

DID MARX HOLD A LABOR THEORY OF VALUE?

In the first volume of *Capital*, Marx introduces a labor theory of value. The theory is supposed to form the basis of his “laying bare” the “inner workings” of capitalism. The theory rests on two claims, and at the outset Marx uses it to explain four features of capitalist production. Yet by the end of the final volume of *Capital*, he abandons both claims and offers alternative accounts of all four features of capitalism. We hold that Marx’s introduction of the labor theory of value is not the presentation of an alternative economic theory, but serves to introduce his analysis of the class structure of capitalism.

We begin by describing the labor theory of value, Marx’s initial arguments in support of it, and the four features of capitalism it is supposed to explain. We then examine why Marx abandons three of the four stated uses of the labor theory of value. We next turn our attention to the central claim of the labor theory of value. We consider, and reject, an apparently devastating criticism of it. Marx rejects the central claim on other grounds; the account that emerges has none of the simplistic assumptions that dominated his early presentation of the labor theory of value. Marx did not hold a labor theory of value after all: no part of his analysis of capitalism depends on it. We conclude by considering the broader implications of this rejection for Marx’s thought as a whole. Our interest is in Marx’s theoretical commitments and the explanatory use he makes of them; we shall not be concerned with his explicit avowals or with fathoming what he ‘really’ believed.

1. Value Theories and Labor Theories

The central claim of the labor theory of value is that products exchange in proportion to the amount of labor time required for their replacement. This claim has two components. The first is the claim that exchange is regulated by the resources needed to replace various goods. The second is the claim that labor-power is the fundamental commodity that regulates the exchange of all others. We examine these claims in order.

1.1. Values and Value Theories

Marx’s introduction of the labor theory of value begins with a distinction between use-value and exchange-value. Each exchangeable good, or ‘commodity,’ has both a use value and an exchange value. The use-value of a commodity is whatever features make it desirable as an object of consumption; the use-value of shoes is that they protect the feet and complement one’s other clothing. The exchange value of a commodity is the ratio at

which it normally exchanges with other commodities. Thus seven pairs of shoes might exchange for one coat or two toasters. It is exchange value that Marx sets out to explain.

The labor theory of value is a special case of a more general sort of economic theory, which may be termed ‘value theories of exchange.’² Production is primary; exchange, derivative. A value theory of exchange explains the exchange values of commodities on the basis of their relative costs of production. However, actual, historical production costs are not at issue; if they were, a handmade Toyota would be more valuable than an assembly-line model. Instead, commodities are held to exchange on the basis of their replacement costs: the value of a commodity is equivalent to the proportion of total social resources that would be necessary to replace it, including the proportional cost of the depreciation of the goods used in production.³

Value theories of exchange stand in marked contrast to the utility theories of exchange accepted in neoclassical economics. On the face of it, both seek to explain the same phenomenon. A utility theory maintains that commodities exchange at the ratios they do on the basis of subjective desires for their use-values—how badly people want various things as well as their availability. Exchange ratios emerge out of the aggregation of individual preferences. Production conditions enter into the process in two ways: insofar as the effort involved in producing various goods has a negative utility for producers (thus requiring inducement), and the effects of supply and demand on the costs of capital goods. Exchange ratios reflect the balance, or ‘equilibrium,’ between aggregate consumer desire for various goods and the producers’ unwillingness to produce them.⁴

Value theories, including Marx’s, recognize that actual exchange ratios reflect individual willingness to consume various commodities. Some commodities, such as gold, may never exchange at their real values because demand is so high. However, value theories maintain that demand only influences exchange within limits that are set by replacement cost. Demand may serve to explain short-term fluctuations in exchange, but does not and cannot explain exchange in general.

² Other examples include the theories of Sraffa [1960], and such neo-Ricardian or post-Sraffian Marxists as Ian Steedman, in Steedman [1978] and Steedman [1981].

³ On the relevance of actual, historical costs to Marx’s theory, see the debate between Himmelweit & Mohun [1981] and Shaik [1981]. Cohen [1981] points out that Marx appeals to both historical costs and replacement costs at various places in *Capital*.

⁴ Like value theories, utility theories iterate to take production goods into account.

1.2. The Labor Theory of Value

Labor plays two distinct roles in the value theory that Marx introduces. It is both the source of value and the measure of value.

1.2.1. *Labor as the Source of Value.* The fundamental claim of a labor theory of value is that labor-power is the source of surplus. Value theories can focus on exchange in two distinct types of economy. The first is the subsistence economy,⁵ which Marx calls “simple commodity production,” in which no more is produced than is used up in production. In a subsistence economy, the value of any particular commodity is equivalent to the portion of the total commodities that are used up in its production.

In the second and more familiar kind of economy, the production of commodities is normally also the production of surplus—the portion of the product that remains after everything used up in production is replaced. Because more goods are produced than are consumed in their production, there is a surplus to be appropriated. After the costs of replacing all of the resources used up in production has been taken into account, there is a surplus of valuable goods; the process of production is a process of adding value.

