

and it is of great intellectual elegance and power. In particular, dialectical materialism's theoretical adjunct, historical materialism, is man's most developed, scientific and promising socio-historical theory, and it is already playing a crucial role in historical development. All this has become possible (or at least has been made more possible) because the founders of dialectical and historical materialism did in fact think as materialists and implicitly followed the rules of logic, as formalized in both classical and non-classical logic. This they did in spite of their misunderstanding of the empirical import of the laws of classical logic and the burdensome ambiguity in their Hegelian concepts. Marx, Engels and Lenin could not and would not reject the laws of classical logic and their weak empirical import as we understand them today. To the extent that they did reject the laws of classical logic, they did so only because they were still inside a tradition of misunderstanding of those laws and of the nature of logic in general. Today's dialectical (and historical) materialists no longer have this excuse. The sooner empirical contradictions are defined as functionally interdependent, conflicting or mutually opposing elements or processes *having nothing to do with logical contradictions*, the sooner dialectical materialism will free itself from the vestiges of philosophical idealism, remove unnecessary obscurity and ambiguity from its key concepts, and more readily draw from and give support to the progressive, materialist tendencies in modern science and logic.

*Institute for Theory of Science,  
Göteborg, Sweden*

## THE SPHERE OF PRODUCTION AND THE ANALYSIS OF CRISIS IN CAPITALISM

JOHN WEEKS

THE CURRENT ECONOMIC CRISIS which has swept the capitalist world caught most bourgeois and some Marxist analysts largely unawares. The apparent economic stability of the postwar period—the absence of deep depressions such as occurred during the interwar period—generated a myth of permanent economic stability, and a faith among the bourgeoisie that capitalist economies could expand without limit, with only minor crises. It became fashionable to talk of the "obsolescence of the business cycle." Some of the radical and Marxist literature on the expanded postwar role of the state (particularly the work of Kidron in England),<sup>1</sup> while providing valuable insights, has suggested that the source of postwar stability can be found in the growth of state expenditure.

This paper argues that the attempt to explain the stability of capitalism in the postwar period by the role of state expenditure derives from a fundamental misunderstanding of the nature of crises in the development of capitalism; in particular, from the error of underconsumptionism, which mistakes the *form* of crisis for its cause. But the underconsumptionist theory of crisis is quite widespread; indeed, in the United States underconsump-

<sup>1</sup> For example, M. Kidron, *Western Capitalism Since the War* (London, 1970). This position is examined critically in D. Purdy, "Theory of Permanent Arms Economy—A Critique and an Alternative," *Bulletin of the Conference of Socialist Economists* (Spring, 1973).

tion is a generally accepted doctrine among those on the left. The first section of this paper deals with this doctrine, and the subsequent sections suggest an alternative analysis of the postwar period derived from the basic contradictions of capitalism arising out of the law of value.

### 1. *The Error of Underconsumptionism*

The underconsumptionist thesis sees the cause of crises to be the unequal distribution of income which creates a tendency to overproduction.<sup>2</sup> The "disproportionality" thesis is closely related and will not be considered separately.<sup>3</sup> The argument is that the low income of the masses in capitalist society is the obstacle to the expansion of capital; i.e., the low income of the masses results in a lack of "effective demand," to use the Keynesian phrase, for the commodities produced by expanding capital.<sup>4</sup> Thus, the *cause* of crisis is seen as the inability to *realize* surplus value in the sphere of circulation, the inability to sell what is produced. The role of the state is to alleviate this crisis of overproduction through increased expenditure on goods and services. This analysis is in the tradition of Hobson<sup>5</sup> and Keynes, not Marx.<sup>6</sup>

2 Rosa Luxemburg provided the first major statement of the underconsumptionist thesis. R. Luxemburg, *The Accumulation of Capital* (London, 1963). In *The Theory of Capitalist Development* (London, 1962), Paul Sweezy devotes most of his discussion of crises to underconsumptionist causes.

3 For a critique of disproportionality explanations of crisis, see David S. Yaffe, "The Marxian Theory of Crisis, Capital, and the State," *Economy and Society*, II, 2 (May, 1973), pp. 209-211.

4 This view can be found in such diverse publications on the left as *The Guardian, Class Struggle*, and the *Monthly Review*.

5 "Whatever is produced in England can be consumed in England, provided that the 'income,' or power to demand commodities, is properly distributed." J.A. Hobson, *Imperialism: A Study* (London, 1938), p. 88; and, "My contention is that the system prevailing in all developed countries for the production and distribution of wealth has reached a stage in which its productive powers are held in leash by its inequalities of distribution. . . ." "Introduction" (written for the 1938 edition), p. xii.

6 Marxist underconsumptionists frequently cite the following from *Capital* to support their thesis: "The ultimate reason for all real crises always remains the poverty and restricted consumption of the masses as opposed to the drive of capitalist production to develop the productive forces as though only the absolute consuming power of society constituted their limit." Karl Marx, *Capital* (London and Moscow, 1972), Vol. III, p. 484. As we shall see below, this quotation offers no support to an underconsumptionist interpretation of crises.

