maintaining growth), is dependent on finding ways to offset these tendencies, with or without crisis.

This brings us to the discussion of the various mechanisms used to offset these tendencies, to the crisis itself, and to the way it recreates the conditions of growth.

## VI. OFFSETTING STRATEGIES AND THEIR CONTRADICTIONS

We have already discussed the most important of capital's strategies to counteract a fall in the rate of (absolute) surplus value, namely the relative surplus value strategy of raising productivity. We now examine briefly several other strategies capital uses to deal with tendencies to crisis at various points in the circuit before turning to the use of crisis itself in the next section.

With respect to the *first stage* of the circuit M — C(LP,MP), let us begin with an examination of the responses to difficulties surrounding the acquisition and value of the *means of production*. In the case of constant capital it is capital's object to offset any tendencies for the value/cost of the means of production to rise by adopting methods that will lower their value/cost. This is partially achieved by raising productivity, or developing new technologies, for example, as natural resources become depleted or scarce. Marx also discussed other methods in *Capital* Volume III. These include: economies of scale; the reduction of waste, raising the quality and durability of machinery, the adulteration of the means of production to cheapen them, and the reduction in such labor-related expenditures as safety measures (Vol. 111, Chapter 5).

In Chapter 14 of Volume III, he added the strategy of foreign trade and foreign direct investment to acquire the elements of constant capital more cheaply. With respect to the acquisition of the means of production, foreign trade is simply an internationalization of M — MP. In the case of direct investment that involves the production of the needed elements of MP as a preliminary to their export, we have a process that also affects the problems of capital in the sphere of production. We will return to this momentarily.

Turning now to the problems surrounding the acquisition and value of *labor power*, we find in Marx all of the various ways that capital tries to control and manipulate the labor market in its own interest. This concerns, most generally, strategies to maintain an excess supply of labor that will keep downward pressure on wages. Capitalist strategies for confronting this problem date from the period of primitive accumulation and the original creation of the working class in-itself. (Marx, 1867, Part VIII) Excess supply in the form of a reserve army has generally been maintained by annexing ever-greater sources of labor and by replenishing the reserves through the introduction of labor displacing machinery. (Marx, 1867, Chapter 25) The expropriation of the rural population at home and the colonialization of rural populations overseas have been the basic means of annexing larger labor reserves. This is true for much of capitalist history whether we are dealing with the creation of the working class, or a capitalist engineered change in the *form* of its relation to capital, for example, from unwaged servitude to waged servitude. In the case of colonialism, direct investment generally has involved the imposition of work on foreign populations, either through a "free" labor market where the coercion lies in economic need, or through direct force as in the case of slavery. The form changes but the principal is the same. As Marx says in the chapter on the working day: "For slave trade, read labor-market, for Kentucky and Virginia, Ireland and the agricultural districts of England, Scotland and Wales, for Africa, Germany." (Marx, 1867, p. 267)

And this brings us to a most fundamental method of labor market manipulation: capitalist engineered *immigration*. From rural-urban or regional migration within a country to international immigration Marx was acutely aware of this method of obtaining and maintaining excess labor

supply. In England, he and Engels commented frequently on the utilization of Irish workers to flood the English labor market. (Marx, 1870, pp. 220-224) In the new world, the major parallel, as the quote in the previous paragraph suggests, was the slave trade where Africa was pillaged to create a massive black labor force. Here too Marx was sensitive to the way in which this unwaged slave labor force was pitted against the waged labor force in the United States. “In the United States of America,” he wrote, “every independent workers’ movement was paralyzed as long as slavery disfigured a part of the republic. Labor in a white skin cannot emancipate itself where it is branded in a black skin.” (Marx, 1867a, p. 414)

