

The Role of Production Relations in Marx's Theory of Capitalist Exploitation*

Gilbert L. Skillman
Department of Economics
Wesleyan University
Middletown, CT 06459
E-mail: *gskillman@wesleyan.edu*

ABSTRACT

It is well known that Karl Marx explained profit in capitalist economies as arising primarily from the exploitation of productive labor. Less generally understood is Marx's theory as to the economic logic of capitalist exploitation, in particular the sense in and degree to which the latter depends on direct capitalist control of production, which Marx termed the subsumption of labor under capital. In Volume I of *Capital*, Marx focuses exclusively on the purchase and consumption of labor power under capitalist production as the basis of capitalist exploitation, on the grounds that the appropriation of surplus value must be explained on the condition that commodities exchange at their respective values. However, this stipulation manifestly does not follow from the arguments Marx presents, and its apparent implications clash with Marx's own historical account of exploitation via circuits of capital which did not in fact depend on the subsumption of labor under capital. This paper argues that the logic of capitalist exploitation is instead best understood in terms of Marx's historical-materialist theory of profit, which depicts capitalist production relations as a historically contingent strategic response to evolving conditions of class conflict over the creation and distribution of surplus product. This account, constructed from Marx's published and unpublished economic writing, establishes a consistent thread of argumentation linking the *Grundrisse* with the analysis featured in Volume I of *Capital* a decade later. Central to this account is the connection Marx draws between forms of surplus value and corresponding forms of subsumption.

* Paper prepared for the "Marxian Economics" session of the History of Economics Society annual conference, Vancouver, BC, June 28-July 1, 1996. I have benefitted greatly from extended discussions with Frank Thompson, Fred Moseley, and especially Michael Lebowitz, but they cannot be held responsible for the views expressed herein or for any errors which may remain.

Introduction

It is well known that Karl Marx explained capitalist profit as deriving essentially from the exploitation of labor, i.e. the appropriation of surplus value via systemic coercion of workers. Less completely understood, perhaps, is Marx's general theory as to the economic basis of capitalist exploitation, in particular the sense in and degree to which the latter is premised on wage labor, that is the purchase of labor power as a commodity, and its consumption within capitalist production, a process Marx referred to as the subsumption of labor under capital.

The purchase and consumption of labor power within capitalist production is the primary focus of Marx's account of capitalist exploitation in Volume I of *Capital*. Surplus value, in this account, derives from capitalists' power, in their capacity as firm owners, to extract magnitudes of productive labor exceeding the value of labor power. Many students of *Capital* would insist further that capitalist exploitation, as Marx understood the term, categorically *requires* capitalist production based on wage labor. This stipulation has in fact consistently informed debates in the Marxian literature.

Apparent grounds for such a stipulation can be found in the conclusion of Chapter 5, where Marx asserts that the "transformation of money into capital" must be explained on the basis that commodities exchange at their respective values. Satisfaction of this condition requires not only that capitalists reap the use value of labor power, but that they purchase labor power *as a commodity* at its exchange value. Since in hiring wage labor capitalists acquire only workers' *capacity* to labor, they must then *extract* surplus labor from workers by exercising their control of the labor process.

However, this argument is doubly problematic. First, the claim that appropriation of surplus value must be explained on the basis that all commodities exchange at their respective values does not follow from the arguments Marx advanced in Volume I, Chapter 5. Consequently, there are no valid *value-theoretic* grounds for the assertion that capitalist exploitation presumes the purchase of labor power *as a commodity*, despite the fact that capital must reap the use value of labor power in order to realize surplus value.

Second, the corresponding inference that capitalist exploitation categorically requires capitalist production cannot be supported by Marx's value-theoretic analysis in Volume I. Moreover, Marx repeatedly affirms historical cases in which surplus value was appropriated via circuits of capital which did not presuppose the purchase and consumption of labor power under production processes directed by capital.

Consequently, the economic logic of capitalist exploitation must be developed on grounds other than those advanced by Marx in Volume I, Part 2 of *Capital*. I argue here that these grounds can be located in Marx's *historical-materialist* account of capitalist exploitation, especially as it concerns the historically contingent *strategic* nature of class conflict in production and exchange.

My chief purpose in what follows is thus to distill Marx's historical-materialist theory of capitalist exploitation, with particular emphasis on its strategic component, from his published and unpublished writing on political economy, extending a perspective advanced in two earlier papers (Skillman, 1995, 1996). In the concluding section, I suggest that this account fundamentally alters traditional interpretations of Marx's critical analysis of capitalism and its connection to modern theoretical and empirical developments.

1. Profit, Surplus Value, and Capitalist Exploitation

Profit arises in economies characterized by systematic commodity exchange.¹ Under such conditions, Marx argues, commodities become crystals of a “social substance,” value, which is measured in terms of socially necessary abstract labor time. (I, pp. 128-29). Marx’s analysis of profit is thus couched in value terms defined in this sense. He refines the analysis further by focusing on exchange mediated by money, which “necessarily crystallizes out of the process of exchange...”[I, 181].

On these grounds, Marx identifies *surplus value* as the material basis of profit [1935, 45] and argues that under the capitalist mode of production surplus value is appropriated primarily by a process of capitalist *exploitation* [III, 132]. Thus, in order to understand Marx’s theory of profit it is necessary to begin with his use of these concepts.