The major figures in the development of Marxian theory—Marx himself, Engels, and Lenin—all rejected underconsumptionism as the explanation of crises in capitalism. The error of underconsumptionism can be demonstrated at various levels of abstraction. Most fundamentally, ascribing the cause of crises in capitalism to the inability of capitalists to realize surplus value is tantamount to rejecting the concept of the mode of production:

. . . the underconsumption of the masses, the restriction to what is necessary for their maintenance and reproduction, is not a new phenomenon. It has existed as long as there have been exploiting and exploited classes. . . . The underconsumption of the masses is a necessary condition of all forms of society based on exploitation, consequently also of the capitalist form of production *which first gives rise to crises*. The underconsumption of the masses is therefore also a requisite condition for crises, and plays in them a role which has long been recognized. But it tells us just as little why crises exist today as why they did not exist before.<sup>7</sup>

That is, all societies divided into classes have been and remain characterized by the poverty of the masses of the working people relative to the wealth of the ruling classes. This only *describes* class societies, explaining nothing. Capitalism as a social system is not unique in this regard. But only under capitalism are crises, taking the form of overproduction and widespread unemployment, inherent in the economic system. While it is certainly true that the poverty of the masses is necessary for economic crises, this poverty cannot explain why they occur only under capitalism and not under pre-capitalist modes of production.<sup>8</sup>

At this level of abstraction, the error of underconsumptionism is the confusion of the form of crisis for its cause:

7 Frederick Engels, *Anti-Dühring* (London, 1962), pp. 393-394.

8 Capitalism can be analyzed scientifically only by recognizing and investigating its historical uniqueness. Marx epitomizes this in his critique of bourgeois political economy of his time: "If then we treat this mode of production [capitalism] as one eternally fixed by Nature for every state of society, we necessarily overlook that which is the differentia specifica of the value-form, and consequently of the commodity-form and of its further developments, money-form, capital-form, etc." *Capital*, Vol. I, p. 85, fn. 1. It is precisely this historical understanding of the uniqueness of capitalism that enables us to understand crises.

this is clearly shown in the crisis of the second half of the 1960s, and the failure to make the distinction between *form* and *essence* of social phenomena.<sup>9</sup>

At another level, underconsumptionism results from a profound misunderstanding of the nature of capitalist accumulation. Implicit in the underconsumptionist thesis is the proposition that the engine of accumulation is the growth of individual consumption.<sup>10</sup> In this view, investment by capitalists is derived from, or prompted by, the growth of this consumption demand. That is, it is the growth of the market for "consumer goods" (individual consumption) which determines the rate of accumulation. This line of argument turns the process of accumulation on its head; it is the rate of accumulation itself which determines the growth of individual consumption through determining the level of employment and the value of labor power. Similarly, the size of the market for all types of goods is a *consequence*, not a determinant, of the rate of accumulation. Fundamentally, the problem of "demand" under the capitalist mode of production is resolved through the demand among capitalists for the means of production.<sup>11</sup> This is the sense in which the rate of accumulation can be treated as an independent variable, determined by the state of the class struggle, the degree of centralization of capital, the quality and size of the labor force, and the technical conditions of production.

It must be stressed that we have not argued that crises of realization are not inherent in capitalism. That all crises eventu-

9 This distinction appears in the first chapter of *Capital*. Marx is making this distinction when he writes: "Political economy has indeed analyzed, however incompletely, value and its magnitude, and has discovered what lies beneath these forms. But it has never once asked the question why labour is represented by the value of its product and labour-time by the magnitude of that value." Vol. I, pp. 84-85.

10 Consumption of use values by workers and capitalists for personal needs is "unproductive" in the sense that it does not directly produce surplus value; but in the case of workers, produces the ability to supply the means by which surplus value is later produced (labor power).

11 In his critique of the Narodniks, Lenin wrote: "... the problem of the home market as a separate, self-sufficient problem not depending on that of the degree of capitalist development does not exist at all. This is why Marx's theory does not anywhere or ever raise this problem separately. . . . The 'home market' for capitalism is created by capitalism itself." V.I. Lenin, *The Development of Capitalism in Russia* (Moscow, 1974), p. 69. The first chapter of this book has perhaps the clearest theoretical exposition of the nature of capitalist accumulation outside of *Capital* itself.

ally take the form of a realization crisis is a necessary consequence of the dialectical role which crises play in the capitalist system (discussed below). But to see realization as the cause, or even as the *signal* that the crisis has arrived, is either, in the first case (confusion of cause with form) never to move beyond the sphere of circulation in the analysis; or, in the second case (believing that all crises are heralded by a failure to realize surplus value) to fail to see that the contradictions of capitalism are always resolved to a higher level, only to reappear in more acute and altered form. These points will be explained at length in the next section; but as a final comment on the underconsumptionist thesis, one can do no better than Marx's criticism:

It is sheer tautology to say that crises are caused by the scarcity of effective consumption, or of effective consumers. The capitalist system does not know any other modes of consumption than effective ones, except that of *sub forma pauperis* or of the swindler. . . . But if one were to attempt to give this tautology the semblance of a profounder justification by saying that the working-class receives too small a portion of its own product and the evil would be remedied as soon as it receives a larger share of it and its wages increase in consequence, one could only remark that crises are always prepared by precisely a period in which wages rise generally, and the working-class actually gets a larger share of that part of the annual product which is intended for consumption.<sup>12</sup>

Marx showed that the possibility of crisis is inherent in the capitalist mode of production *on the assumption* that there are no interruptions in the process of circulation; i.e., that surplus value is realized as profit. Surplus value must be realized as profit, and increased wages cannot aid in this realization problem.<sup>13</sup> Here lies the contradiction: if capitalists cannot sell all that they produce, a rise in wages, far from ameliorating the crisis, intensifies it, for this reduces the profit which capitalists could realize were they to sell all they produced. For the system as a whole, the problem of the capitalist class is to realize profit; this problem cannot be reduced by diminishing that portion of the product which capitalists receive.

12 *Capital*, Vol. II, pp. 414-415.

13 See Yaffe, *op. cit.*, pp. 208ff. for a clear explanation. This point is also made in Tom Kemp, *Theories of Imperialism* (London, 1967), pp. 130-131.