In these two cases of immigration to flood a labor market, one “free,” one slave, we observe another basic capitalist strategy to maintain control over labor and hold down costs, both in the sphere of the labor-market and in the sphere of production. This basic strategy is the limitation of the power of the working class to unite by *dividing it against itself*. By definition, to maintain power over the class is to be able to employ it at will — to keep it malleable, homogeneous — and to employ it profitably, that is, underpaid. When it comes to workers’ struggles, the border between the sphere of circulation (LP — M) and the sphere of production fades. Workers organize and struggle for higher wages (LP — M) and better working conditions, shorter hours in production, and so on, pretty much in the same ways and often at the same time. Therefore capital tries to use divisions of production, divisions according to nationality, race, sex or age, and the hierarchy of wages to weaken the class in all spheres. We have just seen divisions by race, nationality and wage/unwaged in the previous cases of immigration. Marx discusses many others.

The use of new technology to divide workers as well as to raise productivity is discussed by Marx at length in Chapters 13-15 in *Capital*. “It would be possible to write,” he suggests, “a whole history of the inventions made since 1830 for the sole purpose of providing capital with weapons against working class revolt.” (Marx, 1867a, p. 563) These weapons work, at least in part, by fragmenting working-class power through redivision. Quoting Ure, “on the introduction of dressing warps in calico production in response to a strike”:

The combined malcontents, who fancied themselves impregably entrenched behind the old lines of division of labor, found their flanks turned and their defenses rendered useless by the new mechanical tactics, and were obliged to surrender at discretion. (Marx, 1867, p. 436)

In discussing the transformation of manufacturing into the factory system, Marx notes, the associated transformation in the composition of the labor force:

. . . a fundamental transformation takes place in the composition of the collective laborer, a change of the persons working in combination. In contrast with the period of manufacture, the division of labor is henceforth based, wherever possible on the employment of women, of children of all ages and of unskilled labourers. . . . (Marx, 1867, p. 461)

In this chapter of *Capital*, Marx repeatedly discusses how the divisions of sex and age are used to weaken the power of the working class. What must not be forgotten is that this utilization of women and children comes along with the machines than are developed and introduced in response to the collapse of absolute surplus value caused by workers’ struggles.

All of these divisions are used to keep  $v$  to the absolute minimum possible as well as to extract the maximum  $s$  and maintain the highest possible  $s/(c + v)$ . When capital moves abroad

with direct investment, this too is a kind of international division of labor aimed in part at higher rates of exploitation:

As concerns capital invested in colonies, etc., on the other hand, they may yield higher rates of profit for the simple reason that the rate of profit is higher there due to backward development, and likewise the exploitation of labor. . . . [low  $c/v$  and high  $s/v$ ]. (Marx, 1894, p. 238)

If capital is sent abroad, this is not done because it absolutely could not be employed at home, but because it can be employed at a higher rate of profit in a foreign country. (Marx, 1894, p. 256)

When we turn to the last stage of the circuit:  $C' — M'$ , Marx identifies at least two important ways that capital responds to the limitations of use-value and demand. These are the expansion of markets and the diversification of markets. The expansion of markets includes not only the efforts of commerce to penetrate every nook and cranny of potential demand at home, but also the international expansion of markets through foreign trade. Marx's comments on this aspect of capitalist strategy are well known, not least of which is the oft-cited passage in the *Communist Manifesto* about cheap goods providing the cannon balls to batter down the walls of China. Less well known are his comments on the diversification of markets that comes with capital's need and ability to escape from the limitations of the markets for present goods:

. . . The surplus labor gained does not remain a merely quantitative surplus, but rather constantly increases the circle of qualitative differences within labor. . . makes it more diverse, more internally differentiated . . . Hence the exploration of all of nature in order to discover new, useful qualities in things; universal exchange of the products of all alien climates and lands; new (artificial) preparation of natural objects, by which they are given new use values. The exploration of the earth in all directions. . . . The creation of new branches of production, i.e., of qualitative new surplus time. . . . Thus capital creates the bourgeois society. . . . (Marx, 1857, pp. 408-409)

Thus a diversified attempt to escape from the limits on production both in the tendency of the rate of profit to fall and the tendency to overproduce with respect to demand.