Marx defines *surplus value* as the increment $\Delta M = (M' - M)$ which emerges from a circuit of capital $M-C-M'$ (I, 251), on the condition that this involves *valorization* of the value expressed in M (I, 252) rather than a mere redistribution of existing value (I, 265-66). This valorization or self-expansion of value requires something beyond the simple process of commodity circulation: “...for [surplus value] to be formed, something must take place in the background which is not visible in the circulation itself” (I, 268).

¹ In Marx’s theory, *profit* is the general category from which subsidiary forms of surplus, including profit of enterprise, interest, and ground-rent, are derived. Thus, for example, Marx speaks of certain historical forms of interest as “including profit” [G, 853; III, 732], meaning that they include a portion of economic surplus which would be appropriated by industrial capitalists given the capitalist mode of production.

What is this “something”? (In anticipation of the argument to follow, the reader is invited to formulate a specific answer to this question before proceeding.) At a minimum, the sought-for condition involves the production of new value [I, 769], since the process of commodity exchange does not of itself involve the expenditure of socially necessary abstract labor. Nonetheless, surplus value must be *realized* in the process of exchange, since this is the sphere in which the circuit of capital operates (I, 268).

Appropriation of surplus value constitutes *exploitation* insofar as it involves the coercion of value producers (I, 325-6), understood in a *systemic* or *class* sense when production relations are based on individually voluntary exchange rather than servitude.² Consequently, *capitalist exploitation* in Marx’s account corresponds to the appropriation of surplus value via a circuit of capital, insofar as the latter is understood to rest on coercion of value producers based on their class position.³ The material basis of this class relation lies in unequal ownership of the means of production [III, 1019], which implies that producers must enter exchange relationships with capitalists in order to gain access to at least a portion of the necessary conditions of production.

The foregoing considerations establish the basis of Marx’s expanded formula for the circuit of capital, $M-C...P...C\text{€}M\text{€}$ [II, 109]. $M-C$ represents an exchange which translates money into means of production, while (... $P...$) indicates an interruption in the process of exchange in which the means of production are used up in the creation of a greater magnitude of value $C\text{€}$

² Concerning the role of systemic (as opposed to personal) coercion in the Marxian theory of exploitation, see Reiman (1987, 1990).

³ For multiple references supporting Marx’s usage of the term in this sense, see section 3.

Finally, the expression $C\text{---}M\text{---}C'$ denotes an exchange in which the newly created commodities are sold to realize surplus value DM in money form.

Note that Marx's value-theoretic conceptual framework does not of itself dictate a particular form of production or exchange relations beyond that indicated by his expanded formula. The sole relational premise of surplus value is that the recipient of newly created value DM is other than the producer of that value (I, 268). In particular this does not imply that the owner of the original M in the expanded circuit oversees production or implements the phases $M\text{---}C$ or $C\text{---}M\text{---}C'$. For example, Marx represents the circuit by which money-dealing capitalists realize surplus value under the capitalist mode of production as $M\text{---}M\text{---}C\text{---}M\text{---}C'$ (III, 461), although from their perspective the relevant circuit reduces to $M\text{---}M\text{---}C'$ since a separate agent, the industrial capitalist, implements the interior circuit $M\text{---}C\text{---}M\text{---}C'$.

Nor does Marx's conception of *capitalist exploitation* of itself imply specific relations of exchange or production, such as purchase and consumption of the commodity labor power within capitalist production. As I will show in section 3, Marx consistently applied this term to circuits of capital which presumed neither the purchase of wage labor nor capitalist control of the production process.

Nonetheless, Marx's Volume I account manifestly posits capitalist production based on exchange for wage labor as the central basis of capitalist exploitation under the capitalist mode of production. But in what sense, and to what degree, does capitalist exploitation *require* these specific conditions of production and exchange? To appreciate fully where the appropriate answer to this question is to be found, we must begin with his value-theoretic analysis of this connection in Volume I.

2. Capitalist Exploitation and Price-Value Equivalence

Marx's exclusive focus in Volume I on the exploitative consumption within capitalist production of labor power sold as a commodity is explicitly driven by his stipulation that the appropriation of surplus value in capitalist economies is to be explained on the basis that all commodities exchange at their respective values (I, 270), a condition I'll refer to as *price-value equivalence*. Absent this stipulation, there is no value-theoretic basis in Volume I for identifying capitalist production based on wage labor as the essential vehicle of capitalist exploitation. Thus it is important to assess Marx's grounds for imposing this analytical stipulation.

These grounds are established in chapter 5, which addresses "contradictions in the general formula" of capital, $M-C-M'$. Here Marx develops two arguments. The first is that surplus value cannot be understood to arise from simple commodity circulation, taken alone, with or without the condition of price-value equivalence (I, 259-66), which Marx characterizes as the "pure" form of commodity exchange (260-62). The second argument is that surplus value must be *realized* in the process of exchange, since no other relationship among commodity owners is posited at that stage of his argument (268).

On these grounds Marx derives a "double result" to the effect that surplus value must be shown to emerge at once within and from without exchange relations, and that this demonstration must proceed on the premise of price-value equivalence (I, 268-69, 269n). The latter conclusion is emphatically seconded in *Value, Price and Profit*, where Marx asserts that "[i]f you cannot explain profit upon this supposition [that commodities are on average sold at their respective values], you cannot explain it at all" [1935, 37].

