

Marx's Theoretical Legacy: A Response to Anthony Brewer*

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ABSTRACT

Economist Anthony Brewer throws down the gauntlet to those who esteem the economic contributions of Karl Marx, arguing in a 1995 article in *History of Political Economy* that the mainstream's evident neglect of these contributions is amply justified by the fact that there was nothing of lasting value in Marx's political economic writing, or at least in the portion thereof that was widely available to economic scholars by the end of the last century. In addition, Brewer posits three criteria that an effective defense of Marx's work must satisfy: 1) the novelty and usefulness of Marx's contributions must be judged according to what he had to say about *economics*, rather than, say, history or sociology; 2) his economic theories must be judged by their capacity to explain *observable* phenomena; and 3), they must be evaluated according to the *causal* mechanisms advanced to explain such phenomena. The purpose of this paper is to answer Brewer's challenge in a manner not fully addressed by the "minisymposium" of respondents featured along with Brewer's article. The response I propose satisfies Brewer's criteria with room to spare, first in that its grounds are drawn solely from the first and third volumes of *Capital*, and second in that the aspects of Marx's argument that I target can be represented in terms of the concepts and methods of contemporary mainstream theory. Specifically, I argue that Marx advanced demonstrably new and arguably relevant theories for the *basis of economic profit* and the *economic nature of firms*.

* Preliminary and incomplete. Comments very welcome, but please do not cite. I have benefitted greatly from extended discussions with Frank Thompson and Michael Lebowitz, but they cannot be held liable for the views expressed herein or for any errors which may remain.

In the lead article of a recent symposium on the contemporary standing of Marxian political economy, Anthony Brewer (1995) asserts that pervasive neglect of Marx's thought by the economics mainstream is fully justified by the inaccuracy, historical redundancy, and/or irrelevance of his economic analysis. Brewer writes:

I maintain that Marx had little to offer, so mainstream neglect can be seen as a natural result of the normal winnowing process....I believe that the problems with Marx's theory are sufficiently severe and obvious, and the overlap with earlier writers (who were already well known) is large enough, that it is rational for a person who is mainly concerned with understanding economic problems to refuse to spend valuable time addressing it seriously. Conceptual incompatibility and ideological bias may have both existed, but *mainstream attitudes toward Marx can be explained without appealing to either* (1995, 113-14; emphasis added).

An examination of the main elements of Marx's economics shows (broadly speaking) that what was new was not helpful and that what was usable was simply a restatement of well-known ideas in new terms... *The point is that Marx added little or nothing useful to the classical heritage* (1995, 139; emphasis added).

In response to Brewer the other contributors to the symposium grant the virtually complete disjunction of mainstream analytical concerns and conclusions from those of Marx, but argue forcefully in support of the modern relevance and significance of Marx's concerns, methods, and (certain of his) predictions (Elliott, 1995, *et al.*).¹ It is likely that the scope and depth of their responses were limited by space constraints.

My intention here is to address Brewer's argument more fully and directly. I want to argue that Marx developed in Volumes I and III of *Capital* at least two original, logically coherent,

¹ Notably, Howard (1995, p. 175) also anticipates (but does not develop) the position advanced here.

and persistently relevant theoretical consequences of the systematic wealth disparities characteristic of capitalism. The first, found primarily in Volume I, depicts capitalist profit and interest as *scarcity rents* rather than as returns to productively necessary psychic costs of risk and abstinence. The second, with important components in both volumes, analyzes the capitalist firm as a mechanism for ensuring sufficient work effort under conditions that would now be referred to as incomplete contracting.

Consequently, Marx's analysis of profit and the nature of the capitalist firm, no less than its modern orthodox counterpart, satisfies the criteria for theoretical relevance and adequacy stipulated by Brewer (114): it is manifestly "...*about economics*," certainly in the sense that it covers ground "normally treated as an economic issue, or covered in economics courses, or discussed in mainstream economic journals..."; it has the "...capacity to explain *observable* phenomena...", particularly with respect to the determination of savings, the incidence of hierarchy in capitalist production relations, the use of incentive schemes in paying workers, the choice of production technology, and the prevalence of capital-owned firms; and it furthermore offers "...*causal* explanations of [such] observable phenomena."

Meeting the spirit of Brewer's challenge requires showing that Marx's contributions were publicly available to early neoclassical economists who initially shaped the orthodox framework. While I address this requirement by focusing attention on Marx's arguments in Volume I (published 1867) and Volume III (published posthumously by Engels in 1894), I will not resist the temptation to look at Marxian works not yet published in the 19th century in order to clarify or extend key aspects of Marx's thought.