Yet as capital diversifies and explores the whole world for ever more spheres of production and new markets, it never escapes the underlying tendencies, they are simply offset for the moment. For example, the expansion of sales into other lands is only a short-term palliative:

This same foreign trade develops the capitalist mode of production in the home country [the expanded sales allow production to proceed], which causes [eventually] overproduction in respect to foreign markets [as well as home], so that in the long run it again has an opposite effect. (Marx, 1894, p. 239)

Similarly, each time a new branch of production is launched as a response to the decline of another, it is only a matter of time before it too reaches the limits of the need for its product, thus recreating the interruption.

The last capitalist method to counteract crisis that we will discuss in this section, is the development of the credit system. Here too we will see that this offsetting strategy has its

contradictions. Credit is one of the most important mechanisms for capital to overcome the barriers to production that lie in exchange:

The self-expansion of capital based on the contradictory nature of capitalist production permits an actual free development only up to a certain point, so that in fact it constitutes an imminent fetter and barrier to production, which are continually broken through by the credit system. Hence, the credit system accelerates the material development of the productive forces and the establishment of the world-market. (Marx, 1894, p. 441)

And yet, Marx also saw that the very use of credit to overcome the barriers to the expansion of capital contains forces tending to instability and the actualization of crisis:

The credit system appears as the main lever of over-production and over-speculation in commerce solely because the reproduction process, which is elastic by nature, is here stretched to its extreme limits. . . .

It is the historical mission of the capitalist system of production to raise these material foundations of the new [post-capitalist] mode of production to a certain degree of perfection. At the same time credit accelerates the violent eruptions of this contradiction—crises—and thereby the elements of disintegration of the old [capitalist] mode of production. (Marx, 1894, p. 441)

The credit system tends to “accelerate” the crisis when it comes because of the way chains of credit are built up, much like the chains of interactions that we examined in the relations between individual circuits — but this pyramiding is also a pyramid of paper, of bills drawn on bills, of “fictitious” capital that no longer bears any relation to the real capital on which it was originally based. Marx quoted a Yorkshire banker on the way “[an] enormous superstructure of bills of exchange rests upon the base formed by the amount of bank-notes and gold, and when by events, this base becomes too much narrowed, its solidity and very existence is endangered. . . .” (Ibid p. 401) This superstructure arises and feeds on itself, as bills are drawn on bills. “It is impossible to decide what part arises out of real bonafide transactions, such as actual bargain and sale, or what part is fictitious and mere accommodation paper, that is where one bill of exchange is drawn to take up another running. . . .” (Ibid., p. 401):

These promissory notes, which are issued for the original loan capital long since spent, these paper duplicates of consumed capital, serve their owners as capital to the extent that they are saleable commodities. . . . but . . . they merely convey legal claims to a portion of the surplus value to be produced. . . . But as duplicates which are themselves objects of transactions as commodities . . . they are illusory , and their value may fall or rise quite independently. . . . (Ibid., p. 471)

It is partly as a result of these independent financial fluctuations that the development of the credit system gives rise to speculation and the possibilities of financial collapse. Marx distinguished speculation leading to breakdowns in the financial/credit system from a monetary crisis based on collapse of the commercial and industrial system:

The monetary crisis . . . a phase of every crisis, must be clearly distinguished from that particular form of crisis, which also is called a monetary crisis, but which may be produced by itself as an independent phenomena in such a way as to react only indirectly on industry and commerce. The pivot of these crises is to be found in moneyed capital, and their sphere of direct action is therefore the sphere of that capital, viz. banking, the stock exchange and finance. (Marx, 1867, p. 138)

As example of this kind of crisis Marx cites bankers hoarding cash to “create a scarcity of bank-notes.” Elsewhere on the crisis of 1847, Marx cites many kinds of speculations and swindles that were only possible because of credit. In general this growth of speculation accompanies the expansion of the credit system, which grows with the expansion of capital in general and on a world scale:

. . . with the development of the productive power of labor and thus of production on a large scale: 1) the markets expand and become more distant from the place of production; 2) credits must, therefore, be prolonged; 3) the *speculative element must thus more and more dominate the transactions*. (Marx, 1894, p. 481. Emphasis added)

Thus we can see, while credit provides capital with a means to overcome certain barriers and tendencies to crisis, it also contains its own internal contradictions.

