

Structure and Practice in the Labor Theory of Value

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ABSTRACT: The Marxian labor theory of value has been criticized in recent years by neoclassical and Sraffian economists as superfluous to the analysis of capitalist economies. It is argued in this paper the usual presentations and defenses of the labor theory of value are indeed faulty, but the theory itself is nevertheless indispensable. We develop a defense of the labor theory of value based on the proposition that both labor and labor-power fail to reduce to generalized commodity relations.

Introduction

Marxian social theory today contains two opposing tendencies, each marked by a methodological commitment to a specific conception of historical causality. One holds the dynamics of social life to be structurally determined, the social totality submitting to laws of motion independent from, or even constituting, the political practices that mark the content of social struggles.¹ Another holds these dynamics to be the product of the self-constituting political practices of classes, class fractions, and coalitions in society, the concept of "structure" being a mere formalism for regulating our knowledge of the outcomes of social conflict.² We believe this dichotomy to be unproductive, and suggest that a more unified approach be developed in which neither "practice" nor "structure" be reduced to an effect of the other.³ Our reappraisal of the labor theory of value is undertaken in this spirit.

In classical formulations, we shall suggest, the labor theory of value is economistic. Economism, Etienne Balibar notes,

claims precisely to reduce all the non-economic instances of the social structure purely and

simply to reflections, transpositions, or phenomena of the economic base.⁴

But the labor theory of value is economistic in a second, distinct, but little noted sense: by excising political and cultural practices from the internal constitution of the "economic," it reduces the site of capitalist production to a restricted — indeed impoverished — subset of the variety of practices which jointly determine the dynamics of accumulation. The economism of the classical formulations of the labor theory of value is expressed at least as much in its *economistic treatment of the economy* as in its analysis of the articulation of the economy with other instances of the social formulation.⁵

The roots of economism in the classical Marxian labor theory of value lie in two unwarranted reductions. First, the classical theory represents labor as the use-value of labor-power to the capitalist. It thereby abstracts from the political and cultural practices of the working class and reduces the dynamics of capitalist production to the structural imperatives of property and commodity exchange relations.⁶ Second, it represents labor-power as a commodity. By so doing, it abstracts from the theoretically indispensable articulation of radically distinct structures — family and state — with the structure of capitalist production.

We will not here deal with the shortcomings of economistic Marxism as a theoretical basis for understanding those aspects of social practice and social structure traditionally deemed "superstructural".⁷

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Rather, we will confine ourselves to a demonstration that the classical formulation of economic life itself is internally inconsistent and unable to illuminate even the most elementary dynamics of capitalism. The classical labor theory of value is inadequate to its own designated object of analysis: it is bad economics. Indeed in its economistic form the labor theory of value is merely a particularly cumbersome theory of the relationship between the technical conditions of production and the structure of wages, prices and profits. Its formal excision and replacement by the Sraffian or von Neumann systems would matter little to the body of Marxian economic theory.

Yet we do not recommend such a course. Indeed, we believe that reformulated in noneconomistic terms, the labor theory of value provides a necessary framework for analysing the articulation of practices at the site of capitalist production, and of the articulation of capitalist production with other sites of social practice. Our aim thus is to purge the theory of its economistic underpinnings, thereby enhancing its logical consistency, its ability to illuminate the dynamics of advanced capitalist social formations, its general compatibility with contemporary Marxian social theory, and its capacity to inform political interventions towards a socialist transformation.

From its inception, Marxian value theory has been the object of bitter disputation between socialist economists and their critics.⁸ Given the incompleteness of its early formulations, the labor theory of value has been a relatively easy mark. Yet in recent years, with the aid of modern mathematical techniques, and in the hands of able theoreticians, value theory has attained a more precise and internally consistent form than it has heretofore enjoyed.⁹ Indeed, most of the traditional objections to the Marxian approach can no longer be taken seriously.¹⁰

Increasingly, however, new assaults on the labor theory of value come precisely from within the socialist camp. The major critiques are two in number. On the one hand, from the school of thought inspired by Piero Sraffa's *The Production of Commodities by Means of Commodities*,¹¹ we learn that the "detour through value" is unnecessary to the determination of profit, price, and the distribution of income, even within a class analysis of capitalism.¹² Steedman writes:

Thus the only possible role, in a theory of profits, for the statement "r [the rate of profit] is positive if and only if S [surplus value] is positive" is as the final line in an argument, the earlier stages of which show *why S is positive*. . . . a Marxist theory of profits must (thus) be directed to explaining *why* the social, political and technical condition are such that (surplus value is positive).

Exactly. Steedman continues:

. . . such an explanation must necessarily run in terms of the determinants of the condition of production and real wages. Marx's value magnitudes, however, far from being determinants of those factors, are precisely derivative from them: consequently they can play *no essential* role in the theory of why profits are positive.¹³

While not necessarily contesting the body of Marxian social theory, the Sraffian school rejects its application to the purely formal task of analysing price and profit.

The second critique argues that value theory must be *ignored* rather than *changed*. In an era marked by the rejection of economism within Marxian social theory, the labor theory of value has remained largely untouched. The pride of Marx's system, value theory has figured little in the major contributions to Marxist theory of the past several decades. Such central figures as Lukacs, Habermas, Colletti, Thompson, Althusser, and Gramsci have forged powerful new theoretical tools without substantial resort to the labor theory of value. Once the cornerstone of Marxian theory, the labor theory of value has been relegated to an increasingly marginal position within the entire body of Marxian thought. Indeed, E.P. Thompson, in his always polemical and often incisive critique, *The Poverty of Theory*, can say:

Capital . . . remains a study of the logic of capital, not of capitalism, and the social and political dimensions of the history, the wrath, and the understanding of the class struggle arise from a region independent of the closed system of economic logic . . . A unitary knowledge of society . . . cannot be won from a "science" which, as a presupposition of its discipline, isolates certain kinds of activity only for study, and provides no categories for others.¹⁴

We believe both of these critiques to be wholly salutary. The Sraffian school has thrown down the gauntlet: justify the need for a concept of "value" as distinct from "price" in understanding the dynamics of price and profit. Thompson, by contrast, queries how *any* analysis of price and profit abstracting from class practices can comprehend the dynamics of the capitalist system. We agree that it cannot, and propose that the fundamental categories of the labor theory of value be reconsidered in light of this objection. An adequate reinterpretation of value categories will in turn, we believe, provide a compelling answer to the question which over the years has been the recurrent theme of debates on Marxian economics: why should labor be singled out for special treatment in a theory of value?

We shall begin with a consideration of Marx's treatment of labor and the labor process as the basis for our response to Thompson and Steedman. Following and extending Marx, we shall characterize labor as *an ensemble of practices structured by the capitalist social relations of production*. The labor theory of value, in this conception, becomes a theory of the articulation of appropriative, distributive, political, and cultural practices at the site of capitalist production. In this form, the labor theory of value conserves its position as a structural tool, without thereby relegating social practices to the status of epiphenomena.

The great majority of Marxian economists — Dobb, Sweezy, and Mandel among them — have put forward a rather different conception of the labor theory of value, grounded almost entirely on the first several chapters of *Capital, Vol. I*, where Marx attempts to justify the labor theory of value. We shall suggest that his major assertions in support of embodied socially necessary abstract labor time as the basis for value theory are not defensible. In effect, Marx attempts the impossible by striving to demonstrate the *special* character of labor by recourse to its commodity status — namely that which it shares *in common* with all others. We shall then argue directly that the special status of labor-power in the system of capitalist exchange is that it does *not* enjoy commodity status in terms of its conditions of production and its position in the dynamics of price formation and capital accumulation. We shall then turn to labor itself — the concrete form of wage-labor as opposed to its abstract form as an object of exchange. We shall argue here that labor cannot be viewed as the use-value of labor-power to the capitalist without seriously misunderstanding the wage-labor exchange and the capitalist labor process. Finally, we shall suggest that the validity of the labor theory of value derives precisely from the noncommodity nature of wage labor. The Appendix presents the mathematical model and theorems upon which we shall draw in the course of our analysis.

We note that it is by precisely this representation (labor-power as a commodity, labor as its use-value in production) that neoclassical economics demonstrates the absence of *any* distinct characteristics of labor. The general equilibrium model involves an indifferent array of inputs and outputs in which the distinctiveness of labor, or indeed capital or land, disappears.¹⁵ Marx, by contrast, presents extensive argumentation for the specificity of labor. To this we now turn.

Marx's Defense of the Labor Theory of Value

The course of Marx's intellectual development leading to his affirmation of the labor theory of value has been brilliantly analysed in Ernest Mandel's *The Formation of the Economic Thought of Karl Marx*.¹⁶ In

his early work, the *Economic and Philosophical Manuscripts of 1844*¹⁷, Marx establishes the alienated nature of labor in capitalist society. While philosophers have variously located the origins of human fulfillment in service, salvation, pleasure, morality, rationality, duty, and truth, for Marx the key lay in the development of the individual's human powers through the appropriation of nature. The ultimate indictment of capitalism, he proclaims in this early work, is its treatment of labor as a commodity — an instrument towards the accumulation of capital. Marx, we find from his notes, was originally repelled by Ricardo's labor theory of value, but came swiftly to recognize that, however repugnant, the commoditization of labor accurately expressed an essential aspect of the contemporary condition of the working class.

Marx insisted, however, that neither labor nor labor-power is *in fact* reduced to the status of a commodity. His frequent references to the "peculiarity" of labor-power as a commodity bespeaks this duality. The reduction of all social relations to exchange relations is but one of two opposing tendencies of the accumulation process. The other is the formation of the working class as a recalcitrant contender to capital, its unity propelled by the expansion of capital and its struggles grounded in the antagonistic social relations of the "hidden abode" of production. Marx devoted a substantial portion of *Capital, I* — his treatment of the length of the work-day, the development of the factory system, the introduction of machinery, and the real subsumption of labor to capital — to precisely this aspect of accumulation.

Indeed, it is precisely this focus on conflict within the labor process, and on the political and cultural formation of the working class associated with this process, which most clearly distinguishes Marxian economics from other approaches. It will be useful then to formalize the rudiments of this approach here, as Marx provides only the barest *theoretical* (as opposed to *historical*) accounts in *Capital*.

How is labor to be represented?¹⁸ We are tempted simply to treat labor as it is described: the living activity of the worker in the appropriation of nature. However, this will not do, for such a formulation does not capture the specificity of *wage* labor, as opposed to other types of appropriation. Rather, we shall represent wage labor as *an ensemble of social practices involved in the appropriation of nature*, structured by the social relations of capitalist production.

By a *social practice* we mean an intervention by individual, group or class into history, whose project is the stabilization or transformation of some aspect of social reality. We may categorize practices by their objects — the aspect stabilized or transformed. When this object is an aspect of the material world, we speak of an *appropriative practice*. An appropriative practice then,

is a social intervention whose project is the transformation of nature. When the object of a practice is a social relation, we speak of a *political practice*. Like other practices, a political practice is not characterized by *where* it occurs, but by the nature of its *object*. A political practice is an intervention whose project is the stabilization or transformation of some structured social relation — one of the “rules of the game.” Finally, for purpose of social theory, we may consider “culture” as a structured set of tools of communicative discourse which serve to define the forms of bonding and fragmentation, unity and disunity of purpose, on the basis of which appropriative and political practices as collective undertakings can take place. A *cultural practice*, then, is an intervention whose project is the transformation or stabilization of tools of discourse and their structuration.

When a practice or an ensemble of practices is engaged in by a group, coordination and regularity in the action and in its effects is obtained through the *social structuration* of practice. By a *site* we mean an arena of social activity with a characteristic set of social relations defining its specificity. Thus patriarchal family, liberal democratic state, and capitalist production are examples of sites. A site is defined not by what is *done* there, but by what imparts *regularity* to what is done there, its characteristic “rules of the game.” It is not “functions” but “structures” which distinguish sites.¹⁹

Sites structure the appropriative, political, cultural, and distributive practices of individuals and groups within them. We wish to stress that in general sites *structure* but do not *determine* practices, much as grammar, syntax, and semantics structure speech without thereby determining utterances or their content. The extent to which the structure of a site delimits the range of practices occurring within it, and hence the degree to which it imposes a logic to the process of reproduction and change, will depend on the general and specific conditions of that site.²⁰

The intent of this rather rushed development of the concepts of sites and practices has been to motivate the following observation: A site is an articulation of the various practices organized within it. We cannot associate particular practices with specific sites, such as appropriative practices with the economy, political practices with the state, and cultural practices with the family. Each site — family, state, economy, etc. — is itself an articulation appropriative, political and cultural practices.

In particular, appropriative practices are not limited to the site of capitalist production. The state employs vast numbers of workers whose appropriative practices are not dissimilar in their concrete form from those in the site of capitalist production. Housework, as many have recognized, is equally a major aspect of family activity. Political practices, in addition,

are hardly limited to the state site. Within the site of capitalist production, a particular political structure governs the division of labor in the capitalist enterprise — the domination of capital over labor. And within the family site, political practices are structured by the institutions of patriarchy.²¹ Finally, because cultural practices govern the transformation of patterns of bonding and fragmentation in all sites, we reject the notion of cultural or ideological institutions.²²

Labor is an ensemble of practices, structured by the social relations at the site of capitalist production, organized around the appropriation of nature. As such, we shall argue shortly, it is categorically distinct from all other inputs into the production process. Like these others, it *has* a use-value to the capitalist, but can not be *reduced* to this status. It is living, but its biological (or even human) status is not its defining element. The validity — or better cogency — of the labor theory of value, we will seek to show, depends on this specific character of labor.