If the argument to be developed here is correct it necessarily poses a conundrum with respect to the sociology of economic knowledge: if Marx's theory of capitalist production so thoroughly anticipates modern developments in the mainstream theory of the firm, why isn't this legacy acknowledged in the mainstream literature, at least in the early stages of its development? I believe that Brewer's conclusions have some bearing on this question. While it is not implausible that ideological bias played a role in the mainstream's neglect of Marx's contributions (if for no other reason than as a standard for scholarly triage under the pressures of increasing academic specialization), it is also true that Marx's attempt in volume I of *Capital* to ground his theory of capitalist production in purely value-theoretic terms is demonstrably invalid, as I've argued elsewhere (Skillman 1996, 1999).

1. Profit as a Scarcity Rent

The canonical or textbook neoclassical model of perfectly competitive markets advances two key claims with respect to the nature of profit and interest. First, the latter represent payments for productive services which are costly to supply, and thus up to some level represent ordinary and necessary costs of production. Second, factor mobility assures that suppliers of the relevant inputs will tend to receive *only just* the levels of profit and interest minimally necessary to elicit their services. Thus it is presumptive that no portion of profit or interest will constitute economic rent in long-run equilibrium.

Marx's account of capitalist profit and interest reverses this presumption. Put in neoclassical terms, Marx argues that profit, and consequently interest, represent scarcity rents flowing to capitalists due to class-based wealth inequalities. Of course, this representation is not *logically*

inconsistent with the neoclassical model of competitive markets; indeed, John Roemer shows in great detail how “capitalist exploitation” in something very much like Marx’s sense can arise in a general equilibrium framework. But it certainly runs directly counter to the canonical neoclassical account, and challenges the presumption of perfectly elastic long-run supply of capital and risk-taking services.

My task in this section is two-fold. First, I’ll demonstrate that Marx’s representation of profit and interest as scarcity rents diverges fundamentally from the classical account and the proto-neoclassical analyses that grew out of it. The nearest approximation to Marx’s account is given by Ricardo, but the possibility of persistent rents to capitalists in the latter’s analysis depends on a Malthusian theory of labor supply which is of doubtful relevance for developed capitalist economies.

Second, I will argue that Marx provides a logically coherent and potentially relevant account of profit and interest as scarcity rents. The key point in this regard is that Marx recognized the necessity of explaining the persistence of rents in the face of capital accumulation, and developed a novel and logically consistent basis for this persistence.

The notion of “normal” profit as a necessary cost of production is directly traceable to Adam Smith in *The Wealth of Nations* (hereafter cited as WN). He defines a commodity’s “natural” price as “what it really costs the person who brings it to market,” that is, just sufficient to cover the rents of land, wages of labor, and profits of capital stock minimally necessary to elicit the supply of those inputs (WN 55), and argues that market prices tend toward their respective natural levels (WN 58). Smith also identifies the pains of risk encountered in advancing one’s

capital stock as the basis for a positive natural profit rate (WN 48, 52), and correspondingly argues that other things equal profit rates vary with the degree of risk borne (WN 110-11).²

The determination of interest rates is less clearly spelled out in Smith's account. He represents interest as a "derivative form of revenue" subordinate to profit (WN 52) and suggests that the supply price of interest-bearing capital is positive (WN 96), but does not specify what the basis for a positive "natural" rate of interest would be (aside from covering the expected cost of loan defaults). While Smith allows for psychic costs of saving in the form of a "passion for present enjoyment," he asserts that this passion "is in general only momentary and occasional," and offset by the desire for bettering one's condition (WN 324).

This indeterminacy with respect to the natural rate of interest is echoed in Ricardo's *Principles of Political Economy and Taxation* (hereafter cited as PPET), in which he states that the rate of interest is "ultimately and permanently governed by the rate of profit," (PPET 298; compare 357) without quite specifying the governing relationship.

In contrast, Ricardo's theory of profit differs substantially from that of his predecessor. While he makes a nod to the notion of risk-based opportunity costs of supplying capital (PPET 141), Ricardo's theory of profit determination is driven primarily by his theories of wages, land rent, and macroeconomic equilibrium.

The first pillar undergirding Ricardo's theory of profit is his theory of long-run wage determination. He adopts the Malthusian account of labor supply, implying that wage rates tend toward their historically and culturally given subsistence levels (PPET 116). Combined with the

² However, Smith suggests that above-average levels of risk are not fully compensated by higher expected rates of profit. This assertion is somewhat puzzling in light of his argument in Book I, Chapter 6 that market

ceteris paribus stipulation that profit and wage rates are inversely related (PPET 131), this wages theory allows that profits may constitute scarcity rents at any given time.

