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Keynes, Marx and the Business Cycle

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Marx's analysis of cyclical crises and the role of money in the intensification of crises has been subjected to much discussion and criticism during recent years (Boddy and Crotty 1975; Brandis, 1985; Glyn and Sutcliffe 1972; Foster, 1986; Howard and King, 1985; Roemer, 1981; Sherman, 1979; and Weisskopf, 1979). Brandis, for example, argues that Marx failed to develop a theory which could explain the general form of the business cycle during the course of capitalist development. Howard and King, on the other hand, although considerably more sympathetic to Marx's contribution to the theory of cyclical growth, nevertheless criticize him for not adequately specifying the moment at which a rapid expansion in the boom period would come to an end.

This paper takes issue with these and other interpretations of Marx's analysis of cyclical growth. It also challenges the Brandis interpretation that Keynes's discussion of the cycle owes little or nothing to Marx. This paper thus begins by discussing Keynes's assessment of Marx's contribution to the theory of realization crises in capitalism. The reasons for this approach are twofold: 1) It serves to illustrate the parallels in their criticism of the Classical School's belief that a simultaneous general glut of the market is impossible; and 2) it utilizes the favorable references to Marx's work in Keynes's *Collected Writings* to suggest moderation of the view that the direct effect of Marx's work on Keynes was, at best, negligible (Brandis).[1]

Section II examines whether Marx's theory of the business cycle depends on underconsumptionist tendencies in competitive capitalism. Put differently, did Marx explain the sudden downturn in economic activity by a lack of effective demand on the part of workers and capitalists? The final section presents Marx's supply-side cycle theory. It argues that Marx believed that those factors originating in the production process (viz., the wage-profit relation) were primarily responsible for the downturn and the general form of the cycle. Throughout these two sections Marx's discussion of the industrial cycle is compared to that of Keynes in order to highlight the differences between supply-side and demand-side explanations of cyclical movements.

KEYNES ON MARX AND THE REALIZATION PROBLEM

The references to Marx in the *General Theory* and the *Collected Writings* are in general unfavorable, not so much because Keynes believed that Marx had incorrectly diagnosed the realization problem of capitalism, but because of Marx's vision of its ultimate resolution. Keynes was well aware of Marx's concern with effective demand—the centerpiece of his own analysis—as is clearly revealed by the following passage:

> The great puzzle of Effective Demand with which Malthus had wrestled vanished from economic literature. You will not find it mentioned even once in the whole works of Marshall, Edgeworth and Professor Pigou, from whose hands the classical theory has received its most mature embodiment. It could only live furtively . . . in the underworlds of Karl Marx, Silvio Gesell or Major Douglas [Keynes, 1936, p. 32].

Keynes believed that an adequate understanding of the "great puzzle" of effective demand rested upon a clear notion of the role which money plays in a capitalist economy. In a capitalist economy, as opposed to a barter economy, firms will increase their output only if they expect an increase in their *money* profit.[2] Fluctuations in effective demand will occur when firms' anticipated excess of sales proceeds over variable

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costs (in terms of money) are not realized. These fluctuations, according to Keynes, will be more prevalent in an entrepreneur [capitalist] economy because factors of production are remunerated in terms of a "thing [money] . . . which can be spent on something which is not current output, to the production of which current output cannot be diverted . . . If so, but not otherwise, the use of money is a necessary condition for fluctuations in effective demand" (*Collected Writings,* 1979, Vol. 29, pp. 85–86). By contrast, he observes that involuntary unemployment would be impossible in a co-operative [barter] economy because "only miscalculation or stupid obstinacy can stand in the way of production, if the value of the expected real product exceeds the real costs. But in a monetary (or entrepreneur) economy this is not so;—the volume of output which will yield the maximum value of product in excess of real cost may be 'unprofitable'." [1979, Vol. 29, p. 67].