The labor theory of value includes an account of the source of the existence of surplus as part of its general account of the phenomenon of value: the only factor in production that increases the value of a product is human labor-power. Marx stresses the fact that what the capitalist purchases from the worker is the use of a quantity of labor-power—the capacity to transform nature. The capitalist then uses that labor-power to create commodities. Labor-power differs from other commodities because human workers can produce more than the workers themselves cost to ‘produce.’ The value of labor-power is always at a subsistence level; like the value of any other factor, it reflects the social resources necessary to reproduce it: the food, clothing, shelter and whatever other goods are necessary to prepare the worker for another day of work.⁶ But during a working day, a given amount of labor-power can be used to produce goods with more value more than the

⁵ Subsistence in the technical sense used here should not be confused with the ordinary use of ‘subsistence,’ which has connotations of barely keeping the producers alive; subsistence economies of the sort found in the Amazon typically do not produce anything for exchange. In the sense used here, a subsistence economy can exist at any level of wealth; the “no-growth” society that was the object of discussion a decade ago is a subsistence economy in this sense. This technical sense of subsistence must be kept in mind below, where we discuss Marx’s notion of subsistence wage: although workers in Marx’s time received barely enough to live on, that point is irrelevant to his analysis of capitalism’s workings.

⁶ Following Marx, we leave aside the difficulties raised by the question of whether the

per diem portion of their annual cost of production. Thus labor-power is responsible for the constant increase in the total product. All other factors merely transfer their value to the product. Because it is the only commodity that adds value, labor-power is thus the only productive commodity.

Marx analyses the appropriation of surplus in light of his more general view of history, the division of labor, and class struggle; he sees the capitalist's appropriation of surplus created by workers as of a piece with feudal lord's appropriation of a surplus created by serfs. As he says in the first volume of *Capital*, "Capital has not invented surplus labor. Wherever a part of society possesses the monopoly of the means of production, the laborer, free or not free, must add to the working time necessary for her own maintenance an extra working time in order to produce the means of subsistence for the owners of the means of production."⁷

1.2.2. *Labor-Time as the Measure of Value.* The second and subsidiary role that labor plays in the labor theory of value is as a standard commodity against which the value of all commodities is measured. Because price can fluctuate from value, some other measure of exchange ratios is needed. Marx's choice of labor-power rests on two considerations. First, labor-power is a 'basic' commodity because it is involved in the production of all other commodities.⁸ Thus it is convenient as a measure. Second, because labor-power is supposed to be the only productive commodity, the value of any produced commodity can be resolved into the labor-power used directly in its production and the labor-power used in the production of the other goods used in its production. Exchange of equivalents is thus accounted for by the fact that those equivalents are compounded out of common simples. The choice of labor-power as a measure is a reflection of the theory's other commitments; commensurable goods could be measured in terms of each other so long as one is held fixed.

1.3. Marx's Opening Arguments

Volume One of *Capital* opens with two arguments for the labor theory,

value of labor-power includes the cost of producing the next generation of workers. We also grant Marx the assumption that the value of labor-power is paid in commodities rather than as a money wage. Elster [1985] has pointed out that this unrealistic assumption is crucial to Marx's argument, for without it, there is no set thing to count as the value of labor-power. If workers can spend their wages on different commodities, with different values, the value of labor-power is not fixed prior to exchange.

⁷ Marx [1977] 344. Of course, Marx is referring to non-productive owners.

⁸ For the concepts of a basic commodity and a standard commodity, see Sraffa [1960] Chapter II. Sraffa creates a composite artificial commodity, made up of those commodities that there is a surplus of, as a standard commodity in his value theory.

both of which have been widely criticized.⁹ The first focuses on the possibility of exchange. Marx points out that exchangeable commodities need share no natural features or use-values. Therefore, Marx claims, they must share some other feature. The only feature that all produced items share is their producedness, that is the fact that human labor is involved in their production. Thus their exchangeability must reflect the amounts of labor-power required to produce them.¹⁰

This common element cannot be a geometrical, physical, chemical, or other natural property of commodities. Such properties come into consideration only insofar as they make commodities useful, *i. e.* turn them into use values. But clearly, the exchange relation of commodities is characterized precisely by its abstraction from use-values. . . . If we then disregard the use-value of commodities, only one property remains, that of being products of labor.