But why would profits as scarcity rents persist in the presence of capital accumulation? On this point Ricardo invokes Say's Law, which implies that the expansion of productive capacity through capital accumulation creates its own demand (PPET 290). Consequently, for a given subsistence wage rate, capital accumulation will not tend to depress the rate of profit (PPET 290); in particular, wage pressures not associated with secular increases in the cost of food are strictly temporary (PPET 293).

For Ricardo, then, profits as scarcity rents can only be eliminated through secular changes in the subsistence wage rate. His theory of land rent asserts that the price of food, and thus the subsistence wage rate, is non-decreasing in the level of aggregate economic activity (PPET 139). Given the inverse relationship between profit and wage rates, this implies a tendentially falling rate of profit (PPET 139).

The next great systematizer in the classical tradition is John Stuart Mill. His highly popular and influential *Principles of Political Economy* (first published in 1848 and proceeding through six additional editions in the author's lifetime; cited hereafter as PPE) had as its express purpose the task of bringing classical political economy up to date in light of theoretical developments since Adam Smith's time. Part of this task was to update the classical theory of profit and interest.

While Mill rejects aspects of both Smith's and Ricardo's theories of profit, his own account squares more fully with the opportunity cost-based theory of the former than the (secularly

prices must tend toward their respective natural levels.

declining) scarcity rent notion of the latter. The key point in this regard is that Mill rejects the strict Malthusian logic of wage determination (PPE 347-9), thus allowing that wage rates can persistently rise above the subsistence level. He also explicitly adopts the Smithian notion of profit as risk premium (though he differs from Smith in counting the wages of superintendence as part of profits) (PPE 406).

In a key departure from both Smith and Ricardo, Mill follows Nassau Senior in also positing a positive supply price for capital due to the disutility of abstaining from current consumption (PPE 404). Thus, the opportunity costs of risk and abstinence establish a historically contingent minimum level of profit sufficient to call forth saving with a view to investment (PPE 729). Mill argues that the process of capital accumulation will tend to drive the average profit rate to this minimum (PPE 731), and moreover that this minimum would be “speedily” attained in the absence of counteracting factors (PPE 733). In this account Mill does not differentiate between interest and profit.

In contrast to the classical tradition represented by Smith, Ricardo, and Mill, Marx posits, in effect, a scarcity rent theory of profit that is not driven by a Malthusian mechanism of wage determination. In his account, developed in Volumes I and III of *Capital* (hereafter cited respectively as K.I and K.III) capitalists enjoy rents by virtue of their class monopoly in holdings of productive assets. The latter is not inconsistent with Ricardo’s account. However, Marx is more explicit about the economic basis of profits as scarcity rents, and he offers a unique and logically coherent theory to account for the perpetuation of these rents.

While Marx recognizes the possibility that abstinence from current consumption incurs disutility, he ridicules the notion that costs of abstinence (or supervision) provide a systematic

basis for the existence of profit (K.I 298-300). The *sine qua non* of capitalist profit in Marx's account is class-based wealth inequality. With respect to the capitalist mode of production in particular, Marx emphasizes the polar case in which the working class owns no alienable means of production at all (K.I 272-3). In the absence of this polar condition, capitalists were historically able to extract profits through usury or merchant capital (K.III, Chapters 20 and 36), but the capacity of workers to produce by themselves implies that the stream of profits will be undesirably sporadic and "indecently low" (K.I 936).³

Even granting Marx's polar case of wealth inequality, profits may still be depressed by excessive rates of capital accumulation, as he recognizes (K.I 763). Since Marx rejects the Malthusian theory of population as ahistorical, how does he account for the perpetuation of profits as scarcity rents in the face of capital accumulation? His two-part answer, in the form of "the general law of capital accumulation," is developed in Volume I of *Capital*, Chapter 25. This "law" depends on the existence of secular trend of capital deepening technical change. I want to focus here on the first part of Marx's theory of capital accumulation, which does not depend at all on technical innovation.

Addressing the possibility that excessive capital accumulation might raise wages and correspondingly depress the rate of profit, Marx argues that any such effect is necessarily self-limiting, since a decline in the profit rate also reduces the wherewithal for accumulation:

If the quantity of unpaid labour supplied by the working class and accumulated by the capitalist class increases so rapidly that its transformation into capital requires an extraordinary addition of

³ As I'll discuss in the next section, this polar case is critical to Marx's account for an additional reason: once workers cannot provide collateral for production loans, capitalists must take control of the production

unpaid labour, 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 slows down, and the rising movement of wages comes up against an obstacle. 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 an increasing scale (K.I 771).