On this crucial point Keynes shares Marx's view and, in the *Collected Writings* commends him for having realized "that the nature of production in the actual world is not C-M-C', i.e., of exchanging commodity (or effort) for money in order to obtain another commodity (or effort). That may be the standpoint of the private consumer. But it is not the attitude of *business,* which is a case of M-C-M', i.e., of parting with money for commodity (or effort) in order to obtain more money" (1979, Vol. 29, p. 81; Keynes's emphasis). In a footnote on the same page, he even suggests that Marx's analysis of the realization crisis in capitalism is close to that of his own discussion of the problem:

> The excess of M' over M is the source of Marx's *surplus value* . . . [he] was approaching the intermediate truth when he added that the continuous excess of M' over M would be inevitably interrupted by a series of crises, gradually increasing in intensity, or entrepreneur bankruptcy and underemployment, during which, presumably M must be in excess. My own argument . . . should at least serve to effect a reconciliation between the followers of Marx and those of Major Douglas, leaving the classical economists still high and dry in the belief that M and M' are always equal! [1979, Vol. 29, pp. 81–82n; Keynes's emphasis].

Undoubtedly, Keynes's reference to the classical economists was intended as an indictment of the Ricardian school's view that it is impossible for a simultaneous glut of the market to occur (see Ricardo, 1951, Vol. 1, pp. 290–92). Both he and Marx understood that, although the possibility of crises lies solely in the separation of sale and purchase, their actual occurrence would be more likely under capitalism since the means of production have passed into the hands of a minority class whose immediate aim is the expansion of surplus value (see *Capital* I, p. 152). And this conversion of money into capital presupposes that the entrepreneur [owner of money] must "meet in the market with the free labourer, free in the double sense, that as a free man he can dispose of his labour-power as his own commodity, and that on the other hand he has no other commodity for sale, is short of everything necessary for the realization [remuneration in money] of his labour-power" (*Capital* I, p. 1969).[3]

Against this view it might be argued that Say's law is compatible with a situation in which the aggregate excess supply of all commodities (including factors of production) in value terms is just offset by an aggregate excess demand for money. This neoclassical interpretation of Say's law treats money as a store of value which enters into the consumers' budget constraints, but not into their utility functions. In other words, if consumers' aggregate excess demand for money is positive, then the aggregate value of the commodities which agents sell is greater than the aggregate value of those they buy; i.e., they desire to exchange commodities for money in order to replenish their stocks of money. Even Marx contemplated this possibility in *Theories of Surplus-Value* II when he wrote,

> At a given moment, the supply of all commodities can be greater than the demand for all commodities, since the demand for the *general commodity,* money, exchange-value, is greater than the demand for all particular commodities, in other words the motive to turn the commodity into money, to realize its exchange-value, prevails over the motive to transform the commodity again into use-value [pp. 505–50].

However, both Marx and Keynes would have indicated that this situation could only be temporary, since any excess supply of commodities (including factors of production) which prolonged itself for any significant period of time would assert itself by producing a crisis (see *Capital* I, p. 114). The inability of consumers and producers to convert their commodities into money at the existing prices would bring forth

a general price deflation and large spillover effects (Keynesian quantity constraints) that would multiply.[4] In Marx's words,

> They are now, all of a sudden, relatively over-produced, 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 over-producing . . . If over-production has taken place not only in cotton, but also in linen, silk and wollen fabrics, then it can be understood how overproduction in these few, but leading articles, calls forth a more or less (relative) overproduction on the whole market [TSV II, p. 533; see also pp. 502–509].

On the basis of the textual evidence presented above, it is perhaps premature to dismiss the influence of Marx's work on Keynes's economic thinking. Their integration of money into economic theory reveals what they both understood: any important insights into the defects of Say's law and the nature of realization crises rests upon the view that "money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation" (Keynes, 1973, Vol. 13, p. 408; see also pp. 410–11).