We may characterize the labor theory of value as *the theory of the articulation of practices at the site of capitalist production*. Thus we sharply distinguish ourselves from those who would present the labor theory of value as a theory of price, of exchange, or even of profit, though each of these must be encompassed by any viable theory of value. The labor theory of value, by focusing on the contingent nature of surplus-value, bids us analyse those technical, political, and cultural mechanisms within the site of capitalist production that allow such a surplus to arise and be reproduced. It treats the production process not as purely technical, but a political structure within which the domination of capital is a condition of existence of profits, and as a cultural structure geared toward reproducing the forms of bonding and fragmentation on which the political dominance of capital depends.

Our formulation, while faithful to Marx’s approach in the body of his work taken as a whole (even if, as some would prefer, the earlier works are excised), is quite different from the presentation of the labor theory of value in most works of Marxian economics, or indeed in Marx’s own opening chapters of *Capital*, I. There the commodification of labor-power is elevated from a tendency of the accumulation process to the axiomatic foundation of the labor theory of value.

By so doing, Marx maintained the *humanism* of the 1844 *Manuscripts* could be combined with the *science* of political economy. There are good reasons for Marx’s stance in these chapters, and for its later popularity: The undialectical assumption of the commodification of labor-power — the treatment of people as things — provides the basis for an evocative humanist critique of the accumulation process.

Regretably, the particular form of Marx’s union of humanism and science is quite untenable. For as we

shall presently see, the representation of labor-power as a commodity and of labor as its use-value to the capitalist, implies the attendant reduction of practice to a mere effect of structure, and impels Marx to adopt an essentialist humanist treatment which is inconsistent with the body of his work. Here let us turn to Marx's own reasonings in the opening passages of *Capital*.

Marx presents three arguments in favor of the labor theory of value in these chapters. His first, offered in Chapter 1, is that if two commodities exchange equal for equal, they must possess some quality in common which expresses this equality. Moreover, this quality must be the socially necessary abstract labor time embodied in them. The second is that since the process of circulation of commodities is characterized by equal exchange, the origins of profit must lie *outside* the sphere of circulation. Exploitation thus takes place *at the point of production*, and assumes the form of the extraction of surplus labor time from the worker. Marx's third argument is that labor is the unique commodity with the capacity to transfer to the product more value than that embodied in its own production.

Each of these propositions, we shall see, is not only inadequately argued, but incorrect.

Let us begin with the justification of representing the value of a commodity as the socially necessary labor-time embodied in it. Marx presents his justification in the first pages of *Capital I*, and his reasoning may be abridged to the following:

First, the valid exchange values of a given commodity express something equal; secondly, exchange value, generally, is only the mode of expression, the phenomenal form, of something contained in it, yet distinguishable from it. . . (i)n two different things. . . there exists in equal quantities something common to both. The two things must therefore be equal to a third, which in itself is neither the one or the other. . . This common "something" cannot be either a geometrical, a chemical, or any other natural property of commodities. . . If then we leave out of consideration the use-value of commodities, they have only one common property left, that of being products of labor. . . ²³

This argument suffers grave deficiencies. First, it is by no means clear that when two things exchange "there exists in equal quantities something common to both" which explains their rates of exchange.²⁴ The uniqueness and existence of such an entity requires rigorous proof, and Marx supplies only extremely tangential analogies. Second, should such an entity exist, it must still be shown that this coincides with some quantifica-

tion of their common property of being "products of labor." While Marx eliminates some alternatives (e.g., physical properties), he by no means eliminates all. The common property of commodities as use-values is dismissed without argument. Can we take seriously this cavalier treatment of what was, even in Marx's day, a major alternative to the labor theory of value? Indeed, it would be in principle impossible to eliminate all potential alternatives, since these are effectively infinite.

Marx's own demonstration in Volume III that prices and embodied socially necessary labor times are not generally proportional (following Ricardo before him) shows conclusively that when commodities exchange there are not equal quantities of embodied labor times common to both.²⁵ Thus Marx demonstrates *neither* the status of embodied socially necessary abstract labor time as the *equal* substance of equally exchanged goods, *nor* the uniqueness of labor inputs as the physical property involved in the production of all goods. More than Marx's logic is deficient here. His treatment of the phenomenon of equal exchange may be considered to be Marx's own flirtation with commodity fetishism. His formulations systematically displace the analysis of the quality expressed by the social relations of the commodity-owning exchanging parties by an analysis of the quantity expressed by some intrinsic quality of the commodities being exchanged.

The second of Marx's basic arguments is that the origin of profits lies in production rather than exchange, and only the labor theory of value captures this essential aspect of capitalism. Exploitation takes place, argues Marx, at the point of production. Neither classical, nor neoclassical, nor even the Cambridge approach can admit this fact, as all treat production as a technical process. We agree that Marx's proposition is central to the analysis of class relations in capitalism and to the critique of liberal social theory. Yet the way Marx establishes this proposition, abstracting from the class nature of capitalist production *per se*, is quite unacceptable.

Marx argues as follows. The capitalist starts with a sum of money, M , which he trades equal-for-equal for a variety of the elements of constant capital and labor-power. He combines these to produce a commodity C which he sells equal-for-equal for a quantity of money M' . Under normal conditions M' is greater than M ; $M' = M + \Delta M$ where ΔM is the money equivalent of surplus value. How can a process of exchange of equals-for-equals create a surplus? Clearly no analysis of capitalism as a system of pure exchange relations can answer this question. In Marx's words:

If equivalents are exchanged no surplus value results, and if nonequivalents are exchanged, still

no surplus value. Circulation, or the exchange of commodities, begets no value.²⁶

The conclusion, of course, is that the "riddle of profits" is to be solved in the second, nonexchange circuit of capital, in production itself wherein the capitalist combines the elements of constant and variable capital into the final product. First, Marx observes:

the consumption of labor-power is completed, as in the case of every other commodity, outside the limits of the market or of the sphere of circulation.²⁷

And how does the consumption of labor power differ from its purchase and sale?

(The sphere of circulation), within whose boundaries the sale and purchase of labour-power goes on, is in fact a very Eden of the innate rights of man. There alone rule Freedom, Equality, Property. . . . On leaving this sphere of simple circulation. . . . we think we can perceive a change in the physiogomy of our dramatis personae. He, who before was the money owner, now strides in front as capitalist; the possessor of labour-power follows as his labourer. The one with an air of importance. . . ; the other. . . like one who is bringing his own hide to market and has nothing to expect but — a hiding.²⁸

This argument has several flaws. First, as we have seen above, the equality of the exchange which forms the premise of this argument does not refer to the exchange of equal embodied labor times. Indeed, it refers to nothing intrinsic to the commodities at all: the equivalence of an exchange of a \$15 shirt for a \$15 book is definitional. Second, M and M' occur at different points in time, giving rise to numerous "productivity" or "waiting" theories of capital leveled at Marx's framework from Bohm-Bawerk to Samuelson.²⁹

Third, it is by no means clear why the exchange of "nonequivalents" cannot be the source of surplus-value. Marx in this case was probably thinking of Adam Smith's decisive refutation of Mercantilist value theory in *The Wealth of Nations*, where it is shown that the selling of a commodity above or below its natural price leads to a redistribution of value among commodity owners rather than a creation of surplus value.³⁰ But this type of argument is manifestly inapplicable to the bargain between capitalist and worker. Should the exchange of labor-power for a wage be an exchange of "nonequivalents," it becomes clear why M' might be larger than M . Indeed we have here the embryo of the Cambridge analysis of profits! Marx, however, insisted that the labor-wage exchange is an exchange of equivalents. But why should the ex-

change of labor-power for a wage be considered an equal exchange? What is equal to what?³¹ To respond, with Marx, that the wage is equal to the cost of reproduction of labor-power is of course formally correct. But what is this value of labor-power? It is nothing but the value equivalent of the consumption bundle which the worker purchases with the wage. Thus to designate the exchange of labor-power for the wage as an equal exchange expresses a tautological equivalence: the working class gets what it gets. The equivalence, it may be objected, refers to the *formal* equality of the owners of the commodities labor-power and money capital and to the symmetry of the pricing process of all commodities including labor-power. Marx argued thus:

the value of labor-power is determined, as in the case of every other commodity, by the labor time necessary for the production, and consequently the reproduction of this special article.³²

To conclude, the equivalence of the labor-power wage exchange relies for its force on the implicit assumption that the production and valorization of labor-power is governed by the same mechanisms which govern other commodities. As we shall see, Marx did not consistently adhere to this position. And with good reason, for it cannot be sustained. Yet the nonequivalence of the labor-power wage exchange throws into doubt the central insights that profit are generated in production rather than exchange.

The Cambridge School, sensing this inconsistency in the Marxian system, has with equal *prima facie* cogency eschewed the equal exchange framework. By isolating the wage/profit trade-off as the central conflict between capital and labor, they have directly tied the level of profit to the outcome of the wage struggle. We believe the Marxian approach to be superior, but its superiority can be demonstrated neither on logical grounds alone, nor on the basis of arguments of the early chapters of *Capital I*.

Nevertheless we believe it can be established that the origins of profit can be located, at least in part, in the specific character of the capitalist production process, and the labor theory of value is relevant to understanding this specific character. Even here, however, Marx's arguments lack cogency. To arrive at an answer to the $M - C - M'$ "riddle," Marx introduces his third argument for the specificity of labor. The problem of $M' = M + \Delta M$ is as follows: The capitalist starts with a sum of money M capable of purchasing production inputs embodying a certain number of hours of socially necessary labor-time. With these, the capitalist organizes the production of a commodity embodying more hours of socially necessary labor than that represented by M . How is this possible? Marx rephrased the question and answers it as follows:

(The capitalist) must buy his commodities at their value, must sell them at their value and yet at the end of the process must withdraw more value from circulation than he threw into it at starting. . . (He) must be so lucky as to find, within the sphere of circulation in the market, a commodity whose use-value possesses the peculiar property of being a source of value. . . (He) does find on the market such a special commodity in capacity for labor or labor-power.³³

But Marx *assumes* labor to exhibit this "peculiar property." He refers to this formulation again in Chapter 8 with his celebrated distinction between constant capital and variable capital:

That part of capital then, which is represented by the means of production, by the raw material, auxiliary material and the instruments of labor, does not, in the process of production, undergo any quantitative alteration of value. I therefore call it the constant part of capital, or, more shortly, *constant capital*. On the other hand, that part of capital, represented by labor-power, does, in the process of production, undergo an alteration of value. It both reproduces the equivalent of its own value, and also produces an excess, a surplus-value, which may itself vary. . . I therefore call it the variable part of capital, or, shortly, *variable capital*.³⁴

But why does labor-power "possess" this peculiar power, and is it unique in this respect? Did not corn in Ricardo's theory, when purchased as seed and wage goods, generate a corn surplus? Why not a corn theory of value? Why not a "peanut" theory of value, in which all commodities are denominated in direct and indirect "peanut" units? This would surely present no technical problems as long as peanuts were a direct or indirect element in the workers' consumption bundle. And the peanut would also possess the "special" quality, that its use-value would also be a source of value. In fact, this "peculiar property" of labor is not an attribute of labor *per se* but in capitalist society, and even then only under quite specific circumstances.