Not to put too fine a point on the matter, the argument is terrible. Marx has not shown that exchange requires any prior commensurability of goods. Why must exchange reflect some shared feature? And even if exchange must reflect a shared feature, why must it be ‘in’ the goods? Marx has not ruled out the alternative (and prevailing) view that exchange rests on supply and demand. Although exchangeable commodities are typically not interchangeable in their uses, they may be exchangeable because of their varied uses in virtue of how badly various people want to enjoy those uses. Marx clearly appreciates this fact, as he distinguishes between use-value and exchange-value. Worst of all, even if some shared feature other than desirability is required for exchange, Marx has not shown that the property of being the products of labor is shared in an appropriate sense, for he has not shown that diverse forms of human labor are commensurable. Although the production of every commodity involves the expenditure of labor, in what sense are skilled and unskilled labor, or agricultural and industrial labor, any more alike than their products? Marx says that all are ‘abstract labor,’ but that abstraction stands as much in need of explanation as exchange does, for it is simply a special case of exchange. We shall return to the nature of this abstraction.¹¹

The second argument for the labor theory of value focuses on the productivity of labor-power. Marx suggests that only labor can serve to explain the existence of surplus, because only labor can produce more than it costs

⁹ See, for example, Elster [1985] and Kolakowski [1976].

¹⁰ Marx [1977] 127–128.

¹¹ On this point, see Wright [1981b].

to produce.¹²

Therefore the value of the labor-power, and the value which the labor-power creates in the labor-process are two entirely different magnitudes; and this difference of the two magnitudes is what the capitalist had in view, when he was purchasing labor-power. What really influenced him was the specific use value of being a source not only of value, but of more value than it has itself. This is the special service the capitalist expects from labor-power, and in this transaction he acts in accordance with the “eternal laws” of the exchange of commodities.

Marx does not distinguish among three interpretations of this claim. It may be that (i) the expenditure of labor is a necessary condition for the existence of surplus-value; (ii) labor is itself productive of surplus-value; (iii) only labor is productive of surplus-value. The first claim is undeniable but trivial: unless some labor were expended, there would be no production and hence no surplus.¹³ While Marx makes claim (ii) plausible, he comes nowhere close to showing (iii), that only labor-power can produce surplus. Yet only the third interpretation makes the argument work; (iii) is the central claim of the labor theory of value. It is difficult to conceive how such a thing could be shown. Why is a pump turned by a bullock or mule less productive than one worked by a child? Why is a single worker maintaining a fully automated factory productive while the machinery simply transfers its value? We shall return to these questions, and Marx’s considered responses to them, below.

The claim that labor is the only commodity capable of producing surplus-value stands in need of an important clarification. Marx is concerned with surplus of the sort specific to capitalist society: surplus value. Not every increase in the actual physical product is an increase in surplus value, and not every increase in surplus value is identifiable in terms of physical output. In his early *Notebooks on James Mill*, Marx criticizes Adam Smith’s claim that the wealth of a nation consists in its total physical production. He points out that in capitalist society, wealth is a matter of exchangeable product, rather than production per se. A tree yields apples which I can eat; in the process, physical surplus is created in the form of new use-values, but surplus value is not. The difference is important. Marx’s claim that only labor can produce surplus-value is a claim about the increase in exchange

¹² Marx [1977] 188. Italics Marx’s.

¹³ If Robinson Crusoe gathers breadfruit on his island, he is appropriating but not producing; or, if he is producing, by gathering, it is his labor that makes his store of breadfruit accumulate.

value, not in use value. The point can be made clearer if we consider cases in which labor itself produces use-value without producing exchange value. If I bake an apple pie to serve to friends, I am creating new use-values, but no exchange value. If I bake an apple pie while working in a bakery that sells pies, I am also creating exchange value. The difference is not in my activity itself—for there is no difference—but in what becomes of my product. Still, we might wonder whether Marx can make good even on this more limited claim.

Both of Marx's arguments must be understood in their proper context. Their failure does not show the falsity of the labor theory; easy refutations of the arguments do not refute the theory. However, Marx introduces his arguments for other ends. In the introduction to a large and technical work intended for a non-specialist audience, it is not surprising that there should be useful pedagogical simplifications. The first argument does little more than lead the reader into the theory, and lay out one of the questions that it is supposed to address, the conditions of exchange. As it is presented, the second argument does something similar: it states the central thesis of the theory and gives it enough plausibility to entice the reader to continue.¹⁴

2. What the Labor Theory is Supposed to Explain

2.1. Exchange and Three Questions About Surplus

The labor theory of value claims that commodities exchange in proportion to the amount of labor time necessary to replace them (including the cost, in labor-time, of raw materials and depreciation). At the beginning of *Capital*, Marx uses it to explain four things about capitalist production: exchange ratios, the source of surplus, the allocation of that surplus, and the rate at which surplus is produced. Marx's method in *Capital* is one of successive approximations; as details are added to his analysis, simplifying assumptions are dropped. In fact, all four uses of the labor theory are abandoned—in the reverse of the order in which they appear. By the end of the final volume of *Capital*, the initial and simplified version of the labor theory is left with nothing to do. We shall consider the four uses of the theory in the order of their withdrawal, devoting most of our attention to the fundamental claim that labor is the source of all surplus.

¹⁴ Marx does not include either argument in the *Grundrisse*, the rough draft of *Capital*. Both are merely convenient ways into the theory, not proofs of it; their force is expository, not explanatory.