DEMAND-SIDE CYCLE THEORIES

Marx's careful analysis of the periodic fluctations in the industrial cycle (as he called it) led him to conceptually distinguish between 1) those factors responsible for the production of surplus-value (and therefore profit), and 2) those conditions that must be present for its full realization (*Capital* III, p. 244). These factors can be conveniently grouped into supply-side and demand-side theories of the business cycle, respectively. Although Marx was the first economist to systematically examine how the production and realization of surplus-value affects the various phases of the industrial cycle, he believed that in the competitive capitalism of his day cyclical downturns are largely the result of supply-side elements; i.e., cyclical crises would be sparked by a sharp fall in the rate of profit even though up until the precise moment of the crisis the surplus-value produced was being *realized.*[5] In other words, a falling rate of profit would not in and of itself create crises. By contrast, Keynes, faced with the economic and human devastation brought about by a mature capitalist system unable to find sufficient outlets to absorb a rising surplus, naturally concentrated on the realization problem (see the *General Theory,* p. 31).

Before examining in some detail Marx's supply-side explanation of cyclical crises, it will be useful to briefly discuss his appraisal of demand-side theories of the industrial cycle. Marx, at times, speaks as if a fall in the rate of profit could be the *direct* result of a lack of purchasing power by the majority of the population. For example, in Volume 3 of *Capital* he states that "The ultimate reason for all real crises remains the poverty and restricted consumption of the masses" (p. 484). Taken by itself this passage gives the impression that Marx subscribed to a demand-led theory of the business cycle which explained the downturn by a lack of effective demand on the part of the working class. That is, the limited demand of workers induces a break between sale and purchase that gives rise to a sharp fall in the rate of profit and thus precipitates a crisis. It is, however, important to recognize that Marx especially warns his readers against adopting a theory which explains crises *solely* in terms of a lack of workers' purchasing power, since it is often the case that during the late expansion of the industrial cycle the wage share is *high,* not low.[6] Effective demand in the Marxian paradigm is generated not only by workers, but also by capitalists in the form of purchases of investment and consumer goods. Marx even demonstrated via his reproduction schema that capitalist reproduction is possible provided that capitalists buy those goods that workers cannot afford to purchase (*Capital* II, pp. 398–402; cf. p. 410).

Unfortunately, some Marxists and mainstream economists have interpreted Marx's criticism of vulgar underconsumptionist theories as a dismissal of all theories focusing on effective demand. Nothing could be further from the truth. The underconsumptionist tendencies of the capitalist system arise, according to Marx, because as expansion takes place during the early phase of the business cycle, the rate of exploitation rises which, by lowering the average propensity to consume (via a falling wage share—not falling absolute real wages), places an increasing "burden" on the capitalist class to absorb ever-increasing amounts of goods if accumulation is to continue without interruption. The burden of the capitalist class, however, is made quite "light" in view of the fact that the rate of profit is raised by 1) the induced higher profit share and 2) a rising rate of capacity utilization and productivity as output expands.[7] Both factors lead to higher investment and further increases in output which, in turn, raise the profit rate once again. Marx believed that competitive capitalism—although continually threatened by a lack of effective demand as a result of the exploitation of labor—would find enough outlets to absorb the increasing surplus by conquering new markets, adopting more efficient techniques of production, and introducing new products. To summarize, although underconsumptionist tendencies could in theory generate a downturn, in practice the binding constraint lay in those factors inherent in the production process itself which Marx thought were *primarily* responsible for the industrial cycle.[8]

Keynes, on the other hand, did not believe that advanced capitalism could generate the investment spending required to offset the fall in the average propensity to consume. He argued in Chapter 16 of the *General Theory* that as capital accumulation rises over time, the marginal efficiency of capital falls at a faster rate than the rate of interest can "fall in the face of institutional and psychological factors" (p. 219). The system, according to Keynes, would "suffer the fate of Midas" if "the propensity to consume and the rate of investment are not deliberately controlled in the social interest but are mainly left to the influences of laissez faire" (1936, p. 219). For Keynes "the paradox of poverty in the midst of plenty" can only be explained by the incontrovertible fact that the system simply did not generate the effective demand needed to insure the full utilization of labor and productive facilities. Later-day Marxists such as Baran and Sweezy (1957; 1966) appreciated the significance of Keynes's contributions on this area and integrated Keynes's secular stagnation thesis with Marxian and Schumpeterian views of capitalism (see Mott, 1986).