This is an entirely plausible, though certainly not empirically guaranteed, basis for the persistence of profits (and interest⁴) in the form of scarcity rents. Essentially this account of capital accumulation requires that savings, and by extension holdings of productive assets in physical or financial form, are starkly income-elastic (such that only the capitalist class saves) and price-inelastic (such that the substitution effect on savings through increases in the profit or interest rate is zero).

While stark, these assumptions are not strikingly at odds with modern capitalist reality. On one hand, savings and holdings of financial assets are both strongly related to family income (Folbre (1995), p. 1.4), while empirical studies conducted in the U.S. do not on the whole reject the hypothesis that the interest-rate elasticity of saving is zero (Hall and Taylor (1993), p. 298).

The static and dynamic components of Marx's theory of profit have each been formalized in the heterodox economics literature. Using the tools of general equilibrium theory, John Roemer

process itself to ensure that workers provide sufficient effort to yield rates of return consistent with given supply and demand conditions in the labor market.

⁴ Marx, like Smith and Ricardo, sees interest as simply a derivative form of profit.

(1983) has shown how class-based wealth inequalities can support rents in a manner consistent with Marx's theory. Correspondingly, Marglin (1984) constructs a "neo-Marxian" theory of saving and dynamic profit rate determination, as well as presenting evidence (which he judges as mixed at best) with respect to neoclassical and non-neoclassical theories of saving.

In sum, I've argued that Marx provided a logically coherent and potentially relevant account of profit as scarcity rents which differs qualitatively from that of Ricardo. Furthermore, most of the theory was laid out in Volume I of *Capital*, with some auxiliary elements provided in Volume III. If this argument is correct, it meets all of Brewer's criteria for judging the validity and significance of Marx's contribution. Despite this, and contrary to Brewer's thesis, Marx's theory was essentially ignored by the neoclassical mainstream.

In his *Principles of Economics* (PE), Alfred Marshall, for example, echoes Mill in supporting an abstinence-based theory of interest, and rejects as unproven Marx's representation of interest as scarcity rent (PE 581). Correspondingly, Marshall explains profit on the basis of the costs of risk-bearing and superintendence (PE 612-13). Marshall's rejection of Marx's account is subsequently echoed, without additional argumentation or evidence, by Knight (1921, p. 27).

2. The Capitalist Firm as a Labor Extraction Device

As discussed above, the *sine qua non* of the capitalist mode of production, the historical precondition for its existence and development as a unique social form, is according to Marx the existence of a class of workers who are "free in the double sense"--free, that is, of legal restrictions in selling their labor power, and of the means of effectively engaging that power (I, p.

940). The existence of such a class presupposes a historical process in which classical and feudal forms of bondage are destroyed and workers are divested of the means of production (pp. 272-73). The latter aspect of the process is detailed in Marx's analysis of "primitive accumulation" (I, Part 8).

Marx associates two critical developments in relations of production and exchange with the capitalist mode of production. The first, as we have seen, involves a qualitative change in the process of capitalist exploitation, such that the appropriation of surplus value proceeds predominantly on the basis of the purchase and consumption of labor power within capitalist production. Marx calls the circuit of capital that operates on this basis *industrial capital* (p. 256), as distinguished from merchant and interest-bearing capital. Furthermore, as we have seen, Marx argues that the latter, historically antecedent forms are subordinated to the circuit of industrial capital.

The second critical feature of the capitalist mode of production is the progressive development of the powers of social labor. The average scale of production grows significantly, based on an increasingly tight integration of production tasks in the labor process, and production is increasingly mechanized, resulting in continual dramatic improvements in the productivity of labor (I, chapters 13-15).

Marx clearly sees a close connection between the fundamental material premise of the capitalist mode of production and its chief correlates. What is the social logic which links the creation of a propertyless and mobile working class to these developments?

Confronting this question returns us to the problem identified in section III. There we saw that Marx's volume I focus on the purchase and consumption of labor power as the essential

basis of capitalist exploitation could not be supported on the basis of the value-theoretic arguments he advances in chapter 5. In particular, these arguments do not provide grounds for distinguishing industrial capital from merchant or interest-bearing capital as the primary vehicle of capitalist exploitation once the class of propertyless workers is created. By the same token Marx's value-theoretic account cannot establish the necessity of capitalist production to developing the productivity of social labor. Thus an alternative basis for these connections must be located in Marx's account.