Indeed, if we define a "basic good as any which enters directly or indirectly into the production of any element in the wage bundle, then we can show that any basic commodity can be treated as a measure of value. Further, this commodity can be shown to be "exploited" in the sense that profits represent a transformation of surplus-value extracted from this commodity. Surplus-value is here defined analogously to the labor case as the excess of the commodity's input into production (its use-value to the capitalist defined in its own units be they hours, kilos or cubic centi-

meters) over its cost of production (its exchange-value, also defined in its own units).³⁵

The conclusion seems inescapable. If wage labor is treated as a commodity, and labor as its use-value, it has no "special character" in terms of which the labor theory of value can be justified. If the labor theory of value is to be defended at all, it must be by virtue of some *noncommodity* aspect of wage labor. But, as we shall see, the noncommodity aspect of labor-power is quite insufficient as a grounding of a specifically labor theory of value. There are innumerable inputs into the capitalist production process which are both socially necessary to production and are not commodities (e.g. land). Yet any such nonreproducible resource (if it is a basic input) can also serve as a measure of value. Moreover, each can be shown to be exploited in the precise sense defined above.³⁶ Marx in Ch. 6 of *Capital I* does introduce a crucial noncommodity aspect of labor-power: labor itself. Labor-power (or capacity for labor) as a commodity, says Marx, is to be understood as

the aggregate of those mental and physical capabilities existing in a human being, which he exercises whenever he produces a use-value of any description.³⁷

Labor, by contrast, is the concrete activity of the worker:

Labor is. . . a process which both man and Nature participate, and in which man of his own accord starts, regulates, and controls the material reactions between himself and Nature.³⁸

Labor, then, is not a commodity, and has neither price nor value, and can be neither bought nor sold. Emphasizing the categorical distinction between labor and labor-power, Marx notes,

When we speak of capacity for labour, we do not speak of labour, any more than when we speak of capacity for digestion, we speak of digestion. The latter process requires something more than a good stomach.³⁹

Indeed, it is precisely the noncommodity status of labor that accounts, Marx asserts, for the appearance of surplus-value in a system otherwise characterized by equal exchange. But clearly every commodity has an abstract form as a commodity and a concrete form as a physical entity engaged in production. A lathe can be considered the union of lathe-power, its abstract potential to perform useful functions, and as lathing, the concrete activity of the lathe engaged in production. The former can be purchased by the capitalist on commodity markets, while the latter, as a use-value will, under conditions permitting a positive social average

profit rate, exceed its own value.⁴⁰

Thus Marx's depiction of the formal labor/labor-power distinction is incapable of validating the labor theory of value. We do not wish to criticize Marx's stress on the labor/labor-power distinction in the analysis of profit and class relations in capitalism. Rather we will argue first, that labor-power is not a commodity and that the theoretically necessary and sufficient noncommodity aspect of labor-power must be located in the distinct noncommodity structuration of its process of production located at sites distinct from the site of capitalist production: family and state. Second, the designation of labor as the use-value of labor-power to capital obscures the absolutely fundamental distinction between productive inputs embodied in *people capable of social practice* and all of those remaining inputs for whom ownership by capital is sufficient to secure the "consumption" of their productive services. Herein lies the "peculiar nature of labor power" and the basis on which the labor theory of value can be established.

Labor-Power is not a Commodity

Commodities are produced by abstract labor. Labor power is not. Therefore labor-power is not a commodity. The common representation of capitalism as "generalized commodity production," distinguished from simple commodity production by the "commodity status" of labor-power is quite unnecessary in the Marxian system, for the fundamental difference between simple commodity production and capitalism is better expressed by the separation of the producers from the means of production, a formulation which balances both the market and nonmarket aspects of the class relations.

We will demonstrate the inconsistencies occasioned by designating labor-power as a commodity by reference to the valorization of labor-power, the production of labor-power, and the reproduction of the capitalist relation of production.

Let us be perfectly clear. Labor-power is produced by social labor, governed by a well-articulated division of labor. It is one of Marx's great insights that the analysis of capitalism requires a theory of the specifically *social* nature of the reproduction of the labor force. Indeed it is by this route that Marx takes his departure from the Malthus-Ricardo demographic theory of wage determination. Further, we have no quarrel with the representation of the value of labor-power by the socially necessary labor-time embodied in the commodities constituting the wage bundle. This formulation is crucial to the ability of the labor theory of value to integrate the description of the labor process and class struggle with the determination of wages, profits and prices. Nor, lastly, do we suggest

that markets may be ignored in the determination of wages and the allocation of social labor.

But the production and reproduction of labor-power involves — and must involve for the reproduction of capitalism — social relations radically distinct from those governing commodity production in either its capitalist or petty commodity form.⁴¹ The designation of labor-power as a commodity ignores the distinct nature of these social relations and obscures their articulation with practices at the site of capitalist production, and hence should be rejected.

Before supporting our proposition let us recall Marx's position. First:

If then we disregard the use-value of commodities, only one property remains, that of being products of labour. But even the product of labour has already been transformed in our hands . . . (It is no) longer the product of the labour of the joiner, the mason or the spinner, or of any other particular kind of productive labour . . . The different form of concrete labour . . . can no longer be distinguished, but are all together reduced to the same kind of labour, human labour in the abstract.⁴²

Further:

A use-value, or useful article, therefore, has value only because abstract human labour is objectified or materialized in it.⁴³

Thus a commodity in Marx's usage is not, as some have imagined, simply "something which is sold on markets" — which would include lottery tickets, Rembrandts, insurance policies, and land. A commodity is a use-value which is the reproducible product of abstract labor.

Abstract labor, we recall, is characterized by "the indifference to the particular kind of labor. . ." Thus,

. . . we can see at a glance that in our capitalist society a given portion of labour is supplied alternately in the form of tailoring and in the form of weaving, in accordance with changes in the direction of the demand for labour. This change in the form of labour may well not take place without friction, but it must take place.⁴⁴

The allocation of abstract labor throughout its various concrete forms, is thus governed (with more or less friction) by the demand for labor.

If labor power is a commodity, then it must be the product of abstract labor and hence be represented as a value. What is the nature of the production process whereby abstract labor is "objectified in" labor power. Again Marx:

The capital given in exchange for labour power is converted into necessities by the consumption of which the muscles, nerves, bones and brains of existing laborers are reproduced and new labourers are begotten.⁴⁵

The production process of labor-power includes the necessary child rearing and education:

the sum of the means of subsistence necessary for the production of labour-power must include the means necessary for the laborers substitutes i.e., his children, in order that this race of peculiar commodity owners may perpetuate its appearance in the market.

...so that it may acquire skill and handiness in a given branch of industry and become labour power of a special kind, a special education or training is requisite, and this on its part, costs an equivalent in commodities of greater or less amount.⁴⁶

But why must labor-power be represented as a commodity? Marx's argument may be summarized using various passages in his chapter on "simple reproduction:"

If production has a capitalist form, so too will reproduction. . . .the capitalist produces the worker as a wage labourer . . .the individual consumption of the working class is the reconversion of the means of subsistence given by capital in return for labour-power into fresh labour-power which capital is then again able to exploit. . . .The consumption of food by a beast of burden does not become any less a necessary aspect of the production process because the beast enjoys what it eats. The maintenance and reproduction of the working class remains a necessary condition for the reproduction of capital. But the capitalist may safely leave this to the worker's drive for self preservation and propagation.⁴⁷

We will offer three reasons why this representation is both unnecessary and inconsistent with the body of Marx's thought.

First, let us provisionally accept Marx's representation of the production of labor-power as a process of combination of commodities with the worker. These commodities, though themselves the product of abstract labor, are not allocated according to the law of value when they are used in the "production" of labor-power. We may demonstrate this point formally. We will represent the production of labor-power as a commodity producing process and demonstrate that the process of determination of its price of production —

that is, of the wage — deviates significantly from the price of production of commodities produced under either capitalist or simple commodity production relations.

The price of production in capitalist production, according to Marx is the cost-price, (that is, the necessary inputs multiplied by their respective prices) plus the profit earned on the capital advanced (which is equal to the social average rate of profit multiplied by the cost-price). Thus for capitalist production:

$$(1) \begin{array}{l} \text{price of production} \\ \text{[capitalist} \\ \text{production]} \end{array} = \begin{array}{l} (\text{cost-price}) + \\ (\text{profit rate}) \times (\text{cost-price}) \end{array}$$

The price of production for the labor-power production process is the wage, which we know is represented by the quantities in the workers wage bundle multiplied by their respective prices.⁴⁸

Thus for labor-power production:

$$(2) \begin{array}{l} \text{price of production} \\ \text{or the wage} \\ \text{[labor-power} \\ \text{production]} \end{array} = \begin{array}{l} (\text{cost-price, or} \\ \text{the money value} \\ \text{of the wage bundle}) \end{array}$$

The reader will note immediately a discrepancy: the average social rate of profit is not an element in the production on price of labor-power. Why? Because the production of labor takes place not at the site of capitalist production, but at a distinct site, whose structure is quite different from that of capitalist production. To suggest that the two forms of valorization are the same is to obliterate the distinction between the sites. This is of course precisely the strategy of the human-capital school in neoclassical economics, but it is hardly consistent with Marxian theory.⁴⁹

But perhaps the production of labor-power is analogous to simple commodity production. In a capitalist social formation, the price of production of a good produced under simple commodity production is governed by the process of competition and the mobility of abstract labor.⁵⁰ Thus the return to one's own labor received by the simple commodity producer must tend towards that which he or she could earn as a wage worker. Assuming, for simplicity, that the only form of capital used by this simple commodity producer is the stock of means of subsistence on which he or she survives for the duration of the production process, the price of the commodity must also cover the opportunity cost of this advance, which is, of course just the advance itself multiplied by the social average rate of profit.⁵¹ Thus

(3) price of production [simple commodity production] prevailing wage per hour ×

hours of necessary labor time per unit of output × (1 + profit rate)

autonomous and individual process of market clearing. Indeed Marx modifies his earlier assertion as to the symmetry of the pricing process of labor-power and commodities:

In contradistinction therefore to the case of other commodities, there enters into the determination of the value of labour-power an historical and moral element. . .⁵²

Again, process of determination of the price of production of the simple commodity diverges from the wage and for the same reason. Thus, the structure governing the allocation of commodities to the production of labor-power is not equivalent to that governing either capitalist or simple commodity production.

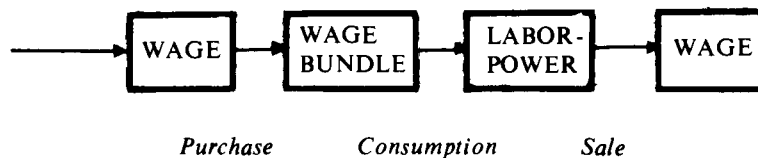
The formal differences in the pricing process of labor-power and of commodities cannot be captured fully by a comparison of equation 1 through 3, for they fail to elucidate the dynamic process of price formation. On the one hand, commodity prices are formed through the process of market clearing in which the autonomous and uncoordinated buying and selling activities of commodity owners give rise to a long-run equilibrium price of production. No such equilibrium process takes place in the case of labor-power. We do not assert the irrelevance of condition of supply and demand for labor-power in the process of wage determination. Quite the contrary, many passages of Marx's *Capital* – Chapter 25 of Vol. I, for example – could readily be reformulated in terms of supply and demand functions, analytical tools unavailable to Marx. The difference lies in the collective nature of the wage determination process and in the irrelevance of market clearing. Formally, excess supply in labor-power markets affects wage determination through its impact upon the conditions of class conflict, not through an

A more contemporary formulation might replace Marx's "historical and moral element" with "class struggle" as the determinant of the average wage; clearly the actual nexus of determinants is even more complex than this. But in no sense can the wage rate be treated as a market-clearing price. Indeed, if it were, Marxian economic theory would be faced with the curious result that given permanent excess supply in labor-power markets (the reserve army) the observed wage rate is perpetually above the monetary equivalent of the value of labor-power represented as the value of the consumption bundle corresponding to the market clearing wage. More generally the designation of labor-power as a commodity in perpetual excess supply yet with a nonzero price is clearly inconsistent. This puzzling anomaly cannot be resolved within the terms of the classical Marxian value theory. We shall return to it.

To conclude, our first argument has shown that even *abstracting* from the labor inputs which produce noncommodity use-values necessary to the process of labor-power production, the symmetry between commodity production and the production of labor-power is decisively broken in the valorization process. But this particular abstraction cannot go unanalysed.

Marx's conception of the reproduction of labor-power may be represented as in Figure 1:

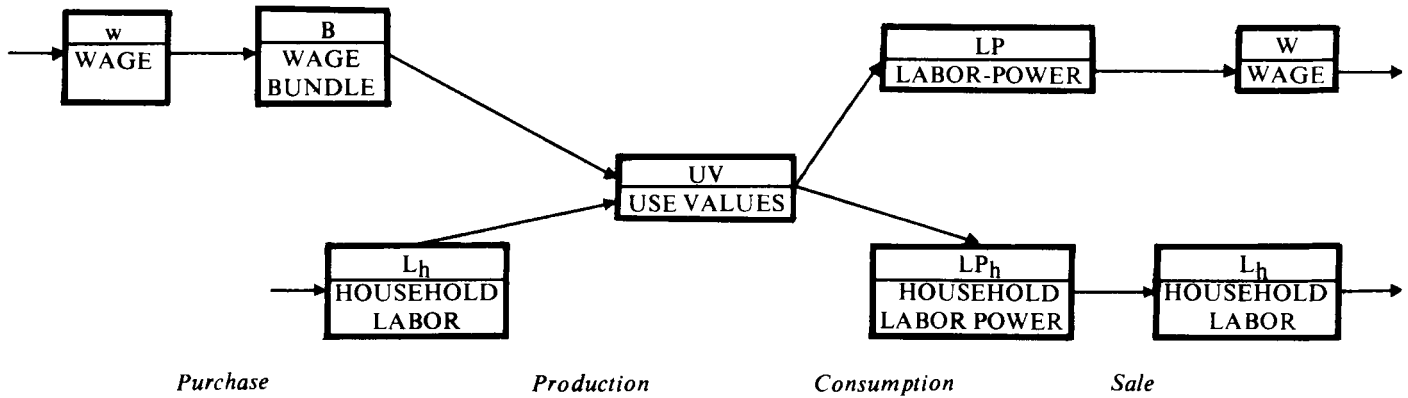
FIGURE 1
The Production of Labor-Power: Version 1



Yet the attentive reader will have noticed in this figure an awkward silence: how are we to represent the necessary labor inputs into the process of reproduction of labor-power which takes the form neither of commodities nor of abstract labor? Consider the expanded and unquestionably more accurate schematic below, in the form of Figure 2:

Whence our second reason why labor-power is not a commodity: labor-power is produced in large measure by necessary labor which is not abstract labor. The error in Marxian theory is to have treated the family as an individual and thus to have ignored its internal articulation of practices.⁵⁴ Let us once again formally compare capitalist production and the production of labor-power.