Before proceeding to a discussion of Marx's supply-side theory of the industrial cycle, it is useful to keep in mind Marx's remarks on the temporary improvement in the *relative* position of the working-class just before the onset of the crisis.

MARX'S SUPPLY-SIDE CYCLE THEORY

Marx argued that the production of surplus-value and its reconversion into capital for further accumulation are an immanent tendency in the capitalist mode of production. It is personified in the behavior of capitalists who, instead of consuming surplus-value, advance it afresh so that their capital can be reproduced on a *progressively* increasing scale (see *Capital* III, p. 251). This process, according to Marx, would come to a halt . . .

> As soon as capital would, therefore, have grown in such a ratio to the labouring population that neither the absolute working-time supplied by this population, nor the relative working-time, could be expanded . . . i.e., the increased capital $C + \Delta C$ would produce no more, or even less, profit than the capital C before its expansion by ΔC. In both cases there would be a *steep* and *sudden* fall in the general rate of profit, but this time due to a change in the composition of capital *not caused* by the development of the productive forces, but rather by a rise in the variable capital (because of increased wages) and the corresponding reduction of the proportion of surplus labour to necessary labor [*Capital* III, pp. 251–52; my emphasis].

Implicit in Marx's argument is that the surplus-value accumulated during the upswing of the cycle is realized; i.e., the fall in the rate of profit, up until the moment of the crisis, is the result of an increasing organic composition of capital—not the result of a break between purchase and sale.[9] However, a crisis of overproduction is brought about when the mass of profit generated by the marginal capital stops growing or falls. This takes place in the late expansion phase of the industrial cycle when the demand for labor is so strong relative to the supply that not only do absolute real wages rise (the worker's wages in terms of means of subsistence), but *relative* real wages as well (the portion of the working day during which the worker reproduces the value of his labor-power).[10] Put differently, as full employment approaches in the late expansion period the reserve army of the unemployed diminishes to such a point that the bargaining power of labor is temporarily strengthened and workers are able to obtain higher wages and better working conditions. The relative position of the working class is also enhanced in view of the fact that productivity gains tend to diminish in late expansion as inexperienced workers and marginally efficient firms crowd into the market.[11]

However, the lower rate of exploitation (or higher wage share) threatens the raison d'être of the capitalist mode of production by reducing the amount of surplus-value available for accumulation and therefore cannot persist. Capitalists, faced with this sudden and sharp fall in the rate of profit (induced by a lower profit share), react as if they experience realization difficulties and thereby actually create them. Implicit in Marx's argument is the following chain of events: the sharp fall in the profit rate lowers capitalists' current profit expectations on additional investments in the future which, in turn, leads to a fall in current investment, setting off a crisis. (*Capital* III, p. 252–53]. The crisis is further exacerbated by the fierce competitive struggle for dwindling markets among capitalists. This process, according to Marx, culminates in falling commodity prices, a depreciation of capital, a collapse in the chain of payment obligations, and

> . . . the ruin of many small capitalists, whose capitals pass into the hands of their conquerors, partly vanish. Apart from this, with capitalist production an altogether new force comes into play—the credit system which . . . drawing into the hands of individual or associated capitalists . . . the money resources which lie scattered, over the surface of society, in larger or smaller amounts . . . soon becomes a new and terrible weapon in the battle of competition and is finally transformed into an enormous social mechanism for the centralization of capitals [*Capital* I, p. 626; see also *Capital* III, p. 254].