The role of the underconsumption thesis as an explanation of crises is practical and immediate. Reformism and the doctrines of social democracy are its logical extension: if crises are caused by insufficient demand, then there is no reason in principle why crises cannot be eliminated or drastically curtailed by either income redistribution (the cure offered by social democrats) or by more reactionary measures such as military spending. On the other hand, if crises are the result of the process of production itself under the capitalist mode of production, as we argue below, they can be eliminated only by the overthrow of capitalism and the building of socialism.

## II. *The Dialectical Role of Crisis*

Equating a failure to realize surplus value with the cause of crisis arises from misperceiving the role of economic crises in capitalism, and, more fundamentally, the nature of capital itself. Capital is self-expanding value. For the system as a whole, stagnation, except in the short run, is not possible. Further, the longer capitalism goes without a major crisis, the more necessary a crisis becomes. These points represent a summary of the argument to which we now turn.

Crises in capitalism arise from the tendency of the rate of profit to fall—changes in values.<sup>14</sup> This tendency is not a *trend*, but a pressure inherent in the self-expansion of capital, which necessitates steps on the part of individual capitalists to counteract the tendency. One of the most important counteracting forces for the system as a whole is the crisis itself. Thus a crisis plays a dialectical role—it is both the *consequence* of the internal contradictions of capital as a social relation, and a measure to resolve those contradictions to a higher level.

Before proceeding further, it is necessary to deal briefly

14 "Involuntary interruptions of an individual circuit [of capital] presuppose a force or disturbance external to the circuit itself. This could be due to the intervention of some influence from outside the spheres of exchange and production, or must otherwise depend upon a previous break in one of these spheres. This is important because it shows that, within the movement of total social capital, crises can only be generated by changes in values, not by the process of circulation itself." Ben Fine, "The Circulation of Capital, Ideology and Crisis," *Bulletin of the Conference of Socialist Economists*, IV, 3 (October, 1973), p. BF6.

with the question of the tendency of the organic composition of capital to rise in the process of accumulation. Throughout the hundred years since the publication of *Capital*, both sympathetic and hostile critics have seized upon this tendency as the focus of their revision of Marx.<sup>15</sup> The critics, whether using bourgeois or Marxian terminology, base their "refutation" upon one apparently telling argument:<sup>16</sup> They point out that technical progress (the revolutionizing of the means of production) can, in principle, reduce the constant capital necessary in production as well as reducing the variable capital (necessary labor time) in production. Often the argument stresses the possibility of technical change increasing the durability of machinery, thus making "capital-saving" possible. The conclusion seems to follow that the direction of change of the organic composition of capital is solely an empirical question.<sup>17</sup>

This line of argument, as Yaffe, and Bullock and Yaffe have shown,<sup>18</sup> involves a rejection or misunderstanding of Marx's analysis. Implicitly, the critics ignore circulating constant capital, and treat only fixed constant capital as such.<sup>19</sup> It is certainly possible for the amount of fixed capital to be economized in production, but fixed capital is only a portion of constant capital. Once it is recognized that raw materials and intermediate goods are important portions of constant capital, a rising organic composition of capital is a self-evident tendency when productivity of labor rises. An increase in the productivity of labor implies that a given amount of labor produces more commodities in a given

15 For a recent statement of the major points of the critique, see G. Hodgson, "The Theory of the Falling Rate of Profit," *New Left Review*, 84 (1974).

16 Gough, for example, takes it as established that there is no inherent tendency for the rate of profit to fall as accumulation proceeds. Ian Gough, "State Expenditure in Advanced Capitalism," *New Left Review*, 92 (1975), p. 57.

17 A detailed critique of this literature is beyond the scope of this paper. Hodgson summarizes the position well and draws the usual conclusion: "... we must bury the last iron law of Marxian political economy—the law of the falling tendency of the rate of profit." Hodgson, *op. cit.*, p. 80.

18 Yaffe, *op. cit.*, and Paul Bullock and David Yaffe, "Inflation, the Crisis, and the Post-War Boom," *Revolutionary Communist* (London), 2-3 (November, 1975).

19 Hodgson is explicit, defining the organic composition of capital as the ratio of fixed capital (k) to "net product" (variable capital plus surplus value, y). (See pp. 60 and 80.) The organic composition of capital was defined by Marx as the ratio of (circulating) constant capital to variable capital (c/v), where the former includes only that part of fixed capital used up in one production period (depreciation).

period of time. In order to do so, labor must process more raw materials and intermediate goods in a given amount of time. This reflects a contradiction of capitalism: increases in the productivity of labor always result in a greater mass of the means of production being set in motion over the production period. This is the *immediate impact* of an increase in the productivity of labor. Certainly there are counteracting tendencies: namely, a) the possibility of the value of the means of production falling relatively, so that the technical composition of capital rises, but the organic composition of capital does not rise as quickly, b) greater durability of fixed capital, so that the value it adds to each commodity falls, and c) revolutions in the means of production which reduce the mass of raw materials and intermediate goods consumed in the production process.

But we are not left with an "agnostic" position (to use Hodgson's term). It is a *necessity* that increases in productivity involve a tendency to put in motion more constant capital. It is a *possibility* that this necessity will be offset by one of the three counteracting tendencies listed above. This relationship between the necessity inherent in accumulation and the possibility of it being counteracted at a particular moment yields a tendency for the organic composition of capital to rise.