Exploitation as a Strategic Problem

Returning to the first issue, what explains the predominance of the circuit of industrial capital relative to those of interest-bearing and merchant capital, given the historical pre-conditions of capitalism, and to what extent is this transformation intrinsic to the logic of capitalist exploitation under these pre-conditions? On the surface, this transformation represents only a quantitative change, as suggested by Marx's comment "...it is absurd to compare the level of *this* interest, in which *all* surplus-value save that which accrues to the state is appropriated, with the level of the modern interest rate, where interest, at least the normal interest, forms only one part of this surplus-value"(III, p. 730).

But does this merely quantitative change in the distribution of surplus value reflect a *qualitative* change in the process of appropriating surplus value? For example, could all industrial capitalists return without loss to being simple usurers, and thus save themselves the tribulations of running the production process?

Marx's answer to the latter question is emphatically negative.

It is utter nonsense to suggest that all capital could be transformed into money capital without the presence of people to buy and valorize the means of production....Concealed in this idea, moreover, is the still greater nonsense... *that the capitalist mode of production could proceed on its course without capitalist production*. If an inappropriately large number of capitalists sought to transform their capital into money capital, the result would be a tremendous devaluation of money capital and a tremendous fall in the rate of interest; many people would immediately find themselves in the position of being unable to live on their interest and thus compelled to turn themselves back into industrial capitalists (III, p. 501).

Why is this the case? Marx argues that modern capitalist exploitation takes *effort* on the part of industrial capitalists or their proxies.

Interest-bearing capital is capital *as property* as against capital *as function*. But if capital does not function, it does not exploit workers....[It] is no sinecure to be a representative of functioning capital, unlike the case with interest-bearing capital. On the basis of capitalist production, the capitalist directs both the production process and the circulation process. The exploitation of productive labour takes effort, whether he does this himself or has it done in his name by others (III, p. 503)

It is not immediately obvious why this is so, given that even in the absence of “functioning capital”, usurers were able to “...swallow up everything in excess of the producers most essential means of subsistence” (III, p. 730). Marx’s proximate argument is based on the *class antagonism* between producers and capitalist firm owners:

...this work of supervision necessarily arises in all modes of production that are based on opposition between the worker as direct producer and the proprietor of the means of production. The greater this

opposition, the greater the role that this work of supervision plays (III, p.507; also see CW 32, p.504).

However, this argument simply replaces one question with another. Presumably there was class antagonism between usurers and direct producers, whether or not the latter owned some of their own means of production, and yet, as Marx confirms, usurers extracted a relatively high level of surplus value. Thus the question remains: how can Marx insist that direct capitalist control of production is in some sense necessary for the process of capitalist exploitation given the historical conditions associated with the capitalist mode of production, even though it was manifestly not necessary for extracting surplus value in antecedent circuits of capital?

There is a related question concerning the necessary connection between capitalist control of production and the progressive development of the productive powers of labor.

Marx argues not only that the “antediluvian” circuits of usury and merchant’s capital failed to develop the conditions of production (CW 32, pp. 534-35; III, pp. 452-53, 730-31), but that these forms were *innately* incapable of effecting this transformation.

The most odious exploitation of labour still takes place [on the basis of usury capital], without the relation of capital and labour here carrying within itself *any basis whatever* for the development of new forces of production, and the germ of newer historic forms (Marx 1993, p. 853).

The transition from the feudal mode of production takes place in two different ways. The producer may become a merchant and capitalist...This is the really revolutionary way. Alternatively, however, the merchant may take direct control of production himself. But however frequently this occurs as a historical transition...it cannot bring about the overthrow of the old mode of production by itself, but rather preserves and retains it as its own precondition (III, p. 452).

Clearly Marx considers that the advent of capitalist production corresponded to a fundamental transformation in the logic of class conflict, relating somehow to the creation of a propertyless working class. This transformation is reflected in two distinct levels of Marx's historical-strategic account, which are explored in the next section.

Forms of surplus value and forms of subsumption

Marx identifies two forms of surplus value produced within the capitalist mode of production: *absolute* surplus value, which derives from increasing the length of the working day, and *relative* surplus value, which derives from reducing the portion of newly created value which must be returned to workers in the form of wages (I, p. 432).

In addition, Marx defines two forms of subsumption of labor which he associates with these forms of surplus value: *formal* subsumption, in which capitalists take over but do not technically alter existing methods of production, and *real* subsumption, in which capitalists transform the conditions of production themselves.