The centralization of capital allows the larger capitalists who have lower unit costs and greater internal sources of funds to avail themselves of the services of a badly damaged credit system, and thus drive out and buy-up the depreciated assets of the smaller capitalists. Competition ". . . drives every capitalist to lower the individual value of this total product below its general value by means of new machines, new and improved working methods, new combinations, i.e., . . . to lower the proportion of variable to constant capital, and thereby release more labourers" (*Capital* III, p. 255).

The increasing rate of exploitation (higher profit share) along with the rising productivity associated with the concentration and centralization of capitals pave the way for the cycle to run its course anew. Marx was quick to add that "the same vicious circle would be described once more under *expanded* conditions of production, with an expanded market and *increased productive* forces" (ibid.; my emphasis). In fact, he was quite unambiguous as to where this process would ultimately lead:

> The accumulation of capital in terms of value is slowed down by the falling rate of profit, to hasten still more the accumulation of use-values, while this . . . adds new momentum to accumulation in terms of value.
>
> Capitalist production seeks continually to overcome these immanent barriers, but overcomes them only by means which again place these barriers in its way on a more formidable scale. The real barrier of capitalist production is capital itself [*Capital* III, p. 250].

The importance of Marx's analysis of the industrial cycle in chapter XV of Volume 3 of *Capital* cannot be emphasized enough. It is by far the most complete discussion of cyclical movements to be found in Marx's work. In it he pinpoints those supply-side factors responsible for the precipitous fall in the profit rate, and then goes on to dethrone the classical proposition advanced by Adam Smith that the fall in the rate of profit is set off by the competition among capitalists.

At this juncture, it is useful to compare Keynes's views on the downward phase of the business cycle with those of Marx. In "Notes on the Trade Cycle" he observes that "the phenomenon of the crisis—the fact that the substitution of a downward for an upward tendency often takes place suddenly and violently" is due "not primarily to a rise in the rate of interest, but a sudden collapse in the marginal efficiency of capital" (p. 315). Interestingly, Keynes, as Marx before him, was of the opinion that the rise in the money rate of interest would be triggered by the "sharp increase in liquidity preference" that *follows* the decline in future profit expectations and in current investment associated with the sharp decrease in the marginal efficiency of capital. In Keynes's words,

> . . . the fact that a collapse in the marginal efficiency of capital tends to be associated with a rise in the rate of interest may seriously aggravate the decline in investment. But the essense of the situation is to be found . . . in the collapse in the marginal efficiency of capital, particularly in the case of those types of capital which have been contributing most to the previous phase of heavy new investment. Liquidity-preference, except

those manifestations of it which are associated with increasing trade and speculation, does not increase until after the collapse in the marginal efficiency of capital [1936, p. 316, Keynes's emphasis; see also pp. 317–18].

However, parallels in their analysis of the downward phase of the cycle end here. Keynes, as previously noted, remained content to analyze the realization problems associated with the fall in the marginal efficiency of capital. He did not turn his analysis toward those factors initiating the sudden collapse in the marginal efficiency of capital. Marx, to his credit, had not only a theory of crises as such, but also hypothesized concerning the general form which the business cycle would take in the course of capitalist development.[12] Furthermore, as shown above, Marx believed that these cyclical crises would increase in magnitude so that capitalism would encounter some well-defined barrier beyond which it would cease to function in its classic form.

Some commentators (Howard and King, 1985) have taken Marx to task for not providing an explanation of the precise moment at which "a burst of accumulation when once under way, must necessarily slow down or come to an end so as to create a crisis" (p. 217); in their opinion, ". . . it [Marx's theory] does not specify a precise theory of the turning-point. It must therefore be extended to show at exactly what *point* disruption occurs; and Marx did not do this" (p. 215). However, as shown above, Marx was quite unambiguous in specifying those conditions necessary for *both* the slowdown and the crisis (collapse of investment) to occur: First, the slowdown in the rate of accumulation (in terms of value)—not accumulation with regard to the *mass* of means of production—would occur when the rate at which the mass of profit increases begins to diminish (see *Capital* III, p. 241). Second, the crisis (disruption of investment) would arise when the demand for labor power to man the increasing number of machines was so powerful that the rise in *relative* wages would lead to a fall in the absolute mass of profit, and therefore, to a sudden and sharp drop in the rate of profit. In Marx's words,