2.2. Exchange of Equivalents

Marx's initial analysis considers the case in which products exchange at their values. The exchange of equivalents is accounted for by the fact that those equivalents are compounded out of simples. The existence, allocation, and rate of surplus must all be explained without assuming that anyone is being defrauded. In the long run such perturbations cancel each other out. Risk-taking cannot explain profit for the same reason: it is a zero-sum game. Across the entire economy winners and losers cancel each other out, but overall a surplus is created and allocated. Marx's insistence on beginning with the 'normal' case does not rest on any supposition that it is in fact normal; enough factors interfere with it that it probably never actually occurs. But Marx treats it as the norm insofar as it sets the level around which interfering factors make exchange fluctuate.

The value of each commodity i resolves itself into two parts. First are capital costs, which reflect the value of the raw materials used in production as well as the decrease in the value of the means of production insofar as they are used up. Marx calls this constant capital (C_i). Second is the value of the labor-power required for production. Labor-power in turn resolves itself into two parts: the first, which Marx calls 'necessary labor,' 'paid labor,' or 'variable capital,' (V_i) is the amount of labor required for the worker to earn a subsistence wage.¹⁵ In some proper part of the working day, the laborer adds value to the finished product equivalent to what is received in wages. The second part of the working day is spent in 'surplus labor,' or 'unpaid labor,' which produces what Marx calls 'surplus value' (S_i). Having earned wages in the first part of the day, the worker works unpaid, to enrich the capitalist.

Suppose that x units of commodity A exchange for y units of commodity B . In the simplest case, A and B exchange as follows:

$$x(C_a + V_a + S_a) = y(C_b + V_b + S_b)$$

At this point, Marx's answers to each of the four questions is straightforward. Commodities exchange in proportion to the labor-time required for their replacement. The source of surplus is labor, and the source of surplus-value unpaid labor. The rate of exploitation for any particular commodity is the proportion of surplus value to variable capital, S_i/V_i . The surplus is allocated in the form of profit; the rate of profit for the production of any commodity i is the ratio of surplus value to total capital,¹⁶ $S_i/(C_i + V_i)$.

¹⁵ This need not mean that workers live on bread and water; see n. 4 above.

¹⁶ In accounting for the relation between exploitation and profit, Marx further distin-

Even in this simplest case, Marx does not use the labor theory of value to explain the source or allocation of profits. Although he relies on the labor theory of value in claiming that labor is the source of surplus, his analysis of the exchange of equivalents is merely a restatement of this, and hence does not qualify as an ‘explanation’ at all.

2.2. Appropriation

The labor theory of value is fundamental to Marx’s answer to the second question. Under capitalism, the question of who appropriates the surplus is a question about who owns the product; by showing that surplus is generated in production Marx shows the conditions under which the capitalist can appropriate a surplus she did not create. The answer is simple: because the capitalist purchases the worker’s labor-power, she gets to keep the entire product of that labor-power, including any surplus that is produced.

2.2.2. *The Degree of Exploitation.* The division of the worker’s activity into parts of the working day may seem arbitrary, but it serves an important purpose. It allows Marx to express the degree to which the worker is exploited as the ratio of necessary to surplus labor time, or surplus to variable capital. The less time the worker takes to earn her wages, the more she is exploited.

Marx’s account of the exploitation of labor must be distinguished from the claim that wages are inversely proportional to profits. The latter claim, which Marx attributes to Ricardo,¹⁷ rests on the view that labor costs are the only costs a capitalist can control, from which it follows that the only way to increase profit is to lower wages. This view, however plausible, is distinct from the labor theory, since it holds that whatever the source of surplus, there is a limited amount that workers and capitalists must vie for. While Marx would not deny that profits and wages vary inversely, he hopes to make a deeper point. Even in the case of windfall profits due to market fluctuations it remains true that the capitalist’s gain is the worker’s loss. His account of exploitation focuses on the fact that only labor-power is productive of surplus-value; that is why the capitalist’s appropriation of it counts as exploitation.

guishes between what he calls the ‘organic’ and the ‘technical’ composition of capital. By the ‘organic composition of capital’ Marx intends the ratio between constant and variable capital in the particular firm; by the ‘technical composition of capital’ he intends the ratio of the mass of means of production to the total labor employed. These distinctions need not concern us here.

¹⁷ Marx [1963] Part II.