However, Marx's conclusion that surplus value and thus profit must be explained on the basis of price-value equivalence manifestly does not follow from the argument that surplus value cannot arise from exchange, *of itself*, whether or not commodities exchange at their respective values. This argument establishes only that *no* particular connection between prices and values is entailed by the existence of surplus value. For example, Marx's Chapter 5 analysis does not rule out the possibility that surplus value originates from "something ...in the background which is not visible in the circulation itself" and yet depends for its realization on the existence of price-value disparities in exchange. As we shall see in the following section, the relevance of this case is confirmed by Marx's own historical analysis of capitalist exploitation.

Moreover, Marx's characterization of price-value equivalence as the "pure" form of commodity exchange is deeply problematic if it is not simply tautological. Marx does not justify this characterization except by reference to the economic literature (I, 261) (and that literature, of course, does not define value in the same manner as Marx). But John Roemer (1982, 1983, 1988) establishes serious qualifications of the notion that price-value disparities constitute "an infringement of the laws governing the exchange of commodities" (I, 261). Specifically, Roemer shows that such disparities can typically be expected to arise from simple commodity exchange if productive assets are unequally distributed (1982, Theorem 1.5, 36). In the next section we shall see that such disparities are in turn integrally connected to the existence of surplus value.

In light of the foregoing, there are no apparent grounds for Marx's suggestion that price-value disparities constitute but a "disturbing incidental circumstance..." which can appropriately be ignored in analyzing the transformation of money into capital [I, 269n]. To put it another way, granting Marx's contention that this transformation requires the production of new value does not

imply that price-value disparities are incidental to capitalist *appropriation* of this newly created value. Thus, Marx's Chapter 5 argument does not establish valid grounds for the conclusion that surplus value must be explained on the basis that all commodities exchange at their respective values.

This defect has important and cascading implications for Marx's subsequent analysis in Chapter 6. Here Marx makes two arguments concerning the material logic of capitalist exploitation. First, the stipulation that surplus value must be explained on the basis of price-value equivalence implies that money-owners "must be lucky enough to find [and purchase at value] within the sphere of circulation, on the market, a commodity whose use-value possesses the peculiar property of being a source of value," that commodity being of course labor power [I, 270]. Second, the commodification of labor power corresponds to the existence of a class of workers who are "free in the double sense," i.e. free to sell their labor power and "free" of owning physical productive assets [I, 270-272]. There are difficulties with both arguments which run more deeply than may first appear.

Once one discards Marx's invalid stipulation of price-value equivalence, there is no value-theoretic basis for the claim that capitalists must purchase labor-power as a commodity. They must of course reap the *use-value* of labor power in order to appropriate surplus value, but it does not follow that they must do so on this basis. There are at least two other logical possibilities consistent with Marx's conceptual framework: capitalists could loan the means of production to workers at interest (the interest payments being subtracted from the new value created in consuming these means of production), or else could purchase labor *services*, defined as specifiable transformations of inputs into new commodities (Skillman, 1995, 1996).

The analytical and historical significance of these alternatives is considered in the next section. For immediate purposes it suffices to note that neither of these alternatives entails direct capitalist control of the production process. Such control is necessitated if capitalists acquire only the *capacity* to labor, since they must then take steps to set this capacity in motion, but not if they can contractually stipulate the interest to be paid or the specific value-producing tasks which are to be performed. In anticipation of the subsequent argument, note further that the ability to make such contractual stipulations does not depend in any substantive sense on the connection between values and prices.

The foregoing judgments are not reversed by Marx's second argument in Chapter 6 concerning the material logic of capitalist exploitation. The commodification of labor power may as a practical matter entail that workers are "free in the double sense" alluded to above; however, despite Marx's suggestion to the contrary, the converse does not hold: this "double freedom" does not of itself imply that workers must sell their labor power as a commodity. Once again, there are at least two alternatives which cannot be ruled out solely on value-theoretic grounds: workers could rent or lease the necessary means of production, or else gain access to them by vending specific labor services.

In sum, there is no valid basis on purely value-theoretic grounds for Marx's Volume I focus on the purchase and consumption of labor power under capitalist production as the basis for capitalist exploitation. If capitalist production based on wage labor is integral to the appropriation of surplus value once workers become "free in the double sense," as Marx and modern experience suggest, this claim must be analytically established on alternative grounds. To locate

these grounds, we must begin with Marx's account of capitalist exploitation prior to the advent of the capitalist mode of production.

3. Capitalist Exploitation Prior to the Capitalist Mode of Production

There were of course circuits of capital long before the advent of the capitalist mode of production (Mandel, 1969). Marx identifies two such "antediluvian" circuits, those based on merchant's capital and usurer's capital (I, 266). The latter "requires nothing more for its existence than that at least a portion of [production] is transformed into commodities and that money in its various functions develops concurrently with trade in commodities" [III, 728]. These circuits yielded returns in the form of profit and interest, respectively.

The question to be addressed in this section concerns Marx's understanding of the material basis of profit and interest appropriated by these antediluvian circuits of capital.