On the one hand, its structure in collapse accelerates the circulation of crisis when it emerges in the industrial sphere. On the other hand, it gives rise to speculation and the possibility of financial collapse that can circulate to industrial production.

## VII. CRISES AS SOLUTIONS TO THE CONTRADICTIONS OF ACCUMULATION

Marx treated crises in a manner similar to other counteracting influences, or offsetting strategies, which capital uses to maintain the basis of its continued expansion. That is to say crises are not merely problems for capital, imposed on it by the working class (the “first moment” of crisis), but if capital is successful, they are converted into their own solution — the means of undermining the power of the working class to rupture accumulation. As solution they constitute the “second moment” of crisis. This is the phenomenon to which Marx is referring when he calls crises “momentary and forcible solutions of existing contradictions. They are violent eruptions which for a time restore the disturbed equilibrium.” (Marx, 1894, p. 249) In these situations crisis appears as one moment of capitalist accumulation. As such, crisis becomes a business-cycle, the recurrent pattern of smooth and ruptured accumulation, of boom-time growth and periodical bust.

The particular ways in which capital can convert crisis into solution depend on the causes of crisis. Wage increases may exceed productivity increases such that the rate of exploitation and the rate of profit fall. The result of this breakdown in capitalist management of M — LP (for example, as a result of the breakdown in capitalist control of workers during a period of rapid accumulation) is a drop in profitability. Capitalists may respond by cutting back on new investment or current production. This capitalist ‘strike’ stops new hiring and leads to the layoff of presently employed workers, both of which increase unemployment. Increased unemployment in turn brings pressure to bear on the remaining wage workers to accept either a slowdown in wage increases or an absolute drop in wages (common enough in Marx’s time):

. . . accumulation slackens in consequence of the rise in the price of labor, because the stimulus of gain is blunted. The rate of accumulation lessens; but with its lessening, the primary cause of that lessening vanishes, i.e. the disproportion between capital and exploitable power-power. The mechanism of capitalist production removes the very obstacles it temporarily creates. The price of labor falls again to a level corresponding with the needs of the self-expansion of capital. (Marx, 1867, p. 619)

Marx felt that capital was able repeatedly to dominate workers' wage struggles through this use of crisis. He notes several times that the downturn in accumulation can control the upward movement of wages: "This reduction of surplus value can never go so far as to threaten the system itself":

The rise of wages is therefore confined within limits that not only leave intact the foundations of the capitalist system, but also secure its reproduction on a progressive scale . . . the very nature of accumulation excludes . . . every rise in the price of labor, which could seriously imperil the continual reproduction, on an ever enlarging scale, of the capital-relation. (Marx, 1867, pp. 620-621)

This pessimistic outlook culminates in a statement which appears to strip the proletariat of its subjectivity and revolutionary potential:

It is these absolute movements of the accumulation of capital which are reflected as relative movements of the mass of exploitable power-power, and therefore seem produced by the latter's own independent movement. To put it mathematically: the rate of accumulation is the independent, not the dependent, variable: the rate of wages is the dependent, not the independent variable." (Marx, 1867, p. 770)

While constantly cited by orthodox Marxists to show the limitations on the potential power of wage struggles, this passage seems totally one-sided. Capital accumulates and sometimes the pace of that accumulation induces rises in wages, sometimes their fall. In contemporary terms the rise and fall of wages are determined by the changing industrial demand for labor.