The labour process is subsumed under capital...and the capitalist intervenes in the process as its director, manager. For him it also represents the direct exploitation of the labour of others. It is this I refer to as the *formal subsumption of labour under capital* (I, p. 1019).

But on this foundation [of formal subsumption] there now arises a technologically and otherwise *specific mode of production-capitalist production*-which transforms the nature *of the labour process and its actual conditions*. Only when that happens do we witness the *real subsumption of labour under capital* (I, pp. 1034-35).

Forms of subsumption correspond closely to the respective forms of surplus value.

If the production of absolute surplus-value was the material expression of the formal subsumption of labour under capital, then the production of relative surplus-value may be viewed as its real subsumption. At any rate, if we consider the two forms of surplus value, ...we shall see that absolute surplus-value always precedes relative. To these two forms of surplus-value there correspond two separate forms of the subsumption of labour under capital, or two distinct forms of capitalist production (I, p. 1025; also see CW 34, p. 95).

As I'll spell out in more detail below, the common premise underlying these strategic connections, translated into mainstream microtheoretic language, is that markets are *incomplete* in the sense that capitalists cannot secure the gains associated with absolute or relative surplus value simply by stipulating the desired outcomes in appropriately specified labor contracts (Holmström and Tirole 1989). Marx invokes incompleteness of this sort in arguing that capitalists can only purchase the capacity to labor rather than contracting for specific labor contributions (I, p. 344). The primary consequence is that capitalists must exert control over production to maximize the rate of labor extraction.

Formal Subsumption and Absolute Surplus Value

Marx identifies two strategic variables in the determination of absolute surplus value, the effective length of the working day and the intensity of labour, which must be maintained in order for a longer working day to be translated into greater surplus value (I, p. 303). These variables are determined strategically in the workplace rather than by the logic of competitive commodity exchange (p. 344).

Thus, capitalists seek to increase the quantity and intensity of labor performed.

[The capitalist] will strive as hard as possible to raise [the worker's] output above this *minimum* [determined by the social average of intensity] and to extract as much work from him as possible in a given time. For every intensification of work above the *average rate* creates surplus-value for him. Furthermore, he will attempt to extend the labour process as far as possible beyond the limits which must be worked to make good the value of the variable capital invested... (I, p. 987).

To accomplish these goals, capitalists must directly oversee the production process.

...if the value of constant capital is not to be eroded, it must as far as possible be consumed productively and not squandered...it is here that the *supervisory responsibility of the capitalist* enters. (He secures his position here through piece-work, deductions from wages, etc.) He must also see to it that the work is performed in an orderly and methodical fashion and that the use-value he has in mind actually emerges *successfully* at the end of the process. At this point too the capitalist's ability to *supervise* and enforce *discipline* is vital (I, p. 986).

Furthermore this mode of compulsion is the *only* basis for increasing the rate of surplus value extraction under the merely formal subsumption of labor, since otherwise the production process is not changed from that operating in earlier modes of production.

The form based on absolute surplus-value is what I call the *formal subsumption of labour under capital*. I do so because it is only *formally* distinct from earlier modes of production on whose foundations it arises..., either when the producer is self-employing or when the immediate producers are forced to deliver surplus labour to others. All that changes is that compulsion is

applied, i.e. the method by which surplus labour is extorted (I, p.1025; also see CW 34, pp. 95-102).

These arguments return us to the seeming paradox mentioned previously: on what basis can Marx insist that such supervision is necessary for maximizing the rate of exploitation under the capitalist mode of production, given his recognition that usury capital (which does not involve even formal subsumption of labor) is able to “swallow up everything in excess of the producers’ most essential means of subsistence”? Moreover, how does such an increased strategic burden on the capitalist derive from the reduced economic status of the direct producing class?

While as far as I can tell Marx does not explicitly address this question, two arguments can be inferred from his historical account of exploitation and profit. The first is that capitalist exploitation on the basis of usury requires that immediate producers own some productive assets so that they can post *collateral* for the additional means of production loaned to them by usury capitalists. Once workers become “free in the double sense,” they cannot be spurred to provide surplus labor in the form of interest on production loans through the fear of losing their means of production by default.⁵

⁵ This interpretation also resolves a potential puzzle in Marx’s account of capitalist exploitation. In arguing that profit of enterprise—the portion of surplus value accruing to industrial rather than interest capitalists—cannot to any degree be considered wages of superintendence, Marx considers the case of worker cooperatives which not only yielded surplus value to capitalists, but also “paid a much higher interest than private [i.e., capitalist] factories did” (III, p.512). This is consistent with his earlier insistence that “the exploitation of labour takes effort” on the hypothesis that this interest was paid by workers in these cooperatives on pain of losing joint property put up as security on loans.