With this in mind, we turn to the analysis of crises. In the period of uninterrupted expansion of capitals, several forces are acting to undermine that expansion. The technical composition of capital is rising with the increases in productivity, and with it, eventually, the organic composition of capital in terms of exchange value, which actualizes the latent tendency of the rate of profit to fall. But this rising technical composition of capital proceeds unevenly, so some capitals fall behind in the growth of labor productivity. Thus, in the expanding period the uneven development that characterizes capitalism is accentuated. If no particular forces, such as a sudden rise in raw material prices or state action, trigger the crisis, it will be brought about by the reduction of the reserve army and a general rise in wages.<sup>20</sup> This general rise in wages makes the fall in the rate of profit more

<sup>20</sup> Crises can, and usually do, occur before the reserve army is eliminated. The argument here takes the case of its virtual elimination to demonstrate clearly that crisis arises from the contradictions within the expansionary process.

acute. The actual impulse which turns the crisis into the form of a realization crisis is of incidental importance, though it is the obsession of Keynesians who mistake the starter-switch for the engine. The important point is that once there is a general rise in wages (or even before), a trigger-mechanism for altering the form of the crisis becomes a necessity. For with the reserve army reduced to a low level, individual capitals compete directly over the distribution of the now limited amount of profit; that is, with the reduction of the reserve army, the mass of surplus value which can be created approaches its limit.

It is now inevitable that the crisis must take the form at some point of a crisis of realization, a "recession." For at this point, capitals momentarily reach their maximum expansion, and must turn upon one another for further expansion. This intra-class conflict over surplus value takes the form of a failure to realize surplus value and, therefore, profit. For out of this form of crisis will emerge the potential to produce a greater mass of surplus value and realize this as profit than before. The purpose of the crisis is two-fold: first, to drive down the cost of labor power to the capitalists; but more important in the long run, to eliminate other capitalists and to restructure capital in the system as a whole.<sup>21</sup> The realization crisis leads to the cheapening of individual capitals, and the more efficient capitals seize the moment to "absorb" their less efficient brothers. What is being absorbed, in essence, is the power to purchase labor power in the market.

What is gained in this process of fratricidal conflict is what was denied to the capitalist class before the crisis took the form of an inability to realize surplus value—the possibility of further expansion. Thus the role of the crisis is to raise the average rate of profit (the social productivity of labor) by the elimination of less efficient capitals, which once the limit of the reserve army is approached represent only a dead-weight drag on the rate of profit. It must be emphasized that the necessity to eliminate capitals *results in* the manifestation of the crisis in the form of an inability to realize surplus value. It is not the failure to realize surplus value that is the impulse for the elimination of relatively inefficient capitals, but the contrary—the successful production

<sup>21</sup> See Ben Fine and Laurence Harris, "The British Economy Since March, 1974," *Bulletin of the Congress of Socialist Economists*, IV, 3 (October, 1975).

of the mass of surplus value inherent in the labor force, and its realization as profit, brings about the necessity to eliminate inefficient capitals. At the moment of success the weaker capitals are the barrier to further expansion.

It might be thought that as capitalism passes through crisis after crisis the process of centralization and concentration would so advance that at some stage the contradictions and, thus, conflicts, arising from the competition among capitals would be eliminated. This is the implication of the "monopoly capitalism" school, and from that analysis derives a new interpretation of Marx which stresses that the tendency towards crisis is much less pronounced now than in capitalism's competitive stage.

Below it is argued that the present world crisis refutes such an interpretation. But on a theoretical level it is interesting to note the similarity between the theory of monopoly capitalism—in particular its conclusions about the absence of competition—and Kautsky's analysis of imperialism. Kautsky argued that there was a trend toward a single world cartel, or monopoly, and this trend would eliminate the warring among factions of the capitalist class and end imperialist rivalry.<sup>22</sup> Lenin's reply is an excellent statement on the importance of the dialectical method:

There is no doubt that the development is going in the direction of a single world trust that will swallow up all enterprises and all states without exception. But the development in this direction is proceeding under such stress, with such a tempo, with such contradictions, conflicts, and convulsions—not only economical, but also political, national, etc., etc.—that before a single world trust will be reached, before the respective national finance capitals will have formed a world union of "ultra-imperialism," imperialism will inevitably explode, capitalism will turn into its opposite.<sup>23</sup>

The culmination of the centralizing trend in capitalism toward a single, integrated production system without competition will be reached, of course, but under socialism, when capitalism has turned into its opposite through a convulsive revolutionary upheaval.

<sup>22</sup> See the discussion in Kemp, *op. cit.*, Chap. V.

<sup>23</sup> Lenin's introduction to N. Bukarin, *Imperialism and World Economy* (London, 1972), p. 14.

### III. *The Genesis of the Current Crisis*

We are now in a position to analyze the current crisis and explain its particular form. This form, which differs from that of previous crises (that is, the high rate of inflation accompanying mass unemployment), is the result of the resolution of the contradictions of capital through previous crises. These resolutions to a higher and more intense level have resulted in the state assuming a more prominent and altered form, and have generated in the working class greater strength to defend its material conditions. These two factors, one superstructural (the form and role of the state), the other inherent in the contradictions in the sphere of production (the strength of the working class), are fundamental to the current epoch.

Marxist commentators have tended to explain the period of expansion from the end of World War II to the late 1960s in terms of an alteration in the fundamental laws of capitalism. In particular, it has been argued that the decline of competition has resulted in a suspension of the law of value; that is, the emergence of monopoly capitalism eliminates the inherent tendency of the rate of profit to fall, and as a consequence, sustained expansion of capital or stagnation of the system as a whole (without breakdown) is possible. The essence of this argument is that the tendency for crises and the potential for breakdown have receded.

One need not question that capitalism in each developed capitalist country is in a monopoly stage. But, as Lenin argued in his work on imperialism, it does not follow that competition has been eliminated at an international level. The crisis of the 1930s, and the world war which followed, led to a profound restructuring of capital. During the inter-war years, the process of centralization advanced for capital as a whole. On an international level, however, the competition among large capitals was keen. Indeed, it was this process of centralization which generated the intensified competition among capitals. The much more rapid accumulation of capital in the United States and the emergence of Germany and Japan as capitalist powers laid the material base for the political necessity of a redistribution of world markets, which before World War II were largely dominated by weak capitalist states—Great Britain and France.