FIGURE 2
The Production of Labor-Power: Expanded Version



Jane Humphries (1977) has accurately pinpointed the explicit asymmetry in Marx's own treatment of the problem:

the allocation of labor at the site of capitalist production (or simple commodity production).

The value of a commodity is constituted by the indirect and direct labor embodied in it. Thus

In the case of other commodities (Marx) determines their value by considering the way in which they are produced. In the case of labour power, however, he adopts a quite different approach and begins not with production but consumption. The wages of the average worker are used to purchase a given bundle of capitalistically produced commodities. To produce this subsistence bundle requires a certain amount of labour-power. So the value of labour-power, in contrast with that of other commodities, is defined without any reference to its own conditions of production (and reproduction). Instead it is based on the conditions of production of those commodities for which it is exchanged. (p. 243)

$$\text{value of a commodity} = \begin{matrix} \text{dead labor, or} \\ \text{indirect labor,} \\ \text{or constant capital} \end{matrix} + \begin{matrix} \text{live labor or direct} \\ \text{labor, or variable} \\ \text{capital plus surplus} \\ \text{value, or paid plus} \\ \text{unpaid labor time.} \end{matrix}$$

Can we represent the value of labor-power in the same manner? The value of labor-power is the commodities which make up the workers wage bundle multiplied by the unit value of each element. Thus

$$\text{value of labor-power} = \text{labor time embodied in the elements of the wage bundle.}$$

If we are to represent the generation and regeneration of labor power as a labor process (rather than a consumption process), we must take account of the labor of house workers.⁵³ This labor cannot be described as abstract labor, for its allocation is not governed by the same considerations (market regulation) which govern

We notice at once a discrepancy: the representation of the value of labor-power makes no reference to a direct labor input (analogous to the live labor input in commodity production). Why not? Because the direct labor input is nonabstract labor, performed by household

workers. The value of labor power is the value surrendered by the capitalist in acquiring command over labor-power. It is an element of the cost of production seen from the standpoint of the capitalist. Is this mode of representation adequate? To see that it is not we may distinguish between the *value of labor-power* (defined as above) and the *cost of reproducing* labor power, defined as the direct and indirect labor time socially necessary to produce a unit of labor-power. Which is the appropriate concept? An uninviting choice. On the one hand we may opt for the value of labor-power formulation and simply ignore the non-commodity forms of use-value necessary to the production and reproduction of labor-power, thus preserving the definition of labor-power as the product of abstract labor. But this approach represents the production of labor-power simply as a process of consumption of commodities. It thus disarticulates the site of capitalist production from other sites and, as we shall see, cannot account for essential aspects of the production and pricing of labor-power. Alternately, we may adopt the more inclusive cost of reproducing labor-power formulation and thus incorporate *all* of the necessary forms of production (whether or not they represent abstract labor). While this approach may seem attractive, it destroys the relationship between the wage rate and the cost of reproducing labor-power, and hence defeats a central project of the labor theory of value, the elaboration of the relationship between capitalist exploitation (a value concept) and profits (money concept). It is no less unfortunate as a guide to understanding the family site, for it subsumes the production of labor-power under the general theoretical categories of the production of commodities, and thus obliterates the distinctness of the structuration of practices at family and state sites.

It may be objected that the two conceptions — value of labor-power and cost of reproducing labor-power — are formally equivalent. To see why this is mistaken, we may assume that the wage bundle is consumed jointly by the worker, and an associated non-wage worker whom we shall call the houseworker. Thus the value of labor-power is the value of the consumption bundle consumed by the wage worker and the houseworker. Does this quantity measure the labor time necessary to reproduce the labor power of the wage worker?

Under what conditions would these two quantities, the value of labor-power and the socially necessary costs of its reproduction, coincide? Only if the houseworker provided the same hours of use values to the wage worker that she or he received from the wage worker in the form of commodities.⁵⁵ But if this were the case, the hours worked by the house worker would be equal to the hours of consumption (both commodities and home produced use values) enjoyed by the

house worker. A remarkable conclusion: the condition under which the value of labor power (defined as a commodity) is identical to the socially necessary costs of production of the wage worker is that the house worker not perform unpaid labor time.⁵⁶ By collapsing the terms value of labor-power and labor time socially necessary to reproduce the worker the Marxian theory of value commits itself to the result that while wage workers are exploited, house workers are not! In this case the internal relations of the family would be represented by an equal exchange of labor services for commodities. This is, of course, exactly the formulation offered by the neoclassical economics of the family, but in taking the metaphoric "marriage contract" as a literal analytical expression it renders the labor theory of value incompatible with *any* attempt to develop an analysis of the structure of domination in the family site. If we reject the equal exchange view of the family we must conclude that the value of the wage bundle cannot be even a surrogate measure for the total labor time socially necessary for the production of labor-power. Thus the significant role of home produced noncommodity use-values involved in the production of labor-power invalidates the designation of labor-power as the product of abstract labor and therefore as a commodity.

There is a further implication, one which we shall take up shortly. The customary standard of living of the working-class family includes both the home produced use-values and the commodities purchased with the wage. However, the standard of living of the wage worker is his or her share of the wage bundle, plus his or her share of the home produced use-values, and correspondingly for the houseworker. Presented in this manner and acknowledging the sexual division of labor in the household, the complex articulation of gender struggle and class struggle is made compatible with the value framework. But the necessary terms for the analysis of the family as a locus of distributional conflict over both commodities and home produced use-values are not the terms of the labor theory of value but one which respects the specificity of the structure of family site and its characteristic articulation of practices, its patterns of domination, and the like.⁵⁷

Our concern here is not that the classical Marxian labor theory of value will misunderstand the structure of the family, its dynamics and characteristic struggles, but rather that it will misunderstand its own object, the evolution of the social relation of capitalist production. Our third objection to the designation of labor-power as a commodity will make this clear. Such a representation, if correct, would imply the non-reproduction of the social relations of capitalist production. For if the production of labor-power were governed by the valorization process described by either simple commodity or capitalist production (equation 1

or 2 above) then we would expect, as with other commodities, alternating periods of excess demand and excess supply. Excess supply of this commodity would be counteracted by production cutbacks and the movement of productive inputs out of the labor-power production industry into other pursuits. Thus there would be no more reason to expect an enduring glut of labor-power than of any other commodity. More pointedly, a reserve army of labor-power would be as accidental an occurrence as a reserve army of shirts. But we know that a reserve army of unemployed workers (excess supply of labor-power) is central to the maintenance of a positive rate of profit and to the reproduction of the social relations of capitalist production. It might be supposed, however, that the excess supply in the labor-power market will be ensured nonetheless through the constant penetration and destruction of noncapitalist sites (petty-commodity production, debt-tenancy production, the family and the like) or through the labor-saving bias of technological progress in the site of capitalist production. But this view cannot be sustained, as it implies that the producers of labor-power, in making their production decisions are peculiarly ill informed about tendencies in the accumulation process whose impressive regularity is such as to move others to designate these as "laws of motion" of the system. Indeed, if the producers of labor-power *did* incorrectly foresee the influx of new previously nonwage workers and the labor-saving effects of technological change, and hence over produced labor-power, would they not over the years discover their error, and alter their expectations? One does not, after all, see a glut on the horse-shoe market, despite the rather dramatic horse-shoe-saving bias of technological change over the past half century. If labor-power, too, is a commodity by what reason would we impart to its producers this peculiar propensity to overproduce?

We may strengthen our argument. If the production of labor-power were governed by the valorization process of commodity exchange the result would not be, as we have initially supposed above, alternating periods of excess supply and excess demand but rather a strong tendency towards the curtailment of the production of labor-power at all, leading to persistent excess demand. That this result would be contradictory to the generation of profits and the reproduction of capitalist social relations hardly need be argued. But why would the production of labor-power be curtailed, as we suggest? The valorization process of commodity production in either variant determines the exchange-value of the commodity. But it is the ownership relation which allocates that exchange-value to the owner of the means of production and thereby provides both the incentive and the wherewithall for further production:

The labor process is a process between things that the capitalist has purchased, things that have become his property. The product of this process belongs, therefore, to home. . .⁵⁸

What is the relevant ownership relation in the case of the production of labor-power? The commodity — if we must designate labor-power as a commodity — does not belong to those who necessarily initiate the production process, namely the future workers' parents. Of course, the workers' own decisions have a major bearing on the development of labor-power, particularly on such matters as the maintenance of health, the extent of on the job training and other education engaged in, and the like. But the supply of labor-power is critically influenced by the decisions of those who have no property claim on the income associated with the labor-power, and hence no monetary incentive to engage in its production.

This discrepancy between the ownership unit and the decision-making unit has been much commented upon in the human capital literature but it has scarcely been noted by Marxists.⁵⁹ It is of course true that various forms of patriarchal domination, familial love, custom, and social pressure may enforce some claim by the parents upon the children's income stream.⁶⁰ But these by and large legally unenforceable conventions cannot be described as a property relationship. Nor would this discrepancy between ownership of labor-power and decision-making concerning its production be rectified by the industrialization of the household, commercial day care from birth, all meals catered by capitalist enterprise or even test-tube babies. The only way in which ownership and decision making could be integrated is through the institution of life-long contractual relations between the owners of labor-power and those who initiated its production, contractual relations, which assured to the latter a claim on the income stream of each labor-power above and beyond some minimum subsistence requirements. Thus to make labor-power a commodity under terms which would allow its actual production requires that a form of indentured servitude or actual slavery replace "free" labor.

We conclude that the production of labor-power as a commodity is inconsistent with the social relations of production of capitalism. Ironically, it is the *incomplete* nature of the accumulation process, the fact that it has *failed* to convert the family site to commodity production which renders the reproduction of the social relations of capitalist production possible. We are again reminded that the existence of distinct sites of social practice is a necessary condition for the reproduction of the capitalist social relations of production. A theory which reduces the relations among

sites to commodity relations cannot conceptualize the reproduction process except in an internally inconsistent manner.

Our analysis of the reserve army has focused on the inexplicable "over production" of the labor-power commodity. The quite distinct question as to how there can be an excess supply of labor-power at all times, without the wage being thereby reduced to zero, remains to be answered. This requires an analysis of the special nature of the labor exchange: the process whereby labor is transferred to the capitalist in return for a wage. This analysis will suggest, in turn, that labor cannot be considered as labor-power's use-value to the capitalist.

Labor Is Not the Use-Value of Labor-Power

Marx, to be sure, at times represented labor as the use value of labor-power. Yet there are several methodological difficulties involved in this approach. For one, by treating labor as the use-value of labor-power *to the capitalist*, we abandon both the point of view of the working class and the more dispassionate view of the student of capitalism as a system, in favor of viewing wage-labor *through the eyes of capital*. Mechanistic distortions are therefore inevitable in analysing the extraction of surplus-value. For another, the concept of "use-value" derives from the theory of utility and consumption. Labor, then, is treated as a process of consumption. In Marx's words,

The consumption of labour-power is at one and the same time the production of commodities and of surplus-value.⁶¹

Yet it is critical in Marxian social theory that the specificity of capitalist production be maintained, not to be dissolved into the generalized social category of consumption.⁶²

These considerations do not show that labor is not the use-value of labor-power. Rather they register the unhappy consequences flowing from its being so treated. It remains for us to show that, in fact, labor cannot be so treated without grossly distorting the conditions of capitalist production.⁶³

Let us first consider Marx's argument:

To the purchaser of a commodity belongs its use, and the seller of labour power by giving his labour does no more, in reality, than part with the use-value that he has sold. From the instant he steps into the workshop, the use-value of his labour power and therefore also its use, which is labour belongs to the capitalist. By the purchase of labour power, the capitalist incorporates labour, as a living ferment, with the lifeless con-

stituents of the product. From his point of view the labour process is nothing more than the consumption of the commodity purchased, i.e., of labour power; but this consumption cannot be effected except by supplying the labour-power with the means of production. The labour process is a process between things that the capitalist has purchased.⁶⁴

How does Marx define this term: use-value?

The usefulness of a thing makes it a use-value. But this usefulness does not dangle in mid air. It is conditioned by the physical properties of the commodity and has no existence apart from the latter. It is therefore the physical body of the commodity itself. . . This property of a commodity is independent of the amount of labour required to appropriate its useful qualities.⁶⁵

This last sentence is crucial. We will return to it.