There are two bits of evidence in Marx's account for this interpretation. The first is Marx's recognition that usury capital historically involved transfer of property as well as surplus labor (III, p. 745; CW 32, p. 533). Second, Marx argues that in expropriating the property of small producers, usury destroyed its own basis for extracting surplus labor.⁶

In capitalist production, usury can no longer *separate* the conditions of production from the workers, from the producers, because they have already been separated from them. Usury *centralises* property, especially in the form of money, only where the means of production are scattered, that is, where the worker produces more or less independently as a small peasant, a member of a craft guild (small trader), etc.... This comes to an end as soon as the worker no longer possesses any conditions of production. And with it the power of the usurer likewise comes to an end (CW 32, p. 534).

Marx's second argument with respect to this question is stated more directly: he states that the social nature of labor under capitalist production (discussed further below) heightens the antagonistic relationship between capital and labor, thus demanding correspondingly greater supervisory efforts on the part of capitalist overseers.

As the number of co-operating workers increases, so too does their resistance to the domination of capital, and, necessarily, the pressure put on by capital to overcome this resistance. The control exercised by the capitalist is not only a special function arising from the nature of the social labour process, and peculiar to that process, but it is at the same time a function of the exploitation of a social labor process, and is consequently conditioned by the unavoidable antagonism

⁶ Mantoux's (1928) description of the redistributive role of collateral corroborates this interpretation.

between the exploiter and the raw material of his exploitation (I, p. 449).

Marx's argument here anticipates issues raised a century later in the mainstream literature on information and incentives, with the important difference that he emphasizes issues of power and distribution where the modern literature has tended to emphasize issues relating to allocative efficiency. (For an analysis of the strategic role of collateral, see Plaut 1985; Alchian and Demsetz 1972, Holmström 1981 and McAfee and MacMillan 1991 discuss strategic problems of labor extraction in team production.)

In sum, Marx argues that, under the historical conditions associated with the capitalist mode of production, formal subsumption is strategically necessary to maximize the exploitation of labor in the form of absolute surplus value. As I consider next, Marx advances a parallel argument concerning the strategic connection between real subsumption and relative surplus value.

Real Subsumption and Relative Surplus Value

To reap the rewards of relative surplus value, capitalists must move beyond the merely formal subsumption of labor to alter the production process itself (I, pp. 645,1021), which as we have seen Marx terms the *real* subsumption of labor under capital. Again, Marx's argument presumes a plausible form of market incompleteness which prevents capitalists from contractually stipulating the method of production to be used by direct producers.

Beyond its implications for the value composition of capital (the basis for realizing relative surplus value), Marx recognizes a *strategic* role of real subsumption in promoting additional

gains in the form of absolute surplus value. In Marx's account real subsumption has both direct and indirect strategic implications for the process of capitalist exploitation.

The direct strategic effect of real subsumption is to impose technically-driven constraints on the pace of work, reducing workers' flexibility in determining their production routines.

It is clear that the direct mutual interdependence of the different pieces of work, and therefore of the workers, compels each one of them to spend on his work no more than the necessary time. This creates a continuity, a uniformity, a regularity, an order, and even an intensity of labour, quite different from that found in an independent handicraft or even in simple cooperation (I, pp. 464-5).

This direct strategic effect of real subsumption is reinforced by the introduction of machinery in given manufacturing processes, which facilitates both the elongation of the working day (I, p. 527) and the intensification of labor.

Our analysis of absolute surplus-value dealt primarily with the extensive magnitude of labour, its duration, while its intensity was treated as a given factor. We have now to consider the inversion of extensive magnitude into intensive magnitude, or magnitude of degree. It is self-evident that in proportion as the use of machinery spreads, and the experience of a special class of worker--the machine-worker--accumulates, the rapidity and thereby the intensity of labour undergoes a natural increase (I, p. 533).

Marx also acknowledges an important but indirect strategic effect of real subsumption, operating via its impact on the dynamics of capitalist accumulation. A chief consequence of the pursuit of relative surplus value in this regard is the progressive creation of a relative surplus

population or *industrial reserve army*, i.e. a pool of unemployed workers (I, pp. 782-84).

This in turn has important and unique implications for the ability of capitalists to extract surplus labor from workers.