2.3. Exchange of Non-Equivalents

The simplified world in which equivalents exchange is too simple to reveal the complicated world of capitalism. By part 2 of Volume III, Marx has given up the attempt to measure the degree of exploitation or account for the allocation of surplus within the firm. In order to explain exchange ratios, the earlier formula must be modified. The wrinkle in the simple account comes with the recognition of the mobility of capital and its consequences. Capitalists invest in order to make a profit. Because they can move their investments from less profitable to more profitable parts of the economy, large numbers of capitalists will want to invest in the most profitable parts. But because there is a limited demand for almost any product, overproduction makes it more difficult to realize that profit. Hence the return on investment goes down. This leads to an equalization of the rate of profit across industries. Marx's account is uncharacteristically pithy: "The rates of profit prevailing in the various branches of production are originally very different. These different rates of production are equalized into a single general rate of profit, which is the average of all these different rates of profit."¹⁸

2.3.1. *The Capitalist Mutual Fund.* The result of the equalization of the rate of profit might be called the "Capitalist Mutual Fund." The profit the individual capitalist receives depends on her relative share of the total capital in the economy. Like a mutual fund, the return on that share depends on the surplus appropriated in a number of firms in each of a variety of industries. Only in the short run, and even then only in exceptional circumstances, will profits diverge appreciably. Successful speculation may lead to increased profits, but in the long run successful investment will cancel that effect.

Because of the Capitalist Mutual Fund, commodities exchange on the basis of the cost of constant and variable capital, plus the profit accruing to the capitalist on the basis of the proportion of total capital held. Thus, the modified equivalence underlying the exchange of x commodity A for y commodity B is:

$$x(C_a + V_a + S_t[K_a/K_t]) = y(C_b + V_b + S_t[K_b/K_t])$$

where S_t is the total surplus in the economy, and K_i/K_t is the ratio of capital in firm i to the total capital in the economy. Total capital in the economy includes both constant and variable capital, *i. e.* wages as well as

¹⁸ Marx [1967] 158.

the cost of raw materials and *pro rata* costs of means of production. The individual capitalist's share of the Capitalist Mutual Fund is proportional to her outlay of both constant and variable capital.

It is important to recognize what has and has not been changed so far. It is still a labor theory; labor is assumed to be the source of the surplus. Although profit is now regarded as a surcharge above the capitalist's costs, it is not considered an added "cost" of production. The claim that profit is the result of the appropriation of surplus labor remains, though the appropriation of surplus no longer takes place at the point of its production.

The labor theory is now less clearly a value theory: exchange is no longer a direct expression of the resources necessary to replace various goods. The value of those resources still regulates the range of exchange ratios, but there is no direct relationship between the exchange values of commodities and the resources necessary for their replacement. Instead, exchange values are a function of the resources that must be paid for to replace a commodity, plus a surcharge appropriated by the capitalist.

The change is important. Although labor-power is still held to be the source of surplus, it has lost its role in the explanation of exchange. One cannot claim that although amounts of labor-power do not determine exchange ratios, they 'constrain' them. The possibility of showing that amounts of labor-power set limits within which exchange ratios can vary is entirely an artifact of the choice of labor-power as the measure of value: in a system of equivalents, the value of any commodity constrains and is constrained by the value of all of the others. Because exchange of equivalents is no longer accounted for by the fact that those equivalents are compounded out of simples, labor-power has lost one of its fundamental roles.

2.3.2. *The Allocation of Profit.* The most important change is that the allocation of profit is no longer explained by anything connected to the labor theory. Competition accounts for the equalization of the rate of profit, but competition between capitals is left unanalyzed.¹⁹ The ability to appropriate profit on the basis of one's share in the Capitalist Mutual Fund is a consequence of capitalist ownership relations; it is independent of the source or measure of value, other than the trivial sense in which the share in the Capitalist Mutual Fund is determined by the amount of capital possessed.

2.3.3. *The Degree of Exploitation.* The other important change is the notion of an ascertainable measure of the degree of exploitation in a par-

¹⁹ Marx does sometimes speak of capitalists as "capital personified" and suggests that capitalism forces them to compete. In this sense, competition is not an explanatory primitive. However, the account of competition implicit in *Capital* neither entails nor is entailed by the labor theory of value.

ticular firm has been given up. Because profit is allocated on the basis of the capitalist's share in the Capitalist Mutual Fund, the profit of the firm is not an index of the degree of exploitation in it. The degree of exploitation can only be measured for the economy as a whole.²⁰ Although particular commodities no longer exchange in proportion to the sum of the constant capital, variable capital, and surplus value, the total social product reflects the aggregate sum of each.

3. Did Marx Hold a Labor Theory of Value?

3.1. The Source of Surplus Value

By the middle of the final volume of *Capital*, three of the four uses of the labor theory of value have been dropped. Only the core of the theory remains: the claim that labor is the source of all value. This claim has no shortage of critics on no shortage of grounds. We will consider an apparently devastating though unsuccessful criticism of it before turning to Marx's more reasonable grounds for rejecting it.

3.1.1. *The General Exploitation Theorem.* In recent years, a number of writers have offered what they take to be a refutation of the labor theory of value, which has come to be called 'the General Exploitation Theorem.'²¹ The argument is simple. Marx uses labor-power as a measure of value in his theory. Each unit of labor-power requires less than a unit of labor-power for its reproduction. But if we were to choose a different numeraire, say corn or steel, we would find that, measured in corn (or steel), each unit of corn (or steel) requires less than one unit of corn (or steel) for its replacement. Thus every commodity is exploited, so long as one chooses that commodity as the measure of value. As Wolff puts it:²²

²⁰ This is just as well as far as any analysis of what's wrong with exploitation is concerned: the fact that one worker is more exploited than another tells us nothing about working conditions, wages, or relations of domination in the workplace. This technical notion of exploitation is related to 'unpleasantness' only incidentally. The degree to which the capitalist class as a whole exploits the working class as a whole tells us no more about what is wrong with exploitation. The waters are further muddied by the fact that at least some capitalists perform productive functions, while some workers do not. See Cohen [1981].