In particular, were such circuits vehicles of capitalist exploitation in Marx's sense?

The traditional response to this question in the Marxian literature is emphatically negative, based on the argument that profit and interest prior to the capitalist mode of production depended solely on redistribution of existing value via a process of unequal exchange (Eaton (1966), 64). This alternative hypothesis, for example, has informed the debate on the historical transition from feudalism to capitalism (Procacci (1978), 138; Merrington (1978), 177, 181, 186-7) as well as the more recent critique of Roemer's "general theory of exploitation" (e.g., Lebowitz (1984), 410, Devine (1996)).

While it is undeniable that returns to these "antediluvian" circuits were based in part on unequal exchange supported by monopoly power and underdeveloped markets, it is equally clear that in

Marx's understanding certain manifestations of these circuits supported appropriation of surplus value and thus constituted capitalist exploitation in his strict sense of the term. Marx consistently maintains this position across ten years of writing on political economy, including material subsequently published as the *Grundrisse* [G](written by Marx in 1857-58), the Economic Manuscripts of 1861-1863 (published in its entirety as Volumes 30-34 of Marx and Engels' *Collected Works* [CW]), the *Resultate* (1863-66), Volume III of *Capital* (1864-65), and Volume I of *Capital*, written 1866-67.

Of course, Marx argues as well that usurer's and merchant's capital represented historically limited forms of capitalist exploitation which were ultimately subordinated to the circuit of industrial capital based on capitalist domination of production once the historical preconditions of modern capitalism were established. This transformation, and the subsequent development of the capitalist mode of production, is the subject of Marx's *historical-materialist* theory of capitalist exploitation, the key elements of which are identified here and in the following section.

Usurer's capital

Usury refers to the circuit of interest-bearing capital prior to the onset of the capitalist mode of production. Marx distinguishes two sets of clientele for usurer's capital, "extravagant magnates" and "...small producers who possess their own conditions of labour, including artisans, but particularly and especially peasants..." [III, 729].

This distinction corresponds to two contrasting processes by which usurious interest is secured, i.e. by redistribution of existing value and by appropriation of newly created value.

Marx identifies both as historical cases; the first, as mere transfer of value:

"...interest may be a mere *transfer* and need not represent real surplus value, as for example,

when money is lent to a 'spendthrift', i.e. for consumption. The position may be similar when money is borrowed in order to make *payments*. [CW 32, 487]

But Marx also recognizes an alternative case, in which usurer's capital finances the purchase of means of production and reaps surplus value in return:

The third of the older forms of interest-bearing capital is based on the fact that capitalist production does *not as yet* exist, but that profit is still acquired in the form of interest and the capitalist appears as a mere usurer. This implies 1) that the producer still works independently with his own means of production, and ... 2) that the means of production belong only nominally to the producer; in other words, that because of some incidental circumstances he is unable to reproduce them from (the proceeds of) the sale of his commodities. These forms of interest-bearing capital occur...in all forms of society which include commodity and money circulation, whether slave labour, serf labour or free labour is predominant in them. In the last-mentioned form, the producer pays the capitalist his surplus labour in the form of interest, which therefore includes profit.[CW 32, 488]

Circuits of the latter type supported the appropriation of surplus value.

In India, for example, the capital of the *usurer* advances raw materials or tools or even both to the immediate producer in the form of money. The exorbitant interest which it attracts, the interest which...it extorts from the primary producer, is just another name for surplus value. It transforms its money into capital by extorting unpaid labour, surplus labour, from the immediate producer. [*Resultate*, I, 1023; compare CW 34, 118]

In this form, usurious interest corresponds to the sum of profit and interest appropriated under the capitalist mode of production.

In the form of interest, the usurer can in this case swallow up everything in excess of the producers' most essential means of subsistence... (the usurer's interest being the part that later appears as profit and ground-rent)...[III, 730; compare G, 851-853]

On this basis, usurer's interest represents a case of self-valorizing value:

What is demanded of the usurer is not capital, but money as money, and through interest he converts this hoard of money for himself into capital, self-valorising value, a means whereby he takes control of part of the surplus labour and part of the conditions of production themselves, even if they remain nominally independent of him. [MECW 33, 12]

Furthermore, usurer's capital appropriates surplus value without subsuming labor under capital:

But [usurer's capital] does not intervene in the process of production itself, which proceeds in its traditional fashion...here we have *not yet* reached the stage of the formal subsumption of labour under capital. [I, 1023; compare CW, 34, 118]

Since this form of usurer's capital thus supports the creation of new value by financing the purchase of means of production, and appropriates a portion of this as surplus value, it constitutes capitalist exploitation without the capitalist mode of production.

In the mode of production itself, [usurer's] capital still here appears materially subsumed under the individual workers or the family of workers--whether in handicraft business or in small-scale agriculture. What takes place is exploitation by capital without the mode of production of capital. [G, 853]

[Usurer's capital] is rather a form which makes labour sterile, places it under the most unfavourable economic conditions, and combines together capitalist exploitation without a capitalist mode of production...[CW 34, 119; see also 32, 488]

Usurer's capital has capital's mode of exploitation without its mode of production. [III, 732]

Merchant's capital

Merchant's capital operates in the sphere of circulation, purchasing the wares of primary producers and retailing them to final consumers. As noted earlier, merchants may extract profit in this role simply by buying low and selling high, or what Marx refers to as *profit upon alienation*. But Marx recognizes an alternative possibility.