Marx appears to have recognized the limits of the metaphor of consumption when applied to the labor process. He notes:

One consequence of the peculiar nature of labor power as a commodity is that its use value does not, on the conclusion of the contract between the buyer and seller immediately pass into the hands of the former.⁶⁶

And by what means does the use-value of labor-power "pass into the hands of" the capitalist? The essence of exchange is a legally enforceable *quid pro quo*. If a supplier does not deliver the contracted goods or services, one need not pay the bill, or can gain recourse in the courts if the bill has been paid. This is not the case in the labour-power wage transaction, where in return for a wage the worker agrees only to submit to the political authority of the capitalist or his agents for a given period of time. What the worker must do in order to generate profits for the capitalist goes far beyond the terms of legal contract, which will in general specify the hours of work, the wage rate, health and safety conditions, pensions and the like, but *not* the amount of labor services to be performed. The coercive power of the state is relatively ineffective in securing the extraction of labor from labor power. Hence the central relevance of capitalist domination in the site of capitalist production: authority *at the point of production* must be used to evince worker behavior not guaranteed by the wage labor contract. Thus, the "use-value" of labor power passes into the hands of the capitalist, and this is critical, only as an outcome of class struggle at the point of production.

Here is a real peculiarity of labor-power. The enjoyment of the use-value of any other commodity is

nonproblematic: the bread does not resist being eaten. Not so with labor-power. Its "use value" is not delivered, it is not offered, it is not consumed. It must be extracted. This process of extraction engages the energies of armies of supervisors, time-motion men, guards, spies, and bosses of all descriptions. By no stretch of the imagination is this property of labor-power "independent of the amount of labor required to appropriate its useful qualities."

Nor does this appropriation depend solely upon the "physical properties" of labor-power, it depends as well on the ability of the capitalists to induce the worker to perform. This observation directly implies that the use-value of a worker is not limited to his or her "technical attributes," such as skills.⁶⁷ The surplus extracted in the work process depends, in addition, on states of consciousness, degrees of solidarity with other workers, the size of reserve armies, and the social organization of the work process. The classical Marxian insight that capitalist production produces not only commodities, but people as well, can thus be grounded in the process of expropriation of surplus-value. By what means may the capitalist secure the states of consciousness, motivational responses, attitudes towards authority, and degrees of solidarity and social distance vis-a-vis other workers which are conducive to the expropriation of surplus-value? The capitalist may, of course seek to influence the structure of family life, the curriculum of schools, the legal structure pertaining to labor organizations, and the media. But no less important, the capitalist will seek to organize the *experience* of the labor process itself to foster the desired beliefs, attitudes, values, and knowledge. Here we see clearly, the relevance of cultural practices at the site of capitalist production.

What is the basis of the effectiveness of the cultural practices of the capitalist? What are the resources the capitalist has at hand to evoke "proper behavior" on the part of the worker, in order to draw labor out of labor-power? One answer lies in the political structure of the enterprise. Given the legal structure of capitalism, the answer is simply the ability to dismiss, promote or change the wage of the worker. The prudent capitalist will seek to undermine any forms of social relations among workers which curb the potency of these sanctions and rewards.

The most obvious threat to the capitalist's power is collusion among workers. Individuals can be dismissed for insubordination, but the cost of dismissing entire blocs of workers is prohibitive. Thus it is essential to stratify the workforce in order to minimize worker solidarity. Turning the division of labor into a hierarchy of diverse and antagonistic fragments is thus an effective means toward the intensification of labor, and the reduction in workers bargaining power over wages.

It follows that the capitalist, operating independently of any class collusion, will in general reproduce in the enterprise the hierarchy of statuses reflecting the historical development of the working class. This will be directly evident in the day-to-day staffing of jobs — e.g. white over black, male over female, schooled over less schooled. This process, moreover, is substantially independent of the skill levels of the labor segments in question.⁶⁸ The different economic positions of these various labor segments will tend to coincide with and thus serve to perpetuate their status positions in the larger society, barring the intervention of counteracting forces. By making the extraction of labor from labor-power central to value theory, that is by emphasizing the nonexchange aspect of the exploitation process as central, we can thus easily resolve the puzzle, posed within classical Marxian value theory, of the apparent inconsistency between racial, sexual and other forms of labor-market discrimination and the competitive pursuit of capitalist super-profit. Racial, sexual and other worker divisions are not only in the interest of the capitalist class as a whole, they are essential to the extraction of labor from labor-power, and hence to the profits of any given individual capitalist.⁶⁹

The problematic nature of the extraction of labor from labor-power is no less central to solving the puzzle of the coexistence of positive wages with perpetual excess supply in labor markets. The resolution of this anomaly hinges upon the capitalist's imperative to maintain the efficacy of the threat of firing as a necessary condition for the extraction of labor from labor-power. To see how this insight provides a consistent theory of wage setting in long run unemployment situations, consistent with a system of competition among capitals consider the single capitalist whose output and hence profit levels depend upon an array of material inputs, services and labor. The costs of the material inputs and services is simply their market price; but labor itself bears no such market price. Its cost depends jointly upon the price of labor-power and the capitalist's success in extracting labor from labor-power. Towards this latter objective the capitalist may deploy a variety of strategies and instruments. For simplicity we limit these to two: direct supervision and the threat of firing. Both are costly. The cost of supervision is the salary of the nonproduction workers engaged in supervision. The cost of maintaining the threats of firing must include the wage of the production workers, for it is perfectly clear that the efficacy of the threat of firing depends upon the economic loss which being fired inflicts upon the worker. Thus the capitalist may increase the extraction of labor from labor-power by increasing the amount of supervisory labor, or by increasing the cost to the worker of being fired for pursuing projects contrary to capitalist

profit. There is every reason to believe the two strategies to be complementary: supervision works best when it is backed up by a powerful threat; threats work best when the proscribed behavior can be accurately and quickly detected.

Now consider a case in which labor supply conditions permit the capitalist to lower wages by a considerable amount by firing his workers and hiring the unemployed (or by threatening to do so.) Would it maximize the capitalist's profits to lower the wage? It might; but there is clearly some nonzero wage below which it will not pay to go, as each reduction in the wage will lower the efficacy of the capitalist's strategy for the extraction of labor from labor-power. In the limiting case of a zero wage (or more reasonably one equivalent to the level of anticipated unemployment insurance and welfare payments) the threat of firing disappears, rendering the supervision and control structure of the enterprise powerless to elicit work from the worker. Thus the reproduction of positive wages even in glutted labor markets is far from an anomaly: it is a reasonable expectation generated from a theory which makes the extraction of labor from labor-power a substantive conflict internal to capitalist production — necessitating political and cultural as well as economic strategies on the part of the individual capitalist. (Appendix II develops the above arguments formally.)

It is not the use-value/exchange-value distinction which imparts this uniqueness to the wage setting process; the use-values of all inputs in this example may readily be distinguished from their exchange-values. What is unique is the fact that the acquisition by the capitalist of the productive activities of the worker, unlike the other inputs, confronts the active practices of workers pursuing their own projects.

The classical labor theory of value, of course, scrupulously avoids all such references to political and cultural practices in the extraction of surplus-value. In the words of I.I. Rubin, an able exponent of the classical view,

Within an enterprise the engineers, workers and employees are. . . connected, in advance, by determined, permanent production relations in terms of the needs of the technical production process. . . production relations among people have exclusively a technical character.⁷⁰

If this critical moment in the exploitation process — getting work out of workers — is mentioned in the classical formulation at all, it inevitably is presented (to the bewilderment of contemporary students) as a struggle over the length of the working day, as if the daily wage bargain is struck first for an unspecified period of time per day following which labor and capi-

tal fight it out over the matter of hours. Sweezy's formulation is representative:

The magnitude of the rate of surplus-value is directly determined by three factors: the length of the working day, the quantity of commodities entering into the real wage, and the productiveness of labor.⁷¹

And if workers are paid by the hour? The extraction of labor from labor-power is then evidently concretized in the labor contract, thus locating both the terms of sale of labor-power, and the extraction of labor from labor-power within the sphere of exchange relations.

That this matter is "fought out" at all is clearly an indication that political practices are central to the accumulation process. But why is just the length of the working day subject to this treatment? Certainly we must add at least the "intensity of labor." And how is the struggle over this "intensity" to be theorized except as an effect of the total nexus of appropriative, political, and cultural practices at the site of capitalist production?⁷²

Proponents of the classical approach will of course respond that the extraction of labor from labor-power can be reintroduced at the point of production under Sweezy's third factor: "the productiveness of labor." This treatment however involves a fatal confusion. Productivity represents a quantitative relationship among inputs and outputs, each measured in some physical units. Marx:

Productive power has reference of course, only to labor in some useful concrete form. . .⁷³

The input into the labor process clearly is not labor-power, but labor itself, "the productive expenditure of human brains, nerves, and muscles." The extraction of additional labor from labor-power through intensification of the labor process, however profitable, involves an increase in *both* input and output, and thus may represent an increase, decrease or constancy of the productivity of labor.⁷⁴ The discrepancy between profitability and productivity is indicative of a retardation of the forces of production by the capitalist social relations of production. It arises here because profitability takes as its reference the capitalist costs — the terms of purchase of labor-power (e.g. hourly wage) — while productivity is measured in terms of the worker's expenditure of concrete labor.⁷⁵ Thus to represent intensification of labor as an increase in productivity, far from reintroducing the extraction of labor from labor-power at the point of production, does just the reverse: it embraces the capitalist accounting system and obliterates the distinction between labor and labor-power.

In short, it follows from the "peculiar nature of labor-power as a commodity" that the organization of production must reflect essential elements of class struggle. Not only must such traditional issues as the length of the working day and the division of revenue between capital and labor be understood in terms of the extraction of surplus-value, but also the structure of hierarchical authority, job fragmentation, racism and sexism as basic aspects of the capitalist firm.

Hence our original proposition. The representation of labor-power as the use-value of labor-power is not only inconsistent with Marx's own definitions. By providing no space for a theory of cultural and political practices and their structuration at the site of capitalist production, this formulation deprives the labor theory of value insight into the central mechanism of exploitation: the extraction of labor from labor-power.

Conclusion: Labor is Practice

The representation of labor-power as a commodity and of labor as its use value supports a political perspective which we believe to be antithetical to the creation of a democratic mass socialist movement.

First, by banishing politics and culture from the work place, the representation of labor as the use-value of labor-power promotes a technological view of the labor process, thereby undermining the critique of the authoritarianism of capitalist everyday life. Further, in this view it is the property relationship, not the more inclusive capitalist domination of the labor process, which assumes the crucial analytical role. Classical Marxian economics thus comes close to the neoclassical competitive model in which, as Samuelson aptly observes, "it makes no difference whether the capitalist hires the worker, or the other way around."⁷⁶ Worker struggles for democracy at the point of production are thus displaced from their central strategic position in socialist practice and relegated to a merely tactical role.

The political liabilities of the classical labor theory of value are not limited to these considerations. We must here add that the usual formulations of the value of labor-power provide no basis for conceptualizing an alliance of the overlapping but distinct groupings: producers of labor-power and wage workers. Analytically, this shortcoming may be traced to the absence of a term representing direct labor time (the houseworkers' time) in the value and price expressions for the "commodity" labor-power. This absence in turn, may be traced to the lack in Marx's theory of a concept of a family site at which appropriative, distributive and other practices are carried out.

The "labor-power is a commodity" formulation is equally unhelpful as the basis for a critique of liberal social theory and ideology. Neoclassical economics,

liberal law, and other bodies of liberal thought and practice represent labor-power as a commodity substantially like any other. The labor exchange is thus formally and substantively equivalent to other contractual relations. The hallmark of Marx's theory is precisely the nonequivalence of these relations. But Marx was mistaken to dwell upon only one aspect of the nonequivalence (labor is not a commodity) and to miss the other (labor-power is not a commodity). Moreover, by representing labor as the use-value of labor power Marx cut the ground from under his critique of liberal theory.

If, as we have argued in our second proposition, the formulation — labor is the use-value of labor-power — presents the capitalist production process as a technologically determined black box, the companion formulation — labor-power is a commodity — presents the family as a black box. Both formulations obscure the internal social relations of the site in question. The reason can now be simply stated. The classical Marxian theory stresses commodity relations and invokes the metaphor of consumption. No less important, it suppresses noncommodity social relations and the metaphor of transformative practice. To open up these two black boxes we thus need a theory which will center on what goes on *within* the capitalist firm and within the family as well as what goes on *between* families and firms. The exploration of these internal noncommodity social relations must of course be integrated with a theory of commodity relations.

What concepts will provide the basis for such a reformulation? No doubt Marx's substantive conception of the labor theory of value is not captured by our critique of his manner of presenting the theory in the first several chapters of *Capital*, Vol. 1. Marx never ceased to be infatuated with the Hegelian method of seeking truth through the exploitation of the joint validity of a proposition and its negation. The assertion that wage labor is a commodity is just such an assertion. Those of us less enamored of such grand dialectical reason would do better to assert that wage labor enters into exchange relations, but is not a commodity. We suggest that our representation of labor as an ensemble of appropriative, political, cultural and distributive practices better captures the essence of the labor theory of value.

We may now return to E.P. Thompson's critique, as well as that of the Sraffa school. To the former we respond that a correctly formulated labor theory of value does not suffer from the mechanistic, economic, and nomological deficiencies which he so ably records in *The Poverty of Theory*.⁷⁷ Further, the labor theory of value provides a theoretical basis for the systematic analysis of the site of capitalist production which a formulation in terms of class struggle, pure and simple, evidently lacks. The concept of competi-

tion among capitals, and the formulation of a general social rate of profit (with associated prices of production) remains a necessary part of any analytical framework addressed to understanding the accumulation process and capable of informing a nonvoluntaristic political intervention in its process of reproduction.