²¹ The theorem seems to have been independently developed by several people. Robinson [1942] suggests that Marx's notion of 'productivity' is entirely an artifact of his choice of measures; Wright [1981a] makes the same point. Mathematical proofs can be found in Wolff [1981]. Other versions appear in Samuelson [1982] and Roemer [1982]. The name comes from Roemer [1986].

²² Wolff [1981] 101.

The situation we face is this: in the logical space in which we are investigating, all commodities, including labor, have the same formal structure. The choice of labor as ‘substance of value’ is arbitrary, and without significance, unless it can be shown that labor is in some way formally distinguishable from all other commodities. . . . Marx thought he had found such features. . . . But Marx, as we have seen, was wrong.

However much one hesitates to question a theorem, it is important to realize that the General Exploitation Theorem does not show that the labor theory of value is false. It shows only that Marx’s “proof” of the labor theory of value is flawed. The possibility of performing calculations using labor as the measure of value shows nothing about the source of value, for any measure will seem productive in the same sense. This is the point made earlier: the two roles of labor in the theory are distinct.

But the central claim of the labor theory of value is not a vacuous claim. The General Exploitation Theorem may show that as a measure the labor theory of value fails to single out labor, but it does not touch the central claim that labor is the source as well as the measure of value. Economic as well as physical surplus is produced. The claim that some particular agency is the source of that surplus is nonvacuous, and Marx’s identification of labor as that by which surplus is produced seems plausible. It seems to be true of at least some societies. Most important, though, is the fact that it seems to be false, and Marx knew it to be so.

3.1.2. *Value Without Labor.* Toward the end of Volume III of *Capital*, Marx discusses rent and differential rent. He follows Ricardo in holding that rent is appropriated by landowners out of the surplus generated in production. Land does not create value. Rather, rent accrues in proportion to the ability of land to be used in the production of surplus. (In his discussion of commercial capital, Marx makes a similar point; merchant’s profit, like rent, is a return on holdings, appropriated independently of the surplus generated by those holdings.) Marx’s analysis parts company with Ricardo’s analysis on the issue of differential rent: Marx offers an explanation of why rent accrues to all landowners, not just to those whose land is more productive than most.²³ His discussion of rent depends on the de facto rejection of the labor theory of value. Marx considers the case

²³ Ricardo analyzed what he called ‘economic rent,’ which accrued to the holders of good land when prices reflected the less productive land subsequently brought under cultivation. Because the supply of good land was fixed, its owners could continue to enjoy the advantages of its productivity, while the prices of agricultural goods reflect the lesser productivity of land more recently brought under cultivation.

of a capitalist who uses natural water-power in place of steam-power to operate his mill. Because he does not need to pay for coal, he can make a 'surplus profit' by selling his product at the regular price. Assuming that waterfalls are in limited supply and cannot be created by investment, there is no danger of competition from other capitalists also using water-power. The rent of the waterfall is equivalent to the amount of surplus profit it makes possible.²⁴

He owes his profit in the first instance to a natural force—the motive power of the waterfall—which is found readily available in nature and is not itself a product of labor like the coal which transforms water into steam. The coal, therefore, has value, must be paid for by an equivalent, and has a cost. The waterfall is a natural production agent in the production of which no labor enters(= This monopolization of natural forces, that is the increase in labor-power produced by them, is common to all capital operating with steam engines.

The details of how the surplus profit created by the waterfall enters into the rent of the land need not concern us here. What does concern us is the fact that the waterfall is 'a natural production agent.' It creates value equivalent to the value of the coal it produces. It creates that value *ex nihilo*, for it has no value of its own to transfer. Therefore Marx does not hold that labor-power is the only commodity capable of producing value and surplus-value; that is, he does not hold the central claim of the labor theory of value.

It might be objected at this point that this is a necessarily isolated example of surplus profit. It is only because there are natural limits on the supply of waterfalls that some particular waterfall can produce a surplus for its owner; if waterfalls were not in short supply, coal would not normally replace them, so they would not create any value.

The objection misses the point of Marx's concession. Although Marx makes the concession in a discussion of the allocation of surplus, the creation of surplus is at issue. The waterfall serves to increase the value of the commodities produced by the mill it powers, just as labor-produced coal would. It adds value without consuming any. The waterfall thus adds more value than is required to produce it, which is precisely the property that makes a factor surplus-producing. Thus the central claim of the labor theory of value is false.