Merchant wealth can in fact originate purely in this manner [by exchange of non-equivalents], and the wealth of the trading peoples which conduct a carrying trade between industrially less developed nations originated to a large extent in this manner....But if the gain made by the merchant, or the self-valorisation of the merchant's wealth, is not merely to be explained by his taking advantage of the commodity owners; *if therefore, it is to be more than just a different distribution of previously existing sums of value*, it must evidently be derived only from prerequisites which do not appear in its movement, in its specific function, and its gain, its

self-valorisation, appears as a purely derivative, secondary form, the origin of which must be sought elsewhere. [CW 30, 30; emphasis added]

The key additional condition is that merchant's capital be advanced to finance the creation of new value, as in the case of usurer's capital extended to small producers. It also parallels usury in being independent of the subsumption of labor under capital.

A further example is *merchant's capital*, which commissions a number of immediate producers, then collects their produce and sells it, perhaps making them advances in the form of raw materials, etc., or even money. It is this form that provides the soil from which modern capitalism has grown and here and there it still forms the transition to capitalism proper. *Here too we find no formal subsumption of labour under capital*. The immediate producer still performs the functions of selling his wares and making use of his own labour. [I, 1023; latter emphasis added]

On this basis, merchant's capital appropriates surplus value from direct producers.

Without revolutionizing the mode of production, [merchant's capital] simply worsens the conditions of the direct producers, transforms them into mere wage-labourers and proletarians under worse conditions than those directly subsumed under capital, appropriating their surplus labour on the basis of the old mode of production....Under these conditions [the masters] are really only middlemen between the merchant and their own workers.

The merchant is the real capitalist and pockets the greater part of the surplus-value. [III, 453]

Thus, as in the case of usury extended to small producers, proto-industrial merchant's capital constitutes capitalist exploitation.

It will be sufficient if we merely refer to certain hybrid forms, in which although surplus labour

is not extorted by direct compulsion from the producer, the producer has not yet become formally subordinate to capital. In these forms, capital has not yet acquired a direct control over the labour process. Alongside the independent producers, who carry on their handicrafts or their agriculture in the inherited, traditional way, there steps the usurer or merchant with his usurer's capital or merchant's capital, which feeds on them like a parasite. The predominance of this form of exploitation excludes the capitalist mode of production. [I, 645]

On the basis of the foregoing it seems reasonable to conclude that Marx identified usurer's and merchant's capital which financed independent production as vehicles of capitalist exploitation, even though these circuits preceded the era of the capitalist mode of production. This conclusion prompts three observations.

First, these historical modes of appropriating surplus value are manifestly inconsistent with Marx's stipulation of price-value equivalence as the basis for explaining the transformation of money into capital. This is most clearly seen in the case of commodity money, such as gold, which has a value equal to the labor time socially necessary to produce it. Acting as usurer's capital, however, money earns interest, which Marx characterizes as an *irrational* price, i.e., one not based on the money commodity's value [CW 32, 519-20]. Thus, the rate of interest is not based on the value of money, as it does not derive from the conditions of production for this commodity [III, 477-78].

Capitalist exploitation based on proto-industrial merchant's capital also requires the existence of a disparity between prices and values. As the passage on merchant's capital from Volume III of *Capital* cited above suggests [also see G, 851-52 and CW 34, 120], the typical form of the disparity is that direct producers were paid less than the value they created. That is, they

received an income roughly corresponding to the value of their labor power, although proto-industrial capitalists purchased labor *services* rather than simply workers' *capacity* to labor (Skillman, 1995). On this basis merchant capitalists could realize surplus value even if they sold the new commodities at their respective values.

Second, appropriation of surplus value on the basis of circuits which antedated the capitalist mode of production correspond to the form of exploitation characterized by John Roemer in his analysis of "credit market island," that is, a private ownership exchange commodity with markets for interest-bearing capital but not labor power. Here we find substantive grounds for criticizing Marx's depiction of price-value equivalence as the "pure" case of commodity exchange: Roemer shows that wealth inequalities which yield systematic price-value disparities under simple commodity circulation also guarantee a positive rate of interest if markets for loan capital exist [1983, 55].

In light of these results, it seems clear that any possible analytical relevance of price-value equivalence to the explanation of surplus value *presumes* the commodification of labor power. But in that case, contrary to Marx's representation in Volume I of *Capital*, the former condition cannot establish an adequate basis for Marx's subsequent exclusive focus on the purchase and consumption of labor power within capitalist production.

This leads to the third observation, which is to note an apparent paradox. We have seen that Marx repeatedly affirms the appropriation of surplus value via circuits of capital which preceded the capitalist mode of production. On the other hand, as discussed further in the next section, Marx is equally emphatic in asserting the centrality of capitalist domination in production once the historical preconditions of modern capitalism are established.