To the Sraffian school, we reply that the noncommodity status of labor-power, and the character of labor as an ensemble of practices, justifies its being singled out for special treatment. Steedman is quite correct in noting that if the profit rate is determined by the production matrix, the wage bundle, and the vector of labor inputs, then no recourse to value categories is necessary to derive prices and profit — as long as we have adequate theories of the social determination of these immediate determinants of profit. We maintain, however, that the labor theory of value is precisely the theoretical basis for developing such theories. Whereas the Sraffian approach treats the production matrix and the vector of labor entries as the technical conditions for the “production of commodities by means of commodities” the labor theory of value fosters the concep-

tion of the production process as an ensemble of social practices. And whereas the Sraffian approach views class struggle as focused on a distributional conflict over wages the labor theory of value promotes a formulation whereby class struggle is conceptualized both in production and in the “exchange” between the family site and the site of capitalist production.⁷⁸

Without this concept of labor as a social practice and lacking a theory of the articulation of distinct practices and distinct social sites, Sraffian theory, like classical Marxian value theory, cannot provide a compelling account of such fundamental aspects of the capitalist production process as technical choice, labor market segmentation, wage determination, the control over the labor process, and the conditions of labor supply.⁷⁹

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APPENDIX I:
*The Peanut Theory of Value
and the Energy Theory of Value*

What are the distinctive properties of wage labor which justify its being singled out as the basis of value theory? We shall demonstrate four relevant propositions alluded to in the text. Throughout, we will assume that each commodity is produced by a single production process, and all constant capital is circulating capital. In addition to commodities produced under conditions of capitalist production, we will assume there are production inputs not produced under such conditions, but which are marketed and thus have prices representing an exchange-value to their owners. Labor-power is one such production input.

We define an input into production to be a *basic* if it enters directly or indirectly (via its being an input into another production input) into the production of all commodities. We shall show:

Proposition 1: If the wage rate is positive, then labor is not the only basic in the economy.

This simple proposition demonstrates that once the physical properties of goods is abstracted from, labor is still *not* the only production input that commodities necessarily have in common. Therefore Marx’s argument supporting the preferred status of labor in Vol. I, Ch. 1 of *Capital* cannot be correct.

The next proposition concerns the adequacy of different versions of value theory. For our purposes, we may define a value theory as a consistent assignment of positive numbers (values) to each commodity and production input in the economy. By the input *bundle* of a commodity we mean the set of inputs socially necessary to produce it in unit amount. By the *bundle* of a production input other than a

commodity we mean the set of commodities and inputs purchased by the owner of the input upon its sale. This concept is of course an obvious generalization of the standard concept of the wage bundle.

We say that a commodity or production input is the *basis for a value theory* if it is a basic, and the value of each other commodity or production input can be expressed as equal to the sum of the values of the elements in its bundle. If labor is a basic, as we shall assume in this paper, it is clear that it is the basis for the labor theory of value according to this definition.

If a commodity or production input k is the basis for a value theory, we call the value of its bundle the *value of k -power*, and we write this as v_k . Also, we define the *rate of exploitation* of k -power as $\delta_k = (1 - v_k)/v_k$. If k is labor, this corresponds to the usual expression for the rate of surplus-value in the labor theory of value. Furthermore, we define *surplus k -value* for the economy as the k -value of commodity outputs minus the k -value of the commodity inputs directly and indirectly required to produce them. Once again, if k is labor, this corresponds to the usual expression in the labor theory of value.

We say commodity k is a *consistent basis* for value theory if it is the basis for a value theory, and a necessary and sufficient condition for a positive profit rate in the economy is that the rate of exploitation of k -power be positive. In terms of this definition, labor is one consistent basis for value theory. See Morishima (1973). This definition, while suitable for our purposes, is unduly restrictive. See Bowles and Gintis (1977). It will be easy to show that in general that if k is a consistent basis for a value theory, that the same fac-

tors that lead to an increase or decrease in the profit rate (changes in production input coefficients and elements of the k -bundle) lead to a change in the rate of exploitation of k -power in the same direction.

We now can state:

Proposition 2: Any basic commodity is a consistent basis for value theory.

This proposition relates to Marx's argument in Volume I, chapter VII of *Capital* that

...the specific use-value which this commodity [labor-power] possesses is [that of] being a source not only of value, but of more value than it has itself. This is the special service that the capitalist expects from labor-power.

First, this assertion is true in terms of labor only if the profit rate is positive. Second, the same assertion holds for any basic commodity exactly when it holds for labor. Of course if we presuppose the labor theory of value, we obtain Marx's conclusion. But if we presuppose commodity k as the basis for value, we find that Marx's conclusion is true for this commodity and *not* for labor-power. Thus it follows that the distinction between the use-value of labor-power to the capitalist and its exchange value cannot serve to demonstrate that labor is the proper basis for value theory.

It follows from the above that labor must be in some respect *different* from commodities in order that it serve properly as a basis for value theory. One such difference clearly incorporated in the traditional labor theory of value itself is that while the price of a commodity equals its cost-price (the cost of its bundle) *plus* the normal rate of profit on this cost-price, the price of labor-power (the wage) is equal to its cost-price (the money value of the wage bundle) without such a mark-up. The next proposition asserts that labor is not in general the only input with this property.

Proposition 3: Any marketed input into the production of commodities whose valorization process lies outside the site of capitalist production may have the same form of price equation as that of labor-power.

We may call all such inputs *resources*. One example of a resource is land containing exploitable natural resources or raw materials. While the actual exploitation of the resource may take place within the site of capitalist production, the payment of a "rent" to its owner if formally equivalent to the payment of a "wage" to labor-power in the sense that it enters into the determination of prices and profits in a manner perfectly symmetrical to that of labor-power.

Proposition 4: Any basic resource can be considered an acceptable basis for value theory.

This proposition demonstrates that the noncommodity attribute of wage labor recognized by the classical model of the labor theory of value — its distinct valorization process — is not sufficient to justify labor as the proper basis for value theory.

Proof of Proposition 1: We shall assume that labor is a basic input. If the wage rate is positive, then there is some commodity or resource in the wage bundle. This commodity or re-

source is thus indirectly embodied in any commodity produced by labor. Thus any element of the wage bundle is also a basic. It follows that labor is not the only basic.

Proof of Proposition 2: Let us motivate this proposition by means of an example, for the benefit of the less mathematically inclined. The general proof will follow.

Consider an economy with two goods, food (F) and jewelry (J). Food is used to produce all goods and is in the wage bundle, while jewelry is consumed only by nonworkers and is not used in production (i.e., it is not a basic). Specifically, suppose $\frac{1}{2}$ bushel of F and $\frac{1}{2}$ hour of labor are used to produce one bushel of F, and $\frac{1}{2}$ bushel of F is in the wage bundle. Also suppose $\frac{1}{4}$ bushel of F and one hour of labor is used to produce a unit of J.

We obtain labor values by defining the value of labor as unity, and the value of jewelry and food as the amount of labor time directly and indirectly embodied in them. It is easy to see that the value of labor-power v_L is given by $v_L = 1/2 v_F$, where v_F is the value of food. Also, the value of food is given by $v_F = 1/2 v_F + 1/2$. Thus $v_F = 1$ and $v_L = 1/2$. Also, the value of jewelry is given by $v_J = 1/4 v_F + 1 = 5/4$. Finally, the rate of exploitation of labor-power is $\alpha_L = (1 - v_L)/v_L = 1$. Labor is therefore exploited. Is the profit rate positive? Let π be the profit rate, p_F the price of food, and w the money wage rate. Then we have $p_F = (1 + \pi)(1/2 p_F + 1/2 w)$ and $w = 1/2 p_F$. Thus we find that $\pi = 33.33\%$, which is indeed positive.

The same is true, however, for a *food* theory of value. We now define the value of food as unity, and the value of jewelry and labor as the amount of F directly and indirectly embodied in them. It is easy to see that $v_F = 3/4$, $v_J = 3/4$, and $v_L = 1/2$. The rate of exploitation of food-power is $\sigma_F = (1 - 3/4)/(3/4) = 1/3$, so food is exploited!

This example does not show, however, that food is a consistent basis for value theory. To do so, we must show that the profit rate is positive if and only if the rate of exploitation is positive *in general*. Let $A = (a_{ij})$, $B = (b_i)$, and $\ell = (\ell_i)$, where $i, j = 1, \dots, n$. We consider a_{ij} as the amount of commodity i used in the production of a unit of commodity j , b_i as the amount of commodity i in the wage bundle, and ℓ_i is the amount of labor used in the production of commodity i . Furthermore, let w be the money wage, and let $p = (p_i)$, where p_i is the price of commodity i . Finally, let π be the money rate of profit. Then for any good i we have

$$p_i = (1 + \pi) \sum_{j=1}^n p_j a_{ji} + w \ell_i,$$

so
$$p = (1 + \pi)(pA + w\ell).$$

also,
$$w = \sum_{i=1}^n p_i b_i = pb. \quad (2)$$

Now if $x = (x_1, \dots, x_n)$ and $y = (y_1, \dots, y_n)$, where x_i and y_i represent the aggregate outputs and inputs of commodity i in the economy, respectively, it is clear that

$$y_i = \sum_{j=1}^n a_{ij} x_j + \sum_{j=1}^n b_{ij} x_j,$$

so
$$y = Ax + b\ell x = (A + b\ell)x.$$

Suppose good number 1 is a basic. Then we shall show it is a consistent basis for value theory. Writing $A^* = A + b'l$ and $\alpha = 1/(1 + \pi)$, we have from (1)

$$\alpha p = pA^* \quad (1')$$

$$y = A^*x \quad (3')$$

Let A be the matrix derived from A^* by dropping the first row and column. Also, define $d = (d_i)$ and $c = (c_i)$, where $d_i = a_{i1}$ and $c_i = a_{i1}$. If $\lambda = (\lambda_i)$, where λ_i is the 1- value of commodity i , then by definition we have

$$\lambda_i = \sum \lambda_j a_{ji} + d_i$$

so

$$\lambda_i = \lambda^1 A + d. \quad (4)$$

Also it is easy to see that the value of the bundle of good one is given by

$$v_1 = a_{11}v_1 + \lambda^1 c. \quad (5)$$

Now suppose that profits are positive. Then by (1'), we have $p > pA^*$. Then by the Frobenius-Perron theorem $(I - A^*)$ is nonnegatively invertible, which implies that there is a positive x with $x > A^*x$.

Define $x = (x_2, \dots, x_n)$. Then, writing $g = a_{11}$,

$$x > Ax + x_1 c \quad (6)$$

$$x_1 > gx_1 + dx \quad (7)$$

Thus $g < 1$ and $x_1 > (1-g)^{-1}dx$. Define x_1 by $x_1 = (1-g)^{-1}dx$ and let $x^* = (x_1, x_2, \dots, x_n)$.

Then (6) and (7) become

$$x > Ax + x_1 c$$

$$x_1 = dx + gx_1.$$

Thus

$$\lambda^1 x > \lambda^1 Ax + \lambda^1 cx_1 = (\lambda^1 - d)x + \lambda^1 cx_1$$

Hence

$$dx > \lambda^1 cx_1 = v_1(1-g)x_1,$$

and we have, from (5),

$$(1-g)x_1 > v_1(1-g)x_1.$$

Since $a_{11} < 1$ and $x_1 > 0$, we have $v_1 < 1$, and the rate of exploitation is thus positive.

Now assume that $v_1 < 1$. Let $p = (v_1, v_2, \dots, v_n)$. Then we see that $p > 0$ and $p \geq pA^*$, without equality holding. For

$$p_1 = v_1 = v_1 g + \lambda^1 c = a_{11}p_1 + \sum_{j=2}^n p_j a_{1j}.$$

$$i > 1, p_i = \lambda^i = \sum_{j=2}^n \lambda^j a_{ji} + d_i > v a^*_{ii} + \sum_{j=2}^n \lambda^j a^*_{ji} =$$

$$= \sum_{j=1}^n p_j a_{ji}^*.$$

This shows, by the Frobenius-Perron theorem, that the eigenvalue α of A^* is less than unity, so the profit rate must be greater than zero.

Proof of Proposition 3: Now suppose we have in addition a marketed resource whose exchange value is w' , and let $\ell' = (\ell'_i)$, where ℓ'_i is the amount of the resource used in the production of a unit of commodity i . Also, let $b' = (b'_i)$, where b'_i is the amount of commodity i in the bundle of this resource. Then we have

$$p_j = (1 + \pi) \left[\sum_{i=1}^n p_i a_{ij} + w \ell_j + w' \ell'_j \right]$$

$$w = \sum_{i=1}^n p_i b_i = pb$$

$$w' = \sum_{i=1}^n p_i b'_i = pb'.$$

Thus we have

$$p = (1 + \pi)p(A + b'l + b'l') \quad (8)$$

$$w = pb \quad (9)$$

$$w' = p'b' \quad (10)$$

Since labor and the resource are represented symmetrically in equations (8) through (10), the result follows.