Thus, the Great Depression was the vehicle for the restructuring of capital, and the Second World War was the vehicle for the redistribution of markets. The consequence of the war was the temporary elimination of North American capital's rising capitalist competitors (Japan and Germany), and the subordination of the older national capitals (the United Kingdom and France) to secondary status.

This monopoly position of U.S. capital provided the basis for a new phase of accumulation, but inherent in this accumulation was the *reemergence of competition*. As always, capitalism advanced in the grip of dialectical forces in the postwar period—the hegemony of the United States made further accumulation possible, but the recreation of competition was a *necessary* consequence. And the reemergence of competition among capitals on a world scale brought about the current crisis.

In the restructuring of capital, the bourgeois state took on a new and vastly expanded role. This new role had first emerged in the inter-war period, but during the war the tendency towards a stronger state was accelerated tremendously. The new role of the state arose out of the needs of capital, but more profoundly, it represents the political form which contradictions within capitalism assume at their higher and more intensified level.

It is important to understand that it was not the crisis of the 1930s which gave rise to the new role of the state. Such an interpretation derives from a bourgeois "pragmatic" interpretation, and does not explain why previous crises, such as that in the 1890s, did not bring about a "New Deal"-type government in the United States. The growing centralization of capitals in the United States provided the material basis for the expanded state and thus its possibility. The crisis of the 1930s was the historical mechanism for transforming this abstract possibility into actuality. The centralization of capital had two consequences. First, it generated a tendency towards the concentration of the power of the capitalist class into the hands of finance capital, so that the conflicts within the class were repressed in the interests of the advance of capital as a whole.<sup>24</sup> Second, inherent in the centralization of capital is imperialism, characterized by the division

<sup>24</sup> "Repressed," because the conflicts are eliminated by the destruction of, say, smaller capitals, at the level of production; i.e., by absorption into larger capitals.

of world markets and the export of capital. This development, which counteracts the tendency of the rate of profit to fall, places extended demands for military expenditure upon the state. This is clear in the case of the United States. But, again, we do not explain the expanded role of the state in terms of the growth of the military alone. This expanded role must be understood in terms of the total needs of capital in monopoly form.

The growing harmony of interests within the capitalist class, due to fratricidal centralization, made it possible for the class as a whole to transfer more surplus value to the state. The necessity of this transfer arose from the growing instability of capitalism, part of the same process which generated centralization, and the rising strength of the working class. As capital becomes more centralized, the seriousness of a crisis necessary to restructure capital, and to enable it to emerge from the crisis with a higher social rate of profit, increases. This is because the fratricidal struggle during the crisis tends to be among giant financial capitals, which possess great power to endure the crisis of realization and to take advantage of the devaluation of capital through the elimination of their weaker brothers. But as the crisis becomes more profound, the fact that large capitals gain relatively in the crisis is tempered by the possibility that capitalism itself may be destroyed. In other words, each crisis tends to be more severe than the previous, in order to achieve the necessary restructuring of capital, but the same tendency threatens to turn capitalism into its opposite. The role of the bourgeois state is to counteract this tendency.

Out of this dialectic, the state emerges as a rationalizer of competition, acting to lessen the violence of crisis and to try to bring about the restructuring of capital without crisis. In the United States, this second function of the state, restructuring of capital, has played a much less important role than in European capitalist countries.<sup>25</sup>

<sup>25</sup> In the United Kingdom, for example, the restructuring of capital has played a more important role than "demand management," particularly under Labor Governments, beginning with the nationalizations of the 1945-52 period. For the last two Labor Governments (1964-1970 and 1974-present), this has become an obsession—the selective employment tax, the nationalization of strategic industries in crisis, and the National Enterprise Board. See Fine and Harris, *op. cit.*

Integral to the new role of the state was the development of working class consciousness. The severe crisis of the 1930s, while not generating a revolutionary proletariat in the United States, did cause an important leap forward in class consciousness. Growing class consciousness strengthened the resolve of the working class to defend itself through mass action against the return of unemployment rates of the level of the 1930s. The strength of the working class has been an important impetus to reforms like those of the 1930s and the post-war Full Employment Act. Obviously, these measures were taken in the interests of capital, but the strength of the working class forced the interests of capital to take these forms.

Thus, we see the *possibility* of the expanded state to be the result of centralization. Its *necessity* derives from the increased severity of crisis inherent in national capitalism in monopoly form and the emergence of a more militant proletariat. But this new form of the state, arising out of the contradictions of capitalism, does not *resolve* the contradictions, but brings them to a higher level. These contradictions, have reemerged in the present crisis in their altered and more severe form.

We have argued that one of the major functions of the expanded state is to temper the severity of crisis inherent in the monopoly form of capitalism. However, this gain is a limited one, for the crisis itself is one of the counteracting tendencies to the tendency of the rate of profit to fall. Without crises, or with only minor ones, the wage may tend to rise above the value of labor power; but more important, the necessary restructuring of capital does not occur unless achieved in some other manner. Thus, the tempering of crises (reducing the swings of the "business cycle") is a mixed blessing. It not only represses the *symptoms*, but precludes one form of the cure.