It is interesting to compare this with the discussion in *Wages, Price and Profit* (Section II). In those two lectures attacking John Weston, Marx argued vigorously in favor of wage struggles, both during periods of expansion and of contraction. Although he maintained that capitalist crisis would set a limit to the upward movement of wages, workers could still push their wages up higher than they would otherwise rise, and prevent them from falling as low as they otherwise would. Wage struggles could rupture capitalist development, at least periodically. Furthermore, since Marx allowed for the possibility of secular increases in wages, and thus presumably a secular increase in the wealth and power of the proletariat, the recurrent crises were expected to get worse and worse. This prognosis was one he held with Engels from the early 1840s on. It thus appears wrong to interpret the foregoing passage, as many have done, as a denial of the subjectivity of the working class, or of the autonomy of its struggles. What is really at issue is the assessment of class power and the relative effectiveness of wage struggle and capitalist strategy.

Furthermore an objectivist interpretation of the passage (on dependent and independent variables) depends on a narrow interpretation of the meaning of accumulation. In the usual interpretation, accumulation is thought of as the reinvestment of surplus value — an act undertaken by the capitalist as distinct from the working class. Yet only pages earlier Marx goes out of his way to emphasize that accumulation is above all the expanded reproduction of the class relation. In this light, accumulation is the expanded reproduction of all of the elements of the class relation. To say that changes in wages are dependent upon accumulation is to say that those changes are dependent on a whole complex of class forces. Read this way, the objectivist appearance fades. Once "accumulation" is not reduced to the notion of capitalist reinvestment narrowly defined, with its effect on labor demand, we retain the whole complexity of the class relations as an analytical framework for investigating both the first moment of this kind of crisis

(when the working class pushes wages growth above that of productivity) and the second moment (when capital wields low investment and higher unemployment against the workers to restore profitable conditions).

When the causes of crisis are to be found in struggles in production (including those underlying wage struggles) then the way capital uses crisis as a solution involves more than unemployment. It involves the process of restructuring the organization of production to fragment workers' organizations and alliances, and thus undermine their collective strength. This restructuring can occur at any level of the division of labor. In his extended discussion of relative surplus value Marx showed repeatedly how technological innovation, embodied in new machinery and new work organization, has been used by capital against workers' struggles. This of course can occur during a period of expansion, but a crisis facilitates such restructuring by devaluing existing capital, and by breaking up existing production. Such pauses in the accumulation process provide individual capitalists with opportunities at precisely the same moment that workers are weakest. Such restructuring of the industrial production process may involve a geographical reorganization as well as a shop-floor or plant reorganization. As we saw in Section VIII, direct overseas investment in areas of lower wages (a weaker proletariat) and higher profits is one option. Factory doors closed in one area during a crisis may be opened in another area where the balance of class forces is more favorable to capital. Such reorganization can amount to a massive restructuring of labor power as one sector of the global working class is substituted for another. This can also be accomplished without geographical mobility through the reorganization of the composition of the labor force between immigrant and local workers, between male and female workers, and so on. Such reorganization of labor power often goes hand in hand with the restructuring of fixed capital.

A final way in which crisis may be used by capital as an opportunity to reorganize itself to raise average profitability, is through industrial reorganization at the level of individual firms, what Marx termed the centralization of capital; the process whereby crisis affects different firms to different degrees. Some go bankrupt and disappear. Others weaken and are taken over by stronger companies. Competition, Marx says, "always ends in the ruin of small capitalists whose capitals partly pass into the hands of their conquerors, and partly vanish completely." It is the "expropriation of capitalist by capitalist, transformation of many small into few large capitals." (Marx, 1867, p. 625)

When capital is able to collectively take advantage of crisis in this way, through the centralization of capital, Marx saw that it would "intensify and accelerate the effects of accumulation." "Centralization simultaneously extends and speeds those revolutions in the technical composition of capital which raise its constant portion at the expense of this variable portion, thus diminishing the relative demand for labor." (Ibid., p. 628) This in turn accentuates other contradictions of accumulation, especially the tendency of the rate of profit to fall. This last contradiction, brought on by the rising organic composition of capital, which requires a larger and larger proportionate investment to put the same number of people to work, appears to capital mainly in the form of unemployment aggravated by automation. The only possible industrial responses to this problem are either the slowing down of labor displacing innovation — and this can only be temporary — or the speeding up of accumulation to create new opportunities to put people to work. We have seen above how the ability to restructure, especially in the form of centralization, may be the means to this acceleration during, and as a result of crisis.