Proof of Proposition 4: The proposition is of course trivially true if there is neither labor nor other resources in the economy. Clearly, however, this is an unwarranted assumption. Thus we have (n) commodities and $(m + 1)$ resources, the last of which (we shall call it "energy") is to be treated as the basis for value theory. Let $A = (a_{ij})$, $B = (b_{is})$, $R = (r_{st})$, and $L = (\ell_{st})$, where $i, j = 1, \dots, n$ and $s, t = 1, \dots, m$. We consider a_{ij} as the amount of commodity i used directly in the production of commodity j , b_{is} as the amount of commodity i in the bundle of resources s , r_{st} as the amount of resource s used in producing a unit of commodity i , and ℓ_{st} as the amount of resource s in the bundle of resource t . In addition, let $r = (r_s)$, $p = (p_i)$, and $w = (w_s)$, where r_s is the total amount of resource s used in production, p_i is the price of commodity i , and w_s is the market price of resource s . We integrate our energy resource into the economy as follows: let $c = (c_i)$, $d = (d_i)$, $e = (e_s)$, and $f = (f_s)$, where c_i is the amount of commodity i in energy's bundle, d_i is the amount of energy used directly in producing a unit of commodity i , e_s is the amount of energy in the bundle of resource s , and f_s is the amount of resource s in energy's bundle. Finally, let z be the market price of energy, and h the total amount of energy used in production.

We shall now assume that every resource is used in the production of at least one basic and is therefore itself a basic. We also assume that there is some combination of resources

$$r > 0 \text{ such that } r_s > \sum_{t=1}^m \ell_{st} r_t \text{ for all } s = 1, \dots, m.$$

This merely says that there is a combination of resources such that if capitalists purchase r , the amount of resources returned directly to owners of r is itself less than r . Were this false, no production could take place. Thus $(I - L)r > 0$, and by a standard theorem of nonnegative matrices, we have $(I - L)^{-1}$ exists and is positive.

Lemma 1: Define a new matrix A^{**} by

$$A^{**} = A^* + (1 - a_{11})^{-1} c^* d^*$$

Where $A^* = A + B(I - L)^{-1}R$

$$d^* = d + e(I - L)^{-1}R$$

$$c^* = c + B(I - L)^{-1}f$$

$$g = e(I - L)^{-1}f$$

Then if $\alpha = (1 + \pi)^{-1}$, where π is the rate of profit, we have $\alpha p = pA^*$ (11)

Also, if $y = (y_1, \dots, y_n)$ represents the commodity inputs required to produce outputs $x = (x_1, \dots, x_n)$, then $y = A^{**}x$. (12)

Proof: The price equations in this case clearly become

$$\alpha p = pA + wR + zd$$

$$w = pB + wL + ze$$

$$z = pB + wF.$$

Thus

$$w = pB (I-L)^{-1} + ze(I-L)^{-1}$$

so

$$\alpha p = pA + pB (I-L)^{-1}R + ze(I-L)^{-1}R + zd$$

$$\alpha p = pA^{**} + zd^{**}$$

Also, $z = pc + pB(I-L)^{-1}f + ze(I-L)^{-1}f$

$$z = pc^{**} + zg.$$

Hence $\alpha p + pA^{**} + (1-g)^{-1}pc^{**}d^{**} = pA^{**}$.

Lemma 2: Let $\lambda^e = (\lambda_i^e)$, where λ_i^e is the amount of energy directly or indirectly embodied in the production of commodity i . Let x and $y(x)$ be the outputs and corresponding inputs of commodities for the economy. Then by definition surplus-value is given by $S(x) = \lambda^e x - \lambda^e y(x)$.

Define v_e as the value of energy's bundle. Then

$$s(x) = (1 - v_e)dx.$$

Proof: Let us write $\mu = (\mu_1, \dots, \mu_m)$, where μ_s is the value of the bundle of resources s in terms of energy. Then we have

$$\lambda^e = \lambda^e A + \mu R + d \quad (13)$$

$$\mu = \lambda^e B + \mu L + e \quad (14)$$

$$v = \mu f + \lambda^e c \quad (15)$$

From (14) we have

$$\mu = \lambda B (I-L)^{-1} + e (I-L)^{-1}. \quad (16)$$

From (13) we have

$$\lambda^e = d + \lambda^e A + \lambda^e B (I-L)^{-1}R + e (I-L)^{-1}R$$

$$\lambda^e = d^{**} + \lambda^e A^{**}. \quad (12)$$

From (15) we now have

$$\begin{aligned} v_e &= \lambda^e c + \lambda^e B (I-L)^{-1}f + e (I-L)^{-1}f \\ v_e &= \lambda^e c + g. \end{aligned} \quad (13)$$

Now let r and h be the total resources and total energy used directly in the production of commodities x . Then by definition, the value of variable capital is given by $V(x) = v_h$. But $h = dx$, so we find $V(x) = v_e dx$. The value of output is clearly $T(x) = \lambda^e x$. The value of constant capital $C(x)$ includes $\lambda^e A x$ for commodity inputs, and μr or resource inputs. But clearly $r = R x$. Thus

$$\begin{aligned} C(x) &= \lambda^e A x + \mu R x \\ &= \lambda^e x + \lambda^e B (I-L)^{-1}R x + e (I-L)^{-1}f \\ &= \lambda^e A^{**} x + e (I-L)^{-1}R x \end{aligned}$$

Thus surplus-value $S(x) = T(x) - C(x) - V(x)$ is given by

$$\begin{aligned} S(x) &= \lambda^e x - \lambda^e A^{**} x - e (I-L)^{-1}R x - v_e dx \\ &= d^{**} x - e (I-L)^{-1}R x - v_e dx \\ &= dx - v_e dx = (1 - v_e) dx. \end{aligned}$$

We may now show that the profit rate is positive if and only if the rate of exploitation is positive. Suppose $\pi > 0$. Then by Lemma 1, $\alpha p = pA^{**}$ for $\alpha < 1$. Then by the Frobenius-Perron theorem there is a positive x with $\alpha x = A^{**}x$. Then $\lambda^e x = \lambda^e A^{**}x + \lambda^e (I-g)^{-1}c^{**}d^{**}x$.

Thus $(1 - \alpha)\lambda^e x = d^{**}x - \lambda^e (I-g)^{-1}c^{**}d^{**}x > 0$,

So $d^{**}x > \lambda^e (I-g)^{-1}c^{**}d^{**}x$.

Since $d^{**}x > 0$, we have $1 > \lambda^e (I-g)^{-1}c^{**}$ and $(1-g) > \lambda^e c^{**}$, so $1 > \lambda^e c^{**} + g = v_e$. Conversely, if $v < 1$, then Lemma 2 shows that $S(x) > 0$ for any outputs x , and in particular for the eigenvector of the maximal eigenvalue of A^{**} . For this choice of x , we have $s = A^{**}y$. But clearly in this case

$$S(x) = \lambda^e x - \lambda^e y(x) = \lambda^e x - \alpha \lambda^e x = (1 - \alpha)\lambda^e x > 0$$

Then $\alpha < 1$, so $\pi = \alpha^{-1} - 1 > 0$. This completes the proof.

Appendix II: Wage Determination with Labor as Practice

In this appendix we demonstrate the proposition in the text to the effect that because labor must be extracted from labor-power, the profit maximizing capitalist, operating without collusion with other capitalists will in general set wages at a level higher than the workers next best alternative.

Formally we may represent output of the capitalist's enterprise as a function of the level of inputs (though the sequential nature of the maximizing problem in this case allows us to avoid specification of the precise nature of this relationship.)

Thus,

$$1) \quad q = f(x, L)$$

where q is a measure of output over some period of time, x is the vector of material inputs and services, and L is the input of labor over this same time period. We notice immediately that if L could be purchased, or if, as the "use-value" formulation suggests, it could be represented as a given multiple of

the amount of labor-power hired, LP , the price offered for it by the capitalist would be the lowest consistent with the conditions of labor supply facing the enterprise. With market clearing prices the firm would act as the price taker; with long-term unemployment wage cutting would take place. However, where labor is *extracted* rather than *purchased* and *consumed* we will show that the wage which maximizes profits will be an instrument to be manipulated by the capitalist, and will be quite distinct from the supply price of labor, the market clearing price, or any other externally determined quantity.

We may write L as jointly determined by the amount of labor power hired and the "expected cost to the worker of not working," E_c . This expected cost, as in the text, depends on (a) the probability that a worker's own objectives antithetical to profits will be detected and (b) the cost of being fired, if detected. For simplicity, we assume that (a) is measured by the amount of supervisory labor hired per hour of produc-

tion labor-power hired. (We here abstract from the far from trivial problem of extracting work from supervisory employees. Thus we represent supervisory services, S , as purchasable at price P_S .) The cost of being fired is measured by w^* , the difference between the wage offered by the capitalist, w , and the anticipated addition to "social wage" payments if unemployed, w_u . Further we may represent the amount of labor extracted per hour of labor power hired, L/LP as L^* . Thus

$$2) L^* = g(E_c)$$

and

$$3) E_c = j(S, w^*)$$

or

$$4)$$

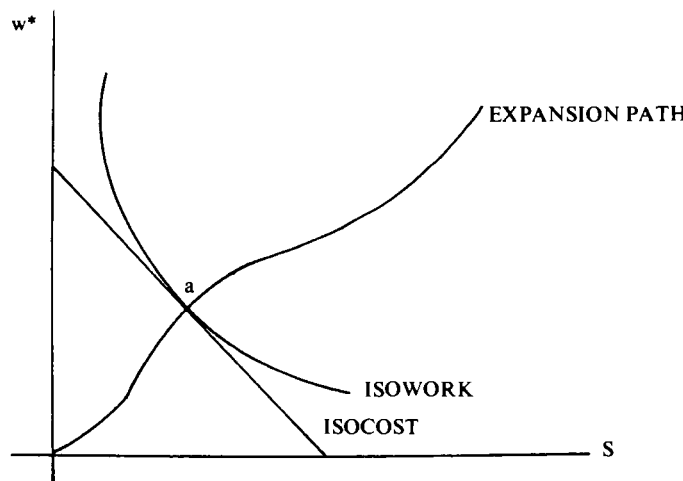
where for S and w^* both positive h_S and h_{w^*} are both positive, and $h_{S w^*}$ is also positive. The last term expresses the complementarity of the cost of being fired and the degree of supervision. For either $s = 0$ or $w^* = 0$, we assume $E_c = 0$ and $L^* = 0$: no work gets done unless the capitalist has some system of detection *and* some effective threat of firing. This assumption expresses a central aspect of the capitalist social relations of production: the only formally sanctioned power possessed by the capitalist is the power to terminate the labor contract.

Under these conditions the profit maximizing capitalist strategy must satisfy the condition that

$$5) P_S = h_S/h_{w^*}$$

or the price of supervision is equal to the "marginal rate of substitution" between threats and detection in the expected cost of not working function (3). Because $h_S \rightarrow 0$ as $w^* \rightarrow 0$ and analogously $h_{w^*} \rightarrow 0$ as $S \rightarrow 0$, the expansion path, or locus of all possible profit maximizing strategies, (S, w^*) will lie entirely within the range of positive values of S and w^* . We may note that even if we alter our assumptions, and let h_S be positive for some $w^* = 0$ (supervision is effective even

FIGURE 1



with no cost of being fired), though the expansion path might include a solution for which $w^* = 0$ it would not generally be the profit maximizing solution.

We may represent the problem graphically as in figure 1. The isocost function is the locus of equally costly capitalist strategies. Its slope is $-P_S$. The isowork function is the locus of equally effective capitalist strategies: points describing an equal extraction of labor from a given number of hours of labor-power hired. Its slope is $-h_S/h_{w^*}$. Point a is a point on the expansion path of (S, w^*) satisfying condition (5). The expansion path is the locus of possible profit maximizing strategies. Given that P_S is positive, a necessary condition for the expansion path to intersect the horizontal axis at a point where S is positive is that the isowork functions also intersect the horizontal axis, which would imply a positive return to supervision even with no cost to the worker of being fired.

NOTES

1. For example, see Sweezy (1942), Althusser (1970), Fine and Harris (1976), Yaffe (1973), Bukharin (1965).

2. For example, see Thompson (1979), Gramsci (1971), and Lukacs (1971). For analysis of the division between these two schools, see Fleischer (1969). Amin (1978) employs a similar division in his recent analysis of the labor theory of value.

3. Our forthcoming book *Recasting Marxian Theory* is an attempt in this direction. See, also, Best and Connolly (1979).

4. Balibar (1970), p. 306.

5. Here we could not be in stronger agreement with the position taken by Colletti:

Nonetheless, despite their differences, what Bernstein shared with Plekhanov and what Engels "self criticism" could not conceal but only confirm was the profound adulteration of the concept of the "economy," or, better still, of "social relations of production" precisely the core and foundation of Marx's entire work. The "economic sphere" — which in Marx had em-

braced both the production of *things* and the production (objectification) of ideas; production and intersubjective communication; material production and the production of social relations. . . — was now seen as one isolated factor, separated from the other "moments" and thereby emptied of any effective socio-historical content, representing, on the contrary an antecedent sphere, prior to any human mediation. (Colletti 1972: 65)

6. Laclau, in his insightful essay "The Specificity of the Political" criticizes Balibar and Poulantzas for "not establishing the necessary distinction between *production* and *economy*." He continues:

If by economy we mean the production of material existence, it is not determinant in the last instance but in the first, whatever the mode of production. If, on the contrary, we understand "economy" in the second sense (production of commodities) it

has never been determinant except when identified with the basic productive relations of the society.