The other varieties of capital which appeared previously, within past or declining conditions of social production, are not only subordinated to [industrial capital] and correspondingly altered in the mechanism of their functioning, but they now move only on its basis, *thus live and die, stand and fall together with this basis*. [II, 136; emphasis added]

Thus, Marx contends simultaneously that capitalist exploitation preceded the subsumption of labor under capital, and that the latter is vital to the existence of capitalist exploitation upon the advent of the capitalist mode of production. Furthermore, the key material condition distinguishing the capitalist era is that workers were largely divested of the means of production. Somehow, then, this deterioration of workers' economic status, and the corresponding concentration of wealth within the capitalist class, made it more difficult for capitalists to appropriate surplus labor.⁴ How can this be so? The answer to this puzzle is found in Marx's *historical-strategic* account of capitalist exploitation, examined next.

4. Historical-Strategic Basis of Wage Labor and Capitalist Production

Central Features of the Capitalist Mode of Production

The *sine qua non* of the capitalist mode of production, the historical pre-condition for its existence and development as a unique social form, is 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

⁴ The apparent paradox is not resolved by Marx's argument with respect to the "modern theory of colonization" that expropriation of the working class is necessary to ensure the rate of flow and regularity in the supply of labor power to be exploited [1, 932-36]. Instead, it deepens. If expropriation promotes a more docile working class, why must capitalists directly oversee the production process in order to guarantee the rate of labor extraction? (I thank Mike Lebowitz for drawing my attention to this point.)

means of effectively engaging that power [I, 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 [I, 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 which operates on this basis *industrial capital* (I, 256), as distinguished from merchant and interest-bearing capital. Furthermore, as we have seen, Marx argues that the latter, historically antecedent forms become 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 the production process 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. But 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 2. 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 workers free in the double sense 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 merchants' 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 indicated by Marx's comment that "...it is absurd to compare the level of *this* [usurious] 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, 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 cost 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, 501]

But 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, 503]

It is not immediately obvious why this is the case, though, given that in the absence of “functioning capital”, usurers were able to “...swallow up everything in excess of the producers most essential means of subsistence” [III, 730]. Marx’s proximate argument is based on the *class antagonism* between producers and capitalists:

...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, 507; also see CW, 32, 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 argued not only that the “antediluvian” circuits of usury and merchant’s capital failed to develop the conditions of production [CW, 32, 534-35; III, 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. [G, 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, 452]

Clearly Marx considers that the advent of capitalist production corresponded to a fundamental transformation in the structure 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.

5. Forms of Surplus Value and Forms of Subsumption

I simultaneously develop two arguments in this section. The aim of the first is to demonstrate that Marx drew an essentially strategic connection between forms of subsumption and the forms of surplus value they engendered. The second seeks to show the remarkable extent to which Marx's strategic analysis has anticipated theoretical developments in the mainstream economics literature over the past quarter century. Implications of this connection are discussed further in the conclusion.

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, 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, 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, 1034-35]

Marx understands the forms of subsumption to 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, 1025; also see CW, 34, 95]

As I'll spell out in more detail below, the common premise underlying these strategic connections, translated into modern 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. Marx suggests incompleteness of this sort in arguing that capitalists are limited to purchasing the capacity to labor, rather than contracting for specific directed labor performance. Its chief

consequence is that capitalists must exert control over production in order to yield profit-maximizing rates 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, 303]. These variables are determined *strategically* in the workplace rather than by the logic of competitive commodity exchange [I, 344].

Individual capitalists seek to increase the quantity and intensity of labor extracted from their workers.

[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... Where the intensity of the labour process is given, he will seek to increase its duration, and conversely, where the duration is fixed he will strive to increase its intensity. The capitalist *forces* the worker where possible to exceed the normal rate of intensity, and he forces him as best he can to extend the process of labour beyond the time necessary to replace the amount laid out in wages [I, 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 pro-

ductively 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, 986]⁵

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, 1025; also see CW 34, 95-102]

These arguments return us to the seeming paradox mentioned previously: on what ground can Marx insist that such supervision is necessary for maximizing the rate of exploitation under the capitalist mode of production, given his allowance that usury capital (which does not involve even

⁵ In this argument Marx anticipates some of the issues later addressed by Frank Knight in *Risk, Uncertainty, and Profit*, with this key difference: whereas Knight sees control of production as a necessary consequence of the choice to bear productive uncertainty (1921, 270), Marx argues the reverse, that capitalists' assumption of productive uncertainty follows from their subsumption of the labor process: "...each process of production entails a risk for the values introduced into it...If the risk falls on the capitalist himself, this is only the consequence of his having usurped the ownership of the means of production." [I, 986]

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 stem 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 responses can be inferred from his historical-materialist 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.⁶

There are two types of evidence in Marx’s account for this interpretation. The first is Marx’s recognition that historically usury capital relations involved transfer of property as well as surplus labor [III, 745; CW 533]. Second, Marx argues that in expropriating the property of small producers, usury destroyed its own basis for extracting surplus labor.⁷

⁶ 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, 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.

⁷ Mantoux’s [1928] description of the redistributive role of collateral corroborates this interpretation.

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, 534]

Marx's second response to this question is stated more directly: he argues 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 between the exploiter and the raw material of his exploitation. [I, 449]

Marx's arguments here anticipate 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.⁸ (For an analysis of the strategic role of collateral, see Plaut (1985); Alchian and Demsetz (1972) and Holmström (1981) discuss strategic problems of labor extraction in team production.)