Notice that this example does not show that the waterfall is capable of

²⁴ Marx [1967] 643.

producing physical surplus. That much is obvious and hardly needs to be shown. The claim is that the physical surplus produced by the waterfall assumes the form of surplus value. (This is the solution to the worry raised by draught-animals as well as by fully automated factories: Marx does not deny that these are capable of producing physical surplus; he makes the more interesting claim that they do not produce surplus value.) Marx is pointing to a social feature of the waterfall rather than a natural one. The social feature that allows the waterfall to produce surplus-value is the fact that the value of its product is set independently of the specific use the waterfall in its production. The value of the clothes produced depends on their typical conditions of production, which require the use of coal. Because the value of the product is increased (*i. e.* replacement cost is increased) without using up scarce resources, value is added.

The point illustrated by the example of the waterfall is not isolated. We find this same peculiar social feature in the case of technical innovations in manufacturing. If one capitalist introduces an innovation before her competitors do, the replacement cost of the commodities produced reflects their typical replacement cost rather than the specific cost in the case of the innovator. Thus the innovator earns a surplus profit because her innovation itself is capable of producing surplus value, that is, of producing more social resources than are consumed in its production. As soon as her competitors catch up, the innovation will cease to produce surplus value because it will set the replacement cost of the commodities produced.

While monopolized waterfalls could be dismissed as merely deviant cases, to be explained by an additional analysis of the deviance, technical innovation cannot, since it is intrinsic to capitalism that technical innovation is not an isolated phenomenon—“the bourgeoisie are constantly revolutionizing the means of production,” as Marx writes in the *Communist Manifesto*.

Technical innovation leads to a further ‘indeterminacy’ in specifying exchange value. The rate at which resources must be paid for (plus the appropriated surcharge) depends on the costs involved in the typical production process, but in a dynamic economy characterized by rapid technical change there may not be any typical process. Replacement or repayment costs fluctuate depending on which sector or firm is taken to determine the ‘typical’ process of production of the commodity. Since sectors and firms are engaged in innovation in the production of both input and output commodities, the exchange value of a commodity will be only a relative measure, depending on actual exchange among all factors. Therefore, the value of a commodity is divorced from the value of the labor-power involved, since the commodity receives value only mediately—depending on the extent of the differentials

in social production, which is not a mere matter of the fluctuation in the value of labor-power. The value of the product is fixed independently of the particular production process, relative to other processes of production. The production of value is inseparable from its realization.

3.1.3 *Labor Without Value.* The ‘labor theory of value’ described in the opening chapters of *Capital* only applies to a static economy and excludes the possibility of crisis. Yet Marx is concerned to explain the cyclical nature of capitalist economies, including their tendency to crises. The existence of crises of overproduction shows that Marx could not have held a labor theory of value. Smith, Petty, and Ricardo hold labor theories of value and take crises of overproduction to be impossible. Marx, contrariwise, takes crises of overproduction to be one of the truly distinctive (if not inevitable) features of capitalism, and as such a key to its ‘inner laws of motion.’ The labor theory of value can account for isolated cases in which labor is performed without producing value—for example, handmade Toyotas. It does less well in accounting for isolated cases in which value is realized without labor, through innovation. But it has no way at all of accounting for crises, in which labor is expended in proportion to the resources required to replace the goods produced, yet no value is realized. Not only do particular commodities no longer exchange in proportion to the sum of the constant capital, variable capital, and surplus value, but in a crisis the total social product no longer reflects the aggregate sum of each.

The fact that labor can be expended without producing value shows that the ability to produce surplus value does not depend on any physical causal process; if it did, value could be produced without being realized. Crises reveal that it cannot. Yet labor-power, at least sometimes, produces a surplus. Under what circumstances is it able to do so? Value is established in a dynamic economy through the socialized processes of exchange, not as a function of the quantity of labor-power involved in the production of the commodity. In the cases of the waterfall and isolated technical innovation, surplus value was created because the value of the product was fixed independently of the particular production process. Waterfalls and isolated technical innovations are productive because of social features of their availability, rather than any natural causal feature of their ability to produce physical surplus. There is no reason to suppose the productivity of labor to be any different.

What social feature does labor-power have that enables it to produce surplus value? What makes it ‘different from other commodities’? It cannot be the same feature that allows waterfalls to produce surplus value, for labor-power is involved in setting the typical replacement costs of all

commodities. The unique feature of labor-power is that its seller does not receive a share of the physical surplus it generates. Unlike owners of other commodities, the owner of labor-power does not receive a share of the surplus that labor-power plays a part in generating. Owners of capital and owners of land are in a position to appropriate a share of the physical surplus in the form of surplus value. The replacement/repayment cost of land and capital includes a share of the surplus they generate. That is what participation in the Capitalist Mutual Fund amounts to. The peculiar feature of labor-power is that its replacement cost does not include a share in the surplus it generates. Just as the profit accrues to the capitalist because she has a monopoly of the use of the waterfall, so profit from wage labor accrues because the capitalist has a monopoly of the use of the worker's labor-power.²⁵ Surplus accrues to the capitalists, both individually and as a class, because of their monopoly over the conditions of production. Because capitalists have a monopoly over the labor-power they purchase as well as their constant capital, they will monopolize the surplus, whatever its source.