The symptoms of the contradictions within the expansion of capital could be repressed so long (from 1945 to the middle 1960s)<sup>26</sup> because World War II had virtually eliminated international capitalist competition. United States capital emerged from the war in a monopoly position in the capitalist world. This ab-

26 It is not being argued that the expansion of U.S. capital was continuous and uninterrupted, but that the tendency for each crisis to become more severe (culminating in the Great Depression) was arrested.

sence of competition temporarily postponed the necessity of re-structuring capital and allowed accumulation to proceed in the absence of major crises. But the underlying contradictions remained. The tendency of the rate of profit to fall lay dormant, but as accumulation proceeded, American capitalism developed in an increasingly fragile manner. Relatively inefficient capitals maintained an artificial hold on life, and larger capitals, in the absence of competition, were not forced to revolutionize the means of production. This is the sense in which monopoly capitalism tends to stagnation,<sup>27</sup> in the social productivity of labor. Thus, United States capital expanded in the post-war period, with a rot at its core, requiring only the reemergence of competition to turn the possibility of crisis into actuality.

The reemergence of competition was *inherent* in the world monopoly position of U.S. capital. Like all synthetic resolutions of contradictory forces in capitalism, within the early post-war monopoly position lay the seeds of its antithesis—competition. The expansion of U.S. capital in the post-war period in face of a catastrophically changed Europe, required the reconstruction of capitalism in these countries. The dialectical situation is clear in retrospect: the destruction of the productive power of the other major capitalist countries (particularly Japan and Germany) was the basis of the U.S. monopoly position; yet, the expansion of U.S. capital and the repression of socialist tendencies in the working classes of the war-ravaged countries required the reconstruction of capitalism in Europe and Japan. Thus the very expansion of U.S. capital progressively eroded the U.S. monopoly position, rebuilding capitalism in Europe and Japan. The only alternative to direct U.S. rule in perpetuity was the fostering of eventual competitors, the local capitalist class.<sup>28</sup>

In the countries of reconstruction it was inevitable that the

27 And not in the sense of stagnation in accumulation; see "Editors," "The Economic Crisis in Historical Perspective," *Monthly Review*, 26, 10 (March, 1975).

28 Why this local capitalist class emerged as *competitive* to U.S. capital and not *complementary* in the war-ravaged countries lies beyond the scope of this article, but the answer lies in the high level of the development of the *social relations of production*. This is in contrast to the development of the national bourgeoisie in backward countries in the imperialist epoch. On the last, see Elizabeth Dore, John Weeks and Bill Bollinger, "The National Bourgeoisie and Revolutionary Struggle," typescript (Lima, September, 1975), available from authors.



technical relations of production would develop at a more rapid rate than in the United States. If the reemerging capitals were to exist at all, they had to develop and utilize more progressive production methods. This is because the first *form* of the reemergence of competition was, and had to be, in the internal markets of the economies under reconstruction. The growing national capitals faced markets dominated by U.S. consumer and producer goods. In this early stage of the growth of the war-ravaged economies, the pressure of competition was hardly felt by U.S. monopoly capital, with its predominant world position. But for the national capitals in each capitalist country, this competition was the major determining factor in accumulation.

In a study of eight industrial capitalist countries and one backward country, Christensen, Cummings, and Jorgenson write:

The ranking of the United States in international comparisons of growth in real output, man-hour productivity, and total factor productivity is always near the bottom. Our study is no exception. . . . During the period 1960-73, the United States ranked eighth of nine countries in growth of real output, ninth in growth of man-hour productivity, and ninth in growth of total factor productivity.<sup>29</sup>

These bourgeois economists find that man-hour productivity in the U.S. grew at 2.8% per annum from 1960 to 1973 (ninth of the nine countries), compared to 8.9% in Japan (the highest) and 3.6% in Canada (the next lowest). Further, in the early post-war years (1947-1960), the U.S. performance was better (3.7% per annum), but ranked next to last, with Germany (Federal Republic) having the highest rate of growth of labor productivity (6.7% per annum). While we must be cautious in using measures derived from bourgeois ideology, the same study finds that the average rate of profit in the United States was falling in the

post-war years; and relevant to the present argument, it began a sharp fall in 1967 (after a rise from 1959 to 1966), *before* the U.S. crisis took the form of a crisis of realization, and fell continuously to 1970, when it began to rise very slightly, but from a level well below 1961-1966.

Thus, we can see that the 1950s, the period of the Japanese and German economic "miracles," was a period in which U.S. capital was continually falling behind in the process by which the means of production are revolutionized, and this tendency accelerated in the 1960s. The possibility of crisis is inherent in capitalism. With the reemergence of competition, the necessity for crisis returned. Only absent was the impulse which would transform possibility into actuality.

We have argued that the *cause* of the current crisis was the activation of the latent tendency of the rate of profit to fall, brought on by the reemergence of competition on a world scale. For the United States, the first symptoms of this crisis were a deterioration in the balance of payments and a pressure on the dollar in international markets. But these symptoms were only the concrete manifestation of the declining relative efficiency of U.S. capital. While the crisis of 1929-1940 first manifested itself in the domestic markets of each country and later in international markets, in the era of capital in monopoly form and state demand-management, the crisis first manifested itself in international markets.

The expanded role of the state, whose material base is national capital in monopoly form, dictated that the crisis would assume the form of accelerating price inflation.<sup>30</sup> The declining competitive position of U.S. capital turned the tendency for the rate of profit to fall into actuality. The fall in the rate of profit reduced the rate of accumulation, and, thus, the rate at which value expanded. In a previous, non-monopolistic epoch, this would have quickly brought the crisis to its form of a failure to realize surplus value. However, in the monopolistic epoch, state fiscal and monetary policy in the years 1962-68 maintained the expansion of the economy counter to the underlying contradic-

29 Their study covers Canada, France, Germany (Federal Republic), Italy, Japan, the Netherlands, the United Kingdom, the United States and Korea. "Total factor productivity" represents a bourgeois attempt to simultaneously account for the productivity of the two "factors," "capital" and "labor." L.R. Christensen, D. Cummings, and D.W. Jorgenson, "An International Comparison of Growth in Productivity, 1947-1973," *SSRI, Workshop Series No. 7531*, University of Wisconsin, Madison (October, 1975), p. 2.