Marx's historical-strategic account anticipates the recent literature in other ways as well. In particular, Marx recognizes the use of piece rates as an "incentive" device, i.e. as a mechanism to induce workers to produce more value [I, 694-695]; compare, for example, Stiglitz (1975). Marx also discusses the use of such payment schemes as a part of "divide-and-conquer" strategies to induce competition among workers [I, 695-96]; compare Marx's discussion, for example, with the analysis of team production incentives in Holmström (1982), McAfee and MacMillan (1991), and Ma *et al.* (1988).

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, 645, 1021], which as we have seen Marx terms the *real* subsumption of labor under capital. Again, Marx's argument presumes a

⁸ Perhaps less surprisingly, Marx's analysis has served as the foundation for a modern radical political economic critique of capitalist production relations. Classic references include Marglin (1974), Braverman (1975), Bowles and Gintis (1975, chapter 3), Gordon (1976), and Edwards (1979).

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 technological 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, 464-5].

This argument anticipates parallel developments in the recent mainstream literature on the role of technical choice in structuring incentives in profit-seeking firms (Holmström and Milgrom (1991)).⁹

The 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, 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

⁹ A related argument in the radical political economic literature is developed by Reich and Devine (1981).

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, 533]

The nature of technical control of labor as a strategic device is spelled out in greater detail in Braverman (1975, Part II) and Edwards (1979, chapter 7).

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, 782-784]. This in turn has important and unique implications for the ability of capitalists to extract surplus labor from workers.

It is not enough that the conditions of labour are concentrated at one pole of society in the shape of capital, while at the other pole are grouped masses of men who have nothing to sell but their labour-power. Nor is it enough that they are compelled to sell themselves voluntarily.....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, 899]

In such passages Marx anticipates the modern literature on efficiency wages (e.g., Weiss, 1990) and contested exchange (Bowles and Gintis, 1990), which emphasizes the role of the threat of unemployment in the process of labor extraction.

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.

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 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 commercial and interest capital prior and subsequent to the advent of the capitalist era.

If my argument is at all 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. If my argument is correct, 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 one of *degree* rather than *kind*. 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 Marxist 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.

Such arguments do not refute Michael Lebowitz's critique that Roemer fails to address *capitalism* as Marx understood the concept (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 required for the existence of capitalist exploitation, capitalists may 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 completely absent from Roemer's formal analysis, these issues are the focus of the recent mainstream literature on the "economics of incentives and information", including "principal-agent" and "efficiency wage" models, among others (see, for example, Holmström, 1979, Harris and Raviv (1979), Grossman and Hart (1983), and Sappington (1983) for representative early treatments). The differences between this literature and the recent critical analysis of capitalist production (a leading example being the treatment of "contested exchange" by Bowles and Gintis (1990)), seen in this light, appear to more a matter of emphasis (particular concerning allocative vs. distributional concerns) than necessary analytical substance.

On the other hand, I argue that there has been insufficient appreciation of the extent to which the issues of concern in the recent mainstream literature have been anticipated in Marx's historical-materialist theory of exploitation. As indicated in the body of the paper, Marx addresses such now-familiar topics as the connection between direction of production and assumption of production risk, the strategic role of supervision and threat of firing (and the value of unemployment in increasing this threat), the use of incentive schemes and "divide and conquer" strategies to increase labor effort, and the significance of technical control of workers' production

choices. These considerations are moreover almost completely absent from the work of Marx's classical predecessors.

Thus the argument presented here calls sharply into question Anthony Brewer's recent assessment of Marx's theoretical contributions to political economy. He writes:

I maintain that Marx had little to offer [mainstream economics], 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. (1995, 113-114)

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)

This assessment seems indefensible in light of the account presented here. While much of the supporting material for Marx's historical-strategic account of capitalist production relations derives from sources not published until this century, the main lines of this account are clearly established in Volumes I and III of *Capital* (the key contribution being Marx's treatment of labor expended in production as strategically rather than contractually determined). At the least, one might imagine that greater attention to Marx's strategic account might have enriched the mainstream's "black box" treatment of capitalist production relations sometime prior to the development of the modern strategic literature in the mid- to late-1970s.

Finally, I note that Marx's approach to these issues adds an important critical dimension which is for the most part neglected in the mainstream literature on strategic production relations, having

to do with the distributional and “micro-political” nature of such relations. As suggested by recent work of such authors as Bowles and Gintis and Hahnel and Albert (1990), these concerns are central to the logic of production relations. Thus, it is not inconceivable that Marx’s historical-materialist analysis of profit and exploitation might yet critically inform modern economics to at least the same extent that he intended his reformulation of classical value theory to address the political economy of his day.

REFERENCES

- Alchian, A. and H. Demsetz. 1972. Production, Information Costs, and Economic Organization. *American Economic Review* 62: 777-95.
- Bowles, S. and H. Gintis. 1975. *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life*. New York: Basic Books.
- . 1990. Contested Exchange: New Microfoundations for the Political Economy of Capitalism. *Politics and Society* 18: 165-222.
- Braverman, H. 1974. *Labor and Monopoly Capital: The Degradation of Work in the 20th Century*. New York: Monthly Review Press.
- Brewer, A. 1995. A Minor Post-Ricardian? Marx as an Economist. *History of Political Economy* 27: 111-145.
- Devine, J. 1996. Taxation without Representation: Reconstructing Marx’s Theory of Capitalist Exploitation. In *Inequality*. Edited by W. Dugger. New York: Greenwood.
- Eaton, J. 1966. *Political Economy: A Marxist Textbook*. New York: International

Publishers.