We can now see where the General Exploitation Theorem goes astray. Wolff is right to suggest that there is no formal feature to distinguish labor-power from other commodities. In principle, some other commodity might just as well have turned out to be the source of surplus value, that is, the factor involved in the production of physical surplus that is merely reimbursed with its own value. Labor-power has this feature because of a fundamental difference in its conditions of production. Suppose some other commodity—corn, for example—were required for production of other commodities, yet producers of it received only the resources required to produce it and no part of the surplus. In such circumstances, corn would produce surplus value. But in those circumstances, nobody would produce it. If one had to use up the equivalent of a bushel of corn to grow a bushel

²⁵ It could still turn out that, in general, labor is often (or at least sometimes) the source of surplus value. How often labor produces value would then be an empirical question, albeit a peculiar one. It is likely that Marx supposed that it almost always was, for he felt such an assumption was necessary to explain the steady decline in profit rates through the nineteenth century. If labor is the predominant source of surplus-value, then as technical innovations lead to the increasing capitalization of industry, the proportion of surplus labor to total capital goods will tend to fall, as will the rate of profit. Because other social structures, including monopolies over particular resources can make factors other than labor-power productive, technical innovation does not guarantee a decline in the rate of profit. Because the falling rate of profit has proved not to be a permanent feature of capitalism, the assumption Marx made to explain it can be relegated to a footnote.

of corn, nobody would grow it. The reason that labor-power is the source of surplus value is that producers of labor-power—workers—cannot, on pain of death, refuse to produce labor-power. And if, having produced labor-power, they have nothing else to sell, they will have no choice but to sell it under the conditions that they are offered. That is, they will have to sell it without receiving a share of the physical surplus it helps to produce. It is this social process, with the general conditions of appropriation monopolized by the capitalist and the circumstances leading to the sale of labor-power, which determine the exchange value of commodities.

4. Conclusion

One popular apologetic view has it that Marx began by accepting the labor theory of value he inherited from Smith and Ricardo when he wrote the first part of *Capital*, but abandoning it after getting bogged down in the details of its application. This view does not stand up well to historical scrutiny; Marx had drafted all three volumes of *Capital* before Volume I went to the printer.²⁶ A more plausible view is that the labor theory of value served two purposes: to emphasize the fact that the worker sells labor-power to the capitalist, who then owns the product of that labor-power, and to account for the antagonism between worker and capitalist, with the resulting struggle over the length of the working day—both of which needed simple explanations for a non-specialist audience.

Marx's rejection of the labor theory of value in Volume III was prefigured in a much discussed but little understood part of the first section of the first volume of *Capital*, the section on "Commodity Fetishism." Marx points out that it is a peculiar feature of capitalist economies that the social relations involved in production assume in the eyes of the producers "the fantastic form of a relation between things." Exchange ratios confront producers as a natural force, independent of human will. "Value converts every product into a social hieroglyphic." The discussion of fetishism appears immediately following Marx's introduction of the labor theory of value. Yet if the labor theory of value were true, it is hard to see why commodity fetishism would be a problem; exchange ratios really would be a natural form, the reflection of objective features of the world, rather than of social relations between persons.

In the labor theory presented at the beginning of *Capital*, exchange is explained in terms of a natural feature of commodities, the amount of labor-power required for their replacement. Exploitation is also conceived of in

²⁶ See the appendix to the first part of Marx [1963] for an outline of the three projected volumes, written before Volume I of *Capital* was completed.

terms of a natural feature, the difference between the value of labor-power and the value it produces. Only appropriation is treated as the outcome of a social process.

By the end of the final volume of *Capital*, though, both exchange and exploitation are recognized for the social processes that they are. Each depends on the capitalist's ability to appropriate surplus, rather than on any objective feature of the labor process or the commodities produced. It is because exchange is a social process that its confrontation of those involved as a natural process is a fetish. All commodities are made commensurable by capitalist appropriation, not vice-versa. The subtitle of *Capital* is 'a critique of political economy': as critique, it investigates the conditions and limits of exchange. It turns out that exchange is conditioned not by prior exchangeability, but by the appropriation of surplus by those who control the means of production. That is why "the products of labor acquire a uniform social status."²⁷ It is also the answer to the question that "political economy has never thought to ask," *i. e.* "why labor is represented by the value of its product and labor time by the magnitude of that value." Labor is measured by the value of its product because the capitalist buys it for what it can produce. Labor-power is the source of surplus value because it is purchased on the basis of its ability to produce not physical surplus, but surplus value. Labor, initially the shared feature of commodities, turns out to be 'abstract' in capitalist production not because it is all interchangeable, but because capitalist social relations make it so.

²⁷ Marx [1977] 78.

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