But at this point Laclau's position diverges from ours (and Colletti's), for he continues:

Notice that the problem is not that the three levels should be articulated in a different way and that, consequently, we should attribute to production a political rather than an economic character; what happens is that the separation between the economic and political has not been verified in modes of production prior to capitalism and, therefore, the discrimination between economic and noneconomic factors is an artificial operation which projects onto the previous mode of production a type of social rationality existing under capitalism.

The fault in this separation of politics from economics, according to Laclau, is not in its rendering of capitalist production relations, but in its treatment of previous modes of production (Laclau 1977: 76-77).

7. We develop some of the necessary critique in our reconsideration of the dynamics of the structure of schooling in capitalist social formations. See Gintis and Bowles (1980).

8. See Bohm-Bawerk (1973), Hilferding (1960), Meek (1956), and Samuelson (1971).

9. See Okishio (1963), Morishima (1973), and Medio (1973).

10. See Morishima's admirable treatment (1973). He is quite incorrect however in claiming that heterogeneous labor constitutes an insurmountable problem for the labor theory of value, and a sufficient grounds for its rejection. See our treatment of this issue in Gintis and Bowles (1977) and our exchange with Morishima in subsequent issues of the *Cambridge Journal of Economics*. However, major problems of internal consistency remain, among which the problems of joint production and fixed capital are probably the most intractable.

11. Sraffa (1960). See also Robinson (1961), Pasinetti (1977), Garegnani (1970), and Eatwell and Robinson (1973).

12. Robinson (1961).

13. Steedman (1977: 58-59). Steedman's critique is in many respects parallel to Lange's (1935) suggestion that the power of Marxian theory lay in its historical and institutional analysis, and that the labor theory of value could be jettisoned in favor of a suitable amended version of neoclassical general equilibrium theory.

14. Thompson (1979:257).

15. Bowles and Gintis (1975).

16. Mandel (1971).

17. Marx (1963).

18. We cannot present our answer fully in this brief space. Our general integration of practice and structure, and our concept of social sites are developed at some length in Gintis and Bowles (1980).

19. Contrary to the implication of Laclau's formulation cited earlier, the purported isomorphism of structures and function is *not* a characteristic of the capitalist mode of production. Here we take strong exception, also, to Godelier's recent formulation:

It is only in certain societies and particularly in capitalist society, that this distinction between functions comes to coincide with a distinction between institutions... (T)he capitalist mode of production... for the first time separated economics, politics, religion, kinship, art, etc., as so many distinct institutions. Godelier (1978: 88).

20. We are of course not asserting that the dynamic of a site is a simple aggregation of the practices of individuals and groups within it; this elementary fallacy has been well exposed with the Marxian tradition, though its roots lie as far back as Montesquieu and Adam Smith. Our general conception of "levels" or "regions" of a social formation as structuring practices within them is due to L. Althusser. Our approach differs in several important respects, the major being

our rejection of the structuralist principle that individuals are mere "bearers" of their social relations, and hence practices have no effectivity beyond the structures that define them. We have criticized this position at length in Gintis (1980) and Bowles and Gintis (1980).

21. See Weinbaum (1978), Hartmann (1979), Ferguson and Folbre (1979), Mitchell (1973), and Chodorow (1978).

22. As for example is proposed in Althusser's concept of the "ideological state apparatus." For a fuller elaboration of our view, see Gintis (1980).

23. Marx (1967: 37).

24. Indeed we have argued elsewhere (1977) that no important result in the labor theory of value hinges on the proportionality of prices and values. Two commodities of equal exchange value will embody equal quantities of socially necessary abstract labor time if and only if the organic composition of capital in the production of these two goods is identical or the general social profit rate is zero.

25. See Appendix I.

26. Marx (1967: 163).

27. Marx (1967: 175).

28. Marx (1967: 176).

29. See the references in Footnote 8.

30. Smith (1937).

31. It will hardly suffice to refer to the *definition* of an exchange, as Marx does in the *Grundrisse*.

The exchange between the worker and the capitalist is a simple exchange; each obtains an equivalent; the one obtains money, the other a commodity whose price is exactly equal to the money paid for it. Marx (1973: 281-2).

32. Marx (1967: 170). An alternative formulation, from the *Grundrisse*:

(The exchange value of labour-power)... is determined like the value of every other commodity by supply and demand; or, in general, which is our only concern here, by the cost of production, the amount of objectified labour, by means of which the labouring capacity of the worker has been produced and which he therefore obtains for it, as its equivalent. (Marx 1973: 306).

33. Marx. (1967: 166-167).

34. Marx (1967: 209). Marx's parallel discussion in terms of "live" and "dead" labor is at best metaphorical. He consistently equates constant capital with "dead labor" and variable capital with "living labor." But certainly if the capitalist acquires the services of an independent agent (say a carpenter, or a technical consultant), with whom he contracts for the delivery of particular labor services this expenditure comes under the heading of constant capital. Yet the capital involved is just as surely "living labor."

35. See Appendix I.

36. See Appendix I.

37. Marx (1967:167).

38. Marx (1967: 177).

39. Marx (1967: 173).

40. Indeed, we show in Appendix I that any basic commodity, when taken as the measure of value, will have a "use-value" to the capitalist exceeding its own value.

41. This position has been expressed by writers as diverse as Sweezy (1979) and Castoriadis (1978). We first encountered it in Lange (1935). He writes:

If wages rise above the "natural price" of labor power so as to threaten to annihilate the employers' profits, there is no possibility of transferring capital and labor from other industries to the production of a larger supply of labor-power. *In this respect labor-power differs fundamentally from other commodities.* (p. 83 our emphasis)

R.P Wolff (1979) presents an elegant development of this point, Emmanuel (1975) and Aumeeruddy, Lautier and Tortajada (1978) develop similar arguments. We believe, however, that the "special nature" of the valorization process of labor-power is not sufficient to justify the labor theory of value, as labor shares this property with other inputs into the capitalist production process. See propositions 3 and 4 of Appendix I.

42. Marx (1967: 38).

43. Marx (1967: 38).

44. Marx (1967: 43-44).

45. Marx (1967: 572).

46. Marx (1967: 172).

47. Marx (1976: Chapter 23).

48. If A_i is the vector of input output coefficients for the unit production of good i , L_i the labor time required for the production of a unit of good i , P_i the price, r the social average rate of profit, p a vector of commodity prices, and w the wage, we have, for capitalist production:

$$(1) p_i = (pA_i + wL) (1 + r)$$

for labor-power production:

$$(2) w = pb$$

and for simple commodity production, using L_i as the labor input coefficient,

$$(3) p_i = wL_i^*(1 + r)$$

49. Cf. Becker (1964), Bowles and Gintis (1975).

50. Indeed Marx introduces the concept of abstract labor in *Capital* through a discussion of simple commodity production.

51. If the price fell below this quantity, the simple commodity producer would be better off investing the advance elsewhere, and seeking employment at the going wage.

52. Marx (1967: 190).

53. See Folbre (1979), Hartmann (1979), Secombe (1974), Gardiner (1975), Himmelweit and Mohun (1977).

54. Marxian value theory shares the trait with the neoclassical theory of the consumer, which represents the family of a single utility function, thus circumventing the otherwise intractable problem of the intrafamily aggregation of preferences.

55. Formally, if λ is a vector of values, A_i a vector of input output coefficients, and L_i the socially necessary direct labor time required to produce a unit of good i , then the value of commodity i , λ_i , can be represented as

$$(1) \lambda_i = \lambda A_i + L_i$$

The value of labor-power is

$$(2) \lambda_{LP} = \lambda b$$

where b is a vector representing the wage bundle. The direct labor time associated with the reproduction of labor power analogous to L_i equation (1) will be denoted L_{LP} , and the share of the wage bundle consumed by the wage worker α ($0 < \alpha < 1$). Thus the labor time socially necessary to reproduce labor-power, R , is

$$(3) R = \alpha \lambda b + L_{LP}$$

As αb represents the commodity inputs into the production of labor-power, and the L_{LP} the direct labor input we see that expression (3) is analogous to (1) with the important exception that L_{LP} is not abstract labor. But are LP and R equivalent? They are only if $L_{LP} = (1 - \alpha) \lambda b$. The right-hand side is the house workers share of the wage bundle, the left is the house workers labor time embodied in use values transferred to the wage worker. Thus the condition that the value of the wage bundle equals the total labor time socially necessary for the reproduction of the worker is that the family site is characterized by relations of equal exchange.

56. A simple example of an "egalitarian" household may illustrate this result. Let us assume that both the wage worker and the house worker each works for 8 hours a day, and that the wage bundle embodies 6 hours of socially necessary abstract labor time. Assume further that the 6 hours of wage-bundle values and the 8 hours of house-worker produced use-values are equally shared between the wage-worker and the house-worker, resulting in a consumption level of 7 hours for each. Both workers have performed one hour (8 minus 7) of surplus labor time. Both are "equally exploited." Have they engaged in an equal exchange? No. The house worker has performed four hours of housework for the wage worker (half of her eight hour total) and received in return her three hour "equal" share of wage bundle. So the exchange of use values for commodities in the family has transferred an hour to the wage worker. The loss of one of the two hours of the wage worker's labor time expropriated by the capitalist has been "redistributed" from the wage worker to the house worker through the unequal exchange within the family.

57. See the insightful contributions of Hartmann (1979) and Ferguson and Folbre (1979).

58. Marx (1967: 185).

59. See Becker (1964) and Bowles (1969). In the Marxian literature, see Wolff (1979).

60. See the excellent treatment by Folbre (1980).

61. Marx (1967), p. 175. The logic of this generalized metaphor of consumption is suggested in this further elaboration:

From the worker's side... it is evident that the use which the buyer makes of the purchased commodity is as irrelevant to the specific form of the relation here as it is in the case of any other commodity, of any other use-value. What the worker sells is the disposition over his labour, which is a specific one, specific skill etc.

What the capitalist does with his labour is completely irrelevant, although of course he can use it only in accord with its specific characteristics, and his disposition is restricted to a specific labour and is restricted in time (so much labour time). (Marx 1973: 282).

Further:

Suppose that a capitalist pays for a day's labour-power at its value: then the right to use that power for a day belongs to him just as much as the right to use any other commodity, such as a horse that he has hired for the day. (Marx 1967: 185)

62. Here Marx exhibits an Hegelian formulation mirroring in attenuated form his earlier analysis of the equivalence of production, exchange, distribution and consumption in (1968).

63. For further treatment, see Gintis (1976).

64. Marx (1967: 185).

64. Marx (1967: 126).

66. Marx (1967: 174).

67. Gintis (1976).

68. We develop these arguments in more detail in Bowles and Gintis (1977).

69. See also Reich (1980) and Roemer (1979).

70. Rubin (1972: 14).

71. Sweezy (1942: 64).

72. The literature on this subject is immense. See Gintis (1976), Whyte (1955), Gorz (1967), Marglin (1974), and Stone (1974).

73. Marx (1967: 46).

74. Marx defined the two terms as follows: "By an increase in the productiveness of labor we mean an alteration in the labor process of such kind as to... endow a given quantity of labor with the power of producing a greater quantity of use value" (1967: 314). "Increased intensity of labor means increased expenditure of labor in a given time" (1967: 524). The "productiveness" of labor, Marx writes in Section 1

of Chapter 1 of Volume is "determined by various circumstances, amongst others by the average amount of skill of the workman, the state of science, and the degree of its practical application, the social organization of production, the extent and capabilities of the means of production and by physical conditions" (1967: 40). Work intensity is absent from this extensive list. Moreover in chapter 17 he clearly distinguishes between an increase in intensity and an increase in "productiveness of labor." (1967: 524).

75. A discrepancy between productivity (or efficiency) and profitability may arise, as neoclassical economic theory has long recognized to its discomfort, whenever an input or output of the production process does not take the form of a commodity — air pollution being a familiar example. The neoclassical theory of "externalities" or "non-market interaction", however, insists that labor is a commodity. See

Bowles and Gintis (1975).

76. Samuelson (1971).

77. Thompson (1979).

78. And the state site as well. We have abstracted from this important dimension of the problem for the purposes of exposition. See Bowles and Gintis (1980).

79. Sraffian theory, to be sure, says nothing at all about the labor process, wage determination, or indeed many of the other topics which we have touched upon here. Thus it is hardly inconsistent with our formulation. From a formal standpoint there is at least as much reason for Sraffians to focus on the labor process as for neoclassicists to focus, say, on externalities. Both are capable of being encompassed by their respective theories. But surely it is not accidental that they do not in fact focus on these theories.

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