Edwards, R. 1979. *Contested Terrain: The Transformation of the Workplace in the Twentieth Century*. New York: Basic Books.

Gordon, D. 1976. Capitalist Efficiency and Socialist Efficiency. *Monthly Review* 28: 19-39.

Grossman, S. and O. Hart. 1983. An Analysis of the Principal-Agent Problem.

Econometrica 51: 7-45.

Hahnel, R. and M. Albert. 1990. *Quiet Revolution in Welfare Economics*. Princeton: Princeton University Press.

Harris, M. and A. Raviv. 1979. Optimal Incentive Contracts with Imperfect Information.

Journal of Economic Theory 20: 231-259.

Holmström, B. 1979. Moral Hazard and Observability. *Bell Journal of Economics* 10:74-91.

———. 1982. Moral Hazard in Teams. *Bell Journal of Economics* 13: 324-40.

Holmström, B. and P. Milgrom. 1991. Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design. *Journal of Law, Economics, and Organization* 7: 24-52.

Knight, F. [1921] 1985. *Risk, Uncertainty, and Profit*. Chicago: University of Chicago Press.

Lebowitz, M. 1984. Review of *A General Theory of Exploitation and Class* by J. Roemer. *Canadian Journal of Economics* 17:407-411.

———. 1988. Is 'Analytical Marxism' Marxism? *Science & Society* 52: 191-214.

Ma, C., J. Moore and S. Turnbull. 1988. Stopping Agents from 'Cheating.' *Journal of Economic Theory* 46: 355-72.

- Mandel, E. 1969. *Introduction to Marxist Economic Theory*. New York: Pathfinder Press.
- Mantoux, Paul. 1928. *The Industrial Revolution in the 18th Century: An Outline of the Beginnings of the Modern Factory System in England*. London: Jonathon Cape.
- Marglin, S. 1974. What Do Bosses Do? *Review of Radical Political Economics* 6:1-60.
- Marx, K. [1935] 1976 *Value, Price, and Profit*. New York: International Publishers.
- . [1867] 1990. *Capital*, vol. 1. London: Penguin Books.
- . [1885] 1992. *Capital*, vol. 2. Edited by F. Engels. London: Penguin Books.
- . [1894] 1991. *Capital*, vol. 3. Edited by F. Engels. London: Penguin Books.
- . [1953] 1993. *Grundrisse*. London: Penguin Books.
- Marx, K. and F. Engels. 1988. *Collected Works*, vol. 30. New York: International Publishers.
- . 1989. *Collected Works*, vol. 32. New York: International Publishers.
- . 1991. *Collected Works*, vol. 33. Moscow: Progress Publishers.
- . 1994. *Collected Works*, vol. 34. New York: International Publishers.
- McAfee, R. and J. McMillan. 1991. Optimal Contracts for Teams. *International Economic Review* 32: 561-77.
- Merrington, J. 1978. Town and Country in the Transition to Feudalism. In *The Transition from Feudalism to Capitalism*. Edited by Rodney Hilton. London: Verso.
- Plaut, S. 1985. The Theory of Collateral. *Journal of Banking and Finance*. 9: 401-19.
- Procacci, G. 1978. A Survey of the Debate. In *The Transition from Feudalism to Capitalism*. Edited by Rodney Hilton. London: Verso.
- Reich, M. and J. Devine. 1981. The Microeconomics of Conflict and Hierarchy in Capitalist Production. *Review of Radical Political Economics* 12:27-45.

- Reiman, J. 1987. Exploitation, Force, and the Moral Assessment of Capitalism: Thoughts on Roemer and Cohen. *Philosophy and Public Affairs*. 16:2-41.
- . 1990. Why Worry About How Exploitation is Defined? Reply to John Roemer. *Social Theory and Practice* 16: 101-13.
- Roemer, J. 1982. *A General Theory of Exploitation and Class*. Cambridge: Harvard University Press.
- . 1983. Unequal Exchange, Labor Migration, and International Capital Flows: A Theoretical Synthesis. In *Marxism, Central Planning, and the Soviet Economy: Economic Essays in Honor of Alexander Ehrlich*. Edited by Padma Desai. Cambridge: The MIT Press.
- . 1988. *Free to Lose: An Introduction to Marxist Economic Philosophy*. Cambridge: Harvard University Press.
- Sappington, D. 1983. Limited Liability Contracts Between Principal and Agent. *Journal of Economy Theory*. 29: 1-21.
- Skillman, G. 1995. *Ne Hic Saltaveris: The Marxian Theory of Exploitation after Roemer*. *Economics and Philosophy* 11: 309-31.
- . 1996. Marxian Value Theory and the Labor-Labor Power Distinction. *Science & Society*, forthcoming.
- Stiglitz, J. 1975. Incentives, Risk, and Information: Notes Toward a Theory of Hierarchy. *Bell Journal of Economics* 6: 552-79.
- Weiss, A. 1990. *Efficiency Wages: Models of Unemployment, Layoffs, and Wage Dispersion*. Princeton: Princeton University Press.