> If the quantity of unpaid labour supplied by the working-class, and accumulated by the capitalist class, increases so rapidly that its conversion into capital requires an extraordinary addition of paid labor, then wages rise, and, all other circumstances remaining equal, the unpaid labour diminishes in proportion. But as soon as this diminution touches the point at which the surplus-labour that nourishes capital is no longer supplied in normal quantity, a reaction sets in: a smaller part of revenue is capitalized, accumulation lags, and the movement of a rise in wages receives a check. The rise of wages therefore is confined within the limits that not only leave intact the foundations of the capitalist system, but also secure its reproduction on a progressive scale [*Capital* I, p. 620; see also *Capital* III, p. 252].

In chapter XV of *Capital* III, Marx makes it quite clear what he means by the statement "the surplus-labour that nourishes capital is no longer supplied in *normal quantity*." He writes,

> Yet it would still be over-production, because capital would be unable to exploit labor to the degree required by a "sound," "normal" development of the process of capitalist production, to a degree which would at least increase the mass of profit along with the growing mass of employed capital; to a degree which would, therefore, prevent the rate of profit from falling *as much* as the capital grows, or even *more* rapidly [p. 255; emphasis added].

Only Dobb (1973) and Sweezy (1970) have emphasized this explanation by Marx, although even they do not explicitly distinguish between changes in relative real wages and changes in absolute real wages. As indicated above, it is the former which matters in explaining the onset of crises.

CONCLUSIONS

Three major conclusions emerge from this comparison of the business cycle theories of Marx and Keynes. First, Keynes saw striking similarities between his own and Marx's analysis of the role of money in the intensification of crises, although he disagreed with Marx's assessment of the future development of capitalism. Second, Marx, contrary to the usual interpretations of his views, did not believe that the underconsumptionist tendencies of competitive capitalism were sufficiently strong to generate a downturn, though he was cognizant of their importance. Lastly, Marx did develop a theory of the business cycle that emphasized the importance of supply-side elements in explaining *both* the slowdown and collapse of investment, and whose clear implication was a cycle which would exhibit a strong tendency to increase in amplitude.