30 From 1962-65 the U.S. GNP price deflator rose at an annual rate of less than 2.0%; from 1965-67, at about 3%; and after 1967, over 4% and rising annually. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

tions which were operating to necessitate a crisis.<sup>31</sup> The action of the state could only postpone the crisis, not eliminate its necessity. State expenditure, while ensuring that the circuit of capital continued unbroken, could not increase the mass of surplus value produced, and the essence of the crisis was (and is) that the mass of surplus value was (and is) too small in relation to capital advanced. In other words, the problem for U.S. capital in the 1960s was not the *realization* of surplus value, but the *production* of it, due to U.S. capital's declining competitive position.

The contradictions go even deeper. Not only could the state not increase the mass of surplus value, but also its growing expenditure,<sup>32</sup> which was aimed at maintaining the rate of accumulation, actually aggravated the problem by directing a larger proportion of surplus value to unproductive expenditure. This is the dialectical contradiction in Keynesian "counter-cyclical" policy: crises are the result of the underproduction of surplus value in the future. Such "counter-cyclical" fiscal policy can be successful only when a crisis is the result of accidental or occasional causes,<sup>33</sup> or when the restructuring of capital has been accomplished and only the impetus to expansion is wanting. When the crisis is a result of *changes in values* (the underproduction of surplus value), "counter-cyclical" policies aggravate the crisis.

This aggravation takes the form of price inflation. The state, through its expenditure, attempts to maintain the rate of accumulation, following the interests of capital; but capitalists in each successive unbroken circuit of capital discover that their realized surplus value is less (absolutely or relatively) and the rate of accumulation declines. After a point, the new value created in

31 From 1962-68, GNP grew at 4-6.5% per annum in real terms (except for 1966-67, when it grew at slightly over 2%). *Ibid.*

32 The proportion of state expenditure in GNP for the second half of the 1960s was

	All	Federal	percentage
			change in GNP
1965	20.0%	9.8%	—
1966	20.9	10.4	6.5%
1967	22.7	11.4	2.3
1968	23.1	11.4	4.7
1969	22.6	10.4	2.7
1970	22.4	9.9	0.5

Source: *Ibid.*

33 For example, changes in "expectations," inventory cycles, etc.

each successive reproductive circuit is less. Inflation is the consequence of the state attempting to maintain the rate of accumulation when the mass of surplus value is contracting relatively or absolutely.

This explains the failure of Keynesian policies in the present crisis and the disarray in which bourgeois economics finds itself as it seeks to account for the present form of the crisis. The disarray is so complete that the capitalist class was even prepared to flirt briefly with the morbid monetary metaphysics of Milton Friedman. The failure of Keynesianism was a result of the absence of a theory of value in this analysis. With its analysis completely in the sphere of circulation, it interprets symptoms (failure to realize surplus value) as causes. Keynesian policies could be effective in the Great Depression (to the extent they were used), because they were employed after the crisis had per-formed its function of reestablishing the basis of accumulation by driving down the cost of reproducing labor power and restructuring capital. Similarly, in the period of U.S. monopoly, when the law of the tendency of the rate of profit to fall lay dormant, Keynesianism had its "golden age." But such "counter-cyclical" policies can never reestablish the basis of profitability. On the contrary, by "smoothing out the business cycle" they postpone the necessary cure, and by draining off surplus value the policies aggravate the crisis.

In the pursuit of its interests, sections of the U.S. capitalist class recognized the impotence of Keynesianism to alleviate the crisis, and in the United States (and other capitalist countries) pressures developed for the reduction of state expenditure.<sup>34</sup> The effect of this is to transform the crisis to its form of an inability to realize surplus value as profit.

This assault upon state expenditure is necessarily an assault upon the working class. While a large proportion of state expenditure may be unproductive (in that it does not produce surplus value),<sup>35</sup> it is nonetheless necessary for the expansion of capital.

34 In current prices U.S. federal government expenditure was 98.8 billion dollars in 1968, the same in 1969, and 96.5 billion in 1970. With inflation, this represented substantial decreases. While federal government purchases of goods and services was in the range of 10.5 to 11.5% of GNP during 1966-69, subsequently it fell to 9 to 10%. Department of Commerce, *op. cit.*

35 Yaffe, *op. cit.*, pp. 225ff. This is a controversial point. Productive labor is defined

Military expenditure is only the most obvious example. Thus, the capitalist class seeks on all levels of government to reduce state expenditure which is least essential to its interests in the short run—expenditure which goes to the working class—"welfare," education, medical care, etc. As in all crises, it is the proletariat, the possessors of the source of value, labor power, which must bear the burden of crisis.

#### IV. Conclusion

This paper has offered an approach to the current crisis, and makes a sharp break with the underconsumptionist thesis. It is in agreement with the position that seeks to shift Marxian analysis in the United States to an emphasis on contradictions of capitalism which arise in the sphere of production. By stressing the central role that contradictions in the sphere of production play, we have consciously played down the sphere of circulation. We have done this, not because we do not see the sphere of circulation as important—indeed, Marx devoted an entire volume of *Capital* to its analysis (a volume sorely neglected).