In terms of the impact of crisis on resolving the contradictions of realization, that is, of  $C'$  —  $M'$ , the devaluation of existing commodity capital is perhaps the most common recognized phenomenon. During crisis,  $C'$ , which cannot be sold at value, is either sold under value or

actually destroyed. In both cases production is brought into line with sustainable market demand and capital is forced to adjust the other components of its circuit to the scale of circulation. This recreates the equilibrium conditions for renewed expansion. This is true at the level of the individual circuit of capital and true at the aggregate level of the reproduction schemes — the balance between industrial departments. If the general problems of overproduction and the more specific problem of disproportionality are due to the pressures on capitalist production carrying it beyond the limits of the market, then crisis is the forcible solution that brings supply and demand back into equilibrium.

As for the failure of capitalist price mediation manifested in direct appropriation, although Marx discussed the phenomenon of crime in a number of places, including working class direct appropriation, and considered it a spur to capitalist development, he never (to our knowledge) integrated these discussions with the general topic of crisis. Clearly crime could rupture the circulation of capital — perhaps contributing to the creation of crisis. When capitalist price mediation fails in circumstances of direct appropriation, then capital must seize the occasion provided by the crisis to forcibly reimpose the price form attempting to ensure that  $C'$  actually reaches the market and is realized as  $M'$ .

To summarize, just as the most fundamental contradiction of capitalism is between the classes, so the most fundamental role of crisis-as-solution is restoring the balance of class forces such that capital can resume its growth — that is, growth in its control over the working class and society. The predispositions to crisis show how the fundamental antagonism between the classes over each element of the class relation and each stage of the circuit of capital predisposes the system to rupture. Capital must fight in each case to maintain its control, which is never guaranteed and is constantly challenged. Aspects of capitalist crisis that do not appear immediately as questions of class relations, we have seen to be forms of those relations and their development to be a function of class struggle. For example, competition that appears solely as a relation between individual capitals, thus internal to capital and separate from the working class, we see to be an organizational form through which collective capital selects the best of its managers and discards the rest. The pattern of class struggle is reflected in the uneven success of firms, expansion or closure being one way capital responds to working class pressure during the crisis.

## VIII. CRISIS AND REVOLUTION

Because of the fundamental class antagonism over the organization of society, crisis is permanently imminent in the system. Capital has created its society by imposing its organization of life on humanity, by creating a working class. This working class has developed from a capitalist-defined 'class-in-itself' to a self-defined 'class-for-itself', a class that has developed its subjectivity from that of living labor to that of a potentially revolutionary class subject. In all of Marx's work capitalist crisis is, from the point of view of the working-class subject, a moment not of *breakdown* but of *breakthrough*. If crises for capital are evidence of its loss of control (direct or indirect) over the working class, then we can also turn this relation around and see that the crises are simultaneously the eruption of working-class subjectivity that undermines capitalist control.

For workers the most important thing about capitalist crisis is that it is, for the most part, the consequence of their struggles. The rupture of accumulation by struggle is a moment of

conquest. It is the opening of a breach in the enemy lines in the class war. When the struggle circulates rapidly the breach is widened and whole lines may give away. The working class widens the scope for its own organization and mobilization. The circulation of struggle to more and more sectors of the class and the widening of the space, time and resources available for organizing further struggle, strengthens the class. Even if the struggles that produce and grow out of a crisis are ultimately crushed by capital, they are still important experiences in the development of the working class as revolutionary subject. As Engels wrote in 1845, they are still “the military school of the working-men in which they prepare themselves for the great struggle which cannot be avoided.”