NOTES

1. Joseph A. Shumpeter (1954) credits Marx for effectively criticizing Say's Law and developing that criticism into a body of analysis which is "itself sufficient to give Marx high rank among the workers in this field" (p. 748).
2. In Volume 29 of the *Collected Writings* Keynes makes the poignant observation that "The firm is dealing throughout in terms of money. It has no object in the world except to end up with more money than it started with. That is the essential characteristic of an entrepreneur economy" (p. 89). For further details see his remarks on pp. 86–90.
3. Dudley Dillard (1984), in an interesting paper which compares the works of Keynes and Marx, is also of the opinion that a "thorough-going integration of money into general economic theory is a common characteristic of the economics of Keynes and Marx . . . The thrust in both cases is a polarization of money, on the one hand, and commodities (real output), on the other. In a capitalist society, money differs from other forms of wealth not just in degree but in kind (p. 422).
4. In this regard, Keynes observes in chapter 22 of the *General Theory* that the effective demand of consumers for commodities is initially constrained by the negative impact of the downward shift in the marginal efficiency of capital on the propensity to consume; and secondly, as a result of the increase in unemployment, by their inability to sell all the labor-power they wish to supply (see p. 319).
5. John Bellamy Foster (1986) argues that "Marx's system . . . was historically specific and was thus consciously modeled after conditions pertaining to the freely competitive stage of capitalism" (p. 61). Put differently, he provided little systematic analysis of the monopolistic stage of capitalism.
6. For further detail see *Capital* II, pp. 410–11.
7. During early and mid-expansion, absolute real wages are rising but not as fast as labor productivity. This implies that the profit share, or the rate of exploitation, is rising. Real hourly wages are kept in check by institutional factors (wage contracts) and because unemployment is still high (limited bargaining power). Productivity, on the other hand, is rising sharply due to technological improvements and a fall in the ratio of overhead labor (e.g., maintenance workers) to output. For further details see Thomas Weisskopf, 1979, pp. 341–378.
8. Maurice Dobb (1973) believes that Marx assigned a role to underconsumption which is strictly secondary to that of the falling rate of profit in explaining the nature of crises (see p. 158). cf., M.H. Dobb, *Political Economy and Capitalism,* 1939, p. 115. See also M.H. Dobb, *Studies in the Development of Capitalism,* 1978 (originally 1947), pp. 286–288.
9. For Marx the value-composition of capital refers to the proportion in which capital-value is divided into constant capital (value of means of production) and variable capital (value of labor-power), c/v. Insofar as the value-composition of capital mirrors changes in the technical composition of capital—the material division between the mass of means of production and mass of labor-power employed in the production process—it is called by Marx the organic composition of capital (see *Capital* I, p. 612). The rate of profit (p′) is defined as the ratio of surplus-value (s) to the total capital (C)—the sum of v and c. If we divide numerator and denominator by v we obtain the following compact expression:

$$p' = \frac{s'}{q + 1} \tag{1}$$

where s′ is Marx's rate of surplus-value and q the organic composition of capital. It is clear from equation (1) that the rate of profit must fall if the organic composition of capital rises and the rate of surplus-value remains constant. However, Marx believed that with an increasing organic composition of capital the social productivity of labor would rise in those industries producing wage-goods. This, in turn, would lower the value of labor-power (v) and thus increase the rate of exploitation (s') in relative terms (i.e., for a given absolute length of the working day). Of course, in this case nothing definite can be said about the rate of profit because it will depend upon which variable (s' or q) is rising faster. For further detail see Meek (1967, pp. 130–31) and Sweezy (1970, pp. 102–103).

10. In the Marxian framework, absolute real wages rise for the active part of the labor force because the value of labor power falls by less than the increase in the productivity of labor in the wage-goods industries. Put differently, wages—in terms of the actual commodities received by the worker—would rise at a slower rate than productivity. Relative real wages, on the other hand, refer to the value of the worker's labor power (v) as a proportion of the value of net output (s + v). They would fall with the rise in the productivity of labor in the wage-goods industries except under the exceptional conditions described above. In this connection, it is useful to quote Marx's words of praise for Ricardo in chapter XV of *Theories of Surplus-Value II*. He writes that "it is one of Ricardo's great merits that he examined relative or proportionate wages, and established them as a definite category. Up to this time, wages had always been regarded as something *simple* and consequently the worker was considered an animal. The position of classes to one another depends more on relative wages than on the absolute amount of wages" (p. 419). For further detail see Ramirez (1986); Sowell (1960); and Cottrel and Darity Jr. (1988).

11. The argument that the profit share is "squeezed" as the bargaining power of labor improves during the boom period is found in Boddy and Crotty (1975, pp. 1–17); see also Glyn and Sutcliffe (1972). For further detail on Marx's views regarding the militancy the working class see his chapter entitled "The Struggle between Capital and Labour and its Results" in *Wages, Price and Profit*.

12. In fact, both chapter XV of *Capital* III and chapter XXV of *Capital* I provides us with the most detailed analysis of the cyclical process to be found in Marx's work. Although Marx worked on all three volumes of *Capital* during the mid-1860s (including *Theories of Surplus-Value*), Volume three was painstakingly pieced together by Engels from a number of manuscripts left behind by Marx and published in 1894—more than twenty five years after Volume one was published.

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