The analysis of the sphere of circulation has been given little space because it is necessary at the present state of Marxist and radical thought in the United States starkly and unambiguously to differentiate underconsumptionist theories of crisis from the Marxian materialist analysis of crisis. At the risk of oversimplification it is necessary to initiate and advance a debate concerning the nature of crises, with the aim of revealing and isolating the underconsumptionist thesis for demolition. The position that crises are the result of changes in values, the tendency of the rate of profit to fall, requires much more theoretical work. However, its unresolved analytical difficulties can be of no solace to underconsumptionists. As we showed in Section I, the underconsumptionist thesis fails in its own terms; i.e., it cannot explain why economic crises are peculiar to the capitalist mode of production. Marxists must discard this analytical framework and leave it to the Keynesians and neo-Ricardian social democrats.

carefully by Bullock and Yaffe, *op. cit.* For the contrary view, see Ian Gough, "Marx's Theory of Productive and Unproductive Labor," *New Left Review*, 76 (1972).

No analysis that incorporates it can break out of the bounds of reformism.

Once underconsumptionism is left behind, the possibility of theoretical advances in the analysis of the laws of motion of capitalism is again before us. One of the most important areas where theoretical work is necessary is in the analysis of the competition among capitals, a subject dealt with here only in general terms. The idea that the centralization of capital has led to the virtual destruction of competition in the United States is another ideological weapon in the reformist arsenal. It suggests that the ills of capitalism lie in the form which capital takes—monopoly enterprises—not in capital as a social relation, whatever its form. The materialist theory of competition follows from the theory of crisis,<sup>36</sup> and is the extension of contradictions in the sphere of production into the sphere of circulation.

Second, with underconsumptionism behind us, progress can be made on the theory of wages. Once the erroneous idea that the importance of wages lies in their relation to "effective demand," the fundamental importance of variable capital can be explored; namely, its function of providing the means of reproducing the commodity labor power, the source of value. From this insight, one can explore the motor of capitalist accumulation—the driving down of the value of labor power in order to raise the rate of surplus value (the extraction of relative surplus value).<sup>37</sup>

And third, by rejecting underconsumptionism, we can open up the theory of imperialism for theoretical advances along a revolutionary line. The analysis of imperialism has too long been mired in the sphere of circulation,<sup>38</sup> and a clean break must be made with the "search for markets" explanation. The direction along which investigation must go is clear: crises in capitalism are

<sup>36</sup> See Marx, *Capital*, Volume III, Chapter XV.

<sup>37</sup> The use values bought by the wage may rise, of course, as the value of the means of consumption fall relatively to the value of other commodities. A step in the analysis of this process is made in John Weeks, "Relative Surplus Value and the Limits to Capitalist Accumulation in Backward Countries," Ms. Madison, Wisconsin (May, 1975), available from author.

<sup>38</sup> Most clearly seen in the work of the neo-Ricardian Emmanuel, which has been influential on the left. A. Emmanuel, *Unequal Exchange: A Study in the Imperialism of Trade* (London, 1972).

the result of the tendency of the rate of profit to fall, and imperialism in the form of the export of productive capital (as opposed to commodities) represents a countervailing tendency to the pressure on profitability.<sup>39</sup> From this perspective, the excellent work of Bettelheim can be built upon to avoid the errors of the "super-exploitation" and "surplus extraction" thesis of imperialism.<sup>40</sup>

The present economic crisis in the United States is the most severe in thirty years. U.S. capital in the post-war period built up a weight of inefficiency which requires a major restructuring of capital. It remains to be seen if the present crisis has been sufficient to bring about this restructuring. To understand the developments out of the crisis and the subsequent recovery, the materialist method must be applied, with the analysis proceeding from contradictions in the sphere of production. It is in understanding these contradictions that we understand the antagonistic struggle between capital and labor and the revolutionary possibilities inherent in that struggle.

*American University  
Washington, D.C.*

39 Or as Lenin wrote, imperialism is the manifestation of a capitalism "over-ripe." Lenin, *op. cit.* (1973). Bukharin's critique of the underconsumptionist explanation of imperialism is excellent. See R. Luxemburg and N. Bukharin, *The Accumulation of Capital—An Anticipation and Imperialism and the Accumulation of Capital* (New York, 1972), particularly Bukharin's chapter 4 ("The Economic Roots of Imperialism").

40 Charles Bettelheim, "Theoretical Comments by Charles Bettelheim," in Emmanuel, *op. cit.*

## THE SOCIAL RELATIONS OF SCIENCE MOVEMENT (SRS)

AND J.B.S. HALDANE

ROBERT E. FILLNER

**I**N THE DECADE AND A HALF before Hiroshima—in a sharp break with traditional practice—a large section of the English scientific community entered the political arena. They not only brought their scientific expertise, experience and prestige to bear in an attempt to influence public policy, but they carried the overall political struggle into the realm of science.

This involvement of English scientists in politics in the 1930s must be seen against the wider background of newly aroused political consciousness of English intellectuals in general.<sup>1</sup> Jolted out—and jolted left—of their ivory towers by domestic and international political and economic crises, poets, writers, artists, actors, and academics marched into political battle. Events were later to cause cynicism and withdrawal, but England, in the 1930s, witnessed an unparalleled decade of social writing and action on the part of intellectuals.

The most important factor in the radicalization of these groups, of course, was the massive breakdown of capitalism and the simultaneous emergence of the Soviet Union as an alternative economic model. Anti-fascism and disgust with appeasement

1 For a more extended discussion, see Lewis A. Coser, *Men of Ideas: A Sociologist's View* (New York, 1965), especially pp. 233-43; Stuart Samuel, "English Intellectuals and Politics in the 1930s," in *On Intellectuals: Theoretical Studies, Case Studies*, ed. by Philip Rieff (Garden City, N.Y., 1969), pp. 196-247; Neal Wood, *Communism and British Intellectuals* (New York, 1959).