The constant generation of a relative surplus population keeps the law of the supply and demand of labour, and therefore wages, within narrow limits which correspond to capital's valorization requirements. The silent compulsion of economic relations sets the seal on the domination of the capitalist over the worker. Direct extra-economic force is still of course used, but only in exceptional cases. In the ordinary run of things, the worker can be left to the 'natural laws of production', i.e. it is possible to rely on his dependence on capital, which springs from the conditions of production themselves, and is guaranteed in perpetuity by them (I, p. 899).

To sum up: the role of capitalist production in appropriating surplus value is historically contingent and essentially strategic in nature. Certain forms of usury and merchant's capital appropriated surplus value without direct control of production, but tended to undermine their own existence in the process. Upon the creation of a propertyless working class, pursuit of maximal profits dictated that capitalists take control of production, in the sense of first formal and then real subsumption of labor under capital. Furthermore, the increasingly social nature of production necessitated the substitution of wage labor for contracts specifying individual labor services.

VII. CONCLUSION

I have argued that the appropriate theoretical foundation for understanding the connection between capitalist production based on wage labor and capitalist exploitation lies not in Marx's

value-theoretic analysis of Volume I, Chapter 5 of *Capital*, but in his historical-materialist theory of exploitation and profit, consistently elaborated in a body of economic writing beginning with the *Grundrisse*. Of particular moment in this theory is Marx's analysis of the process of capitalist exploitation in historically contingent strategic terms, which resolves an apparent paradox suggested by his treatment of capital circuits occurring prior and subsequent to the advent of the capitalist mode of production.

If my argument is correct it yields a number of implications, both for our critical understanding of the existing mainstream and heterodox literature on the economic logic of capitalist production and exchange relations and for subsequent research in these areas. In particular, it suggests important connections between recent Marxian and mainstream treatments of these issues.

First, it seems clear that the canonical justification for Marx's exclusive focus on the subsumption of wage labor under capital as the essential basis for capitalist exploitation under the capitalist mode of production must be completely reformulated. The valid foundation for such a connection is essentially independent of value-theoretic considerations, although it may perhaps be coherently expressed in such terms.

Second, the historically contingent nature of the connection between capitalist exploitation and direct capitalist control of production raises the additional possibility that this relationship is a matter of degree. In this connection I have argued in an earlier paper that capitalist production relations are principally germane to the *magnitude* rather than the *existence* of capitalist exploitation (Skillman 1995).

These considerations prompt a reassessment of John Roemer's "general theory of exploitation and class," grounded in Walrasian theory, in terms of its relevance to the traditional Marxian account. As mentioned earlier, Roemer identifies *differential (class) ownership of relatively scarce productive assets* (DORSPA) as the essential material basis of capitalist exploitation. I argue in the paper alluded to above that this conclusion is consistent with Marx's treatment of certain forms of usury and merchant's capital manifested prior to the capitalist era, and supports the construction of a valid counter-example to Marx's value-theoretic conclusions in volume I, chapter 5 of *Capital*.

Such arguments do not refute Michael Lebowitz's critique that Roemer fails to address *capitalism* as Marx understood the term (Lebowitz 1988). However, they do raise the possibility that Roemer's conclusions, appropriately qualified, remain valid with respect to the capitalist mode of production. Insofar as capitalist production is not categorically required for the existence of capitalist exploitation, capitalists might still exploit labor even if they were not in direct control of production processes, as Roemer's analysis suggests. Furthermore, future technical advances might conceivably render such direct methods of surplus value extraction strategically redundant.

None of this is to deny that a truly general theory of capitalist exploitation must include an explicit consideration of the strategic implications of Marx's distinction between labor power and labor performed. While absent from Roemer's formal analysis, these issues are the focus of two major strands in the recent economics literature. The mainstream literature concerns the "economics of incentives and information", including "principal-agent" and "efficiency wage" models, among others (see, for example, Holmström 1979, Grossman and Hart 1983, and

Sappington 1983 for representative treatments of the principal-agent problem; Weiss 1990 studies the efficiency wage model).

This is paralleled by a growing radical literature on strategic problems of effort extraction in capitalist firms, surveyed by Rebitzer (1993) . The classic references include Marglin (1974), Braverman (1974), Bowles and Gintis (1976, chapter 3), Gordon (1976), and Edwards (1979). This literature follows Marx in raising an important critical dimension which is for the most part neglected in the mainstream literature on strategic production relations, having to do with the “micro-political” nature of such relations.

As suggested by the work summarized in Rebitzer’s survey, these concerns are central to the logic of strategic production relations. Given the growing attention garnered by this body of work, it is not inconceivable that Marx’s analysis of capitalist production relations might yet critically inform mainstream economics to the same extent that he intended his reformulation of classical value theory to address the political economy of his day.

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