Marx repeated this theme almost two decades later in *Wages, price and Profit* where he saw each and every struggle as a conditioning prelude to revolution. He also took up this theme in *Capital*, Volume I, where he not only chronicled the growth of working class struggle and capitalist crisis (for example, Chapter 10 on the working day) but also outlined the “historical tendency of capitalist accumulation” (Chapter 32), in which he saw that along with the growth of accumulation, centralization and monopoly went, hand in hand, “the revolt of the working class” — a revolt which would ultimately lead to the final rupture of the “integument” of capitalist control and the expropriation of the expropriators.

But what do “expropriation,” and “revolution,” mean? This can only be answered with reference to our understanding of the nature of capitalist control. We have said that the central characteristic of the capitalist organization and control of society is the generalized imposition of commodity producing work, and that capital tries to organize the rest of society so that its activities contribute to the reproduction of human life as the capacity to work for capital. If this is the central substance of capitalist control, then in class terms, crisis and revolution must be defined in terms of the overthrow of capitalist imposed work and of the subordination of life to that work.

We have tried to show, through this essay, how Marx’s analysis of crisis can be interpreted in a non-objectivist way. How the value concepts, the analysis of accumulation and its breakdown can all be understood in terms of the class struggle around work. How, therefore, the pattern of development of capitalist society (including its crisis) is the outcome of the confrontation of two active class subjects, and involves the growth of the working class along with the expansion of capital. From this perspective, revolution appears when working class struggles throw capital into a crisis to which it is unable to fashion a solution. There is no “second moment” of crisis. The rupture of capitalist control spreads and grows, overthrowing more and more of the social relations that capital created to reinforce its imposition of work. We understand by the capitalist “integument is burst asunder” the ripping apart by the working class of the entire capitalist social system shaped around imposed labor. The expropriation of the capitalist is not simply the expropriation of their “property” in any usual sense, it is rather the reappropriation of the whole social order. Moreover, it is clear enough in Marx that expropriation here means the freeing of that social order from capitalist organization such that a wholly new society can be constructed. Thus it means the end of the commodity form, of the fetishism of production, the hierarchy of work, the alienation of labor, and so on.

Although Marx and Engels rarely indulged in utopian speculation about post-capitalist society, their observations of the pattern and content of working class struggle led them again and again to emphasize how the revolutionary destruction of capital would involve, in a fundamental way, the liberation of people from a life sentence of hard labor. Already in 1844 Engels saw in his *Critique of Political Economy* how the development of productivity during the capitalist period would create the possibility of reducing “to a minimum the labor falling to the share of mankind.”

This early insight received extensive theoretical elaboration by Marx in the *Grundrisse*. He clearly perceived how the rise in the organic composition of capital and in the associated productivity of labor reduced the need for work, making its imposition more and more difficult. This creates a problem only for capital. For the working class, on the other hand, it is a continual expansion of its potential ability to reduce necessary labor to a minimum. Revolution must be precisely the creation of a new historical situation in which, as Marx said, “disposable time will grow for all. . . . The measure of wealth is then not any longer, in any way, labor-time, but rather disposable time.” (Marx, 1857, p.708) Of the content of this time, Marx spoke only of the “free development of individualities,” of the expansion of the multidimensional self-defined needs and activities of the working class. Ultimately this is what defines the working class as a revolutionary subject, not only the negative power to abolish capital but the positive power to increasingly define its own needs, to carve out an expanding sphere of its own movement and to create a new world in the place of capitalism.<sup>4</sup>

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<sup>4</sup> In the time since this essay was written two things have become clearer. First, that revolution involves the working class going beyond its status as “working” class to become a multiplicity for which the activities that we now regroup under the rubric of “work” become but moments in a broader process of self-realization. Second, that what the people who make up that multiplicity create in the place of capital is not “a new world” but, as the Zapatistas have pointed out, *many* new worlds whose interaction form the stuff of post-capitalist politics.

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