

CAPITAL + CLASS

X 39

WINTER 1989

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What is 'simple labour'?

A re-examination of the value-creating capacity of skilled labour

● In his seminal critique, Böhm-Bawerk (1896) dismissed Marx's reduction of the value-creating capacity (VCC) of skilled labour to that of unskilled labour as tautological. This 'reduction problem' threatens Marx's law of value at its core. But Hilferding's (1986) influential reply (treating the VCC of skilled labour as the sum of the unskilled labours done in the past to create skill) is itself doubtful: Harvey (1985), Itoh (1987), and others have demolished Hilferding's 'solution.'

This paper aims to rethink the 'reduction,' to defend the law of value. First, in terms of method, the 'problem' is merely one of refining core concepts of value (see part 1). So the issue turns out to be very simple: Böhm-Bawerk's critique, though accurate, is beside the point. So we can move on to using value (socially necessary abstract labour time or *snalt*) to understand capitalism as a social system rather than to criticize definitions or calculate prices. Next, in part 2, Marx's writings are re-examined, especially those on 'simple labour.' His conflation of 'simple average' labour with 'unskilled' labour is one source of the problem of the reduction. Simple labour should be emphasized and treated as equivalent to *snalt*. Further, Marx's discussion indicates that differences in VCC are socially determined at the time of the product's sale. However, other

Examining the century-old controversy over the meaning of 'simple labour', the author argues for an approach which distinguishes between simple, average and marginal labour. These distinctions are used to shed light on relations within the working class under the accumulation process.

measures of VCC turn out to be useful in understanding the dynamics of labour under capitalism. Finally, in part 3, the VCC is linked to the 'New Solution' to the transformation problem and this paper's conclusions are summarized.

It should be stressed from the onset that the subject is not the value of labour-power (the capacity to work) but the use of that labour-power to create value.¹ Thus relative wages are not the issue. Rather, it is the core concepts of the law of value.

Two cheers for tautology!

The aversion to tautology and circular reasoning is hardly startling in this age of Popperian positivism. It is now common to reject a theory as tautological, i.e., empirically or logically unfalsifiable. This 'scientific method' is an antidote to faith-based thinking, as with the Cambridge critique of neoclassical capital theory. Similarly, much of 'Chicago school' *laissez-faire* economics should be rejected as a seemingly seamless web of tautologies.

However, we cannot take Popperian positivism too far. While appropriate for developed theories, it does not apply to basic concepts. As Lakatos (1970) argues, each 'scientific research program' has its 'hard core' concepts and axioms that are immune to falsification. Just as Marxists have basic value categories, neoclassicals have utility maximization. Indeed, falsificationism is itself a core concept, hardly subject to falsification. And to reject core concepts is to embark on the road to sterile empiricism or 'naïve falsificationism.'

A key difference between paradigms concerns the goals and uses of the various sets of tautologies. The Marxian value categories reflect an antithetical world-view to that of the neoclassicals. As Sweezy (1975: xxii) argues, Böhm-Bawerk and the neoclassicals have a unhistorical and unsocial view; they presume that Marx pursued the same aims as they, such as the derivation of prices. But Hilferding (as with other Marxists) had a social and historical perspective, seeing value as 'the bond uniting an atomized society' (1904: 133). Marxian analytical, philosophical, and political goals are clearly distinct from those of the neoclassicals.

While core concepts are not *verboten*, the principle of parsimony must be applied: we should try to get as much as possible in the way of understanding, explanation, and even

prediction from core concepts. As much as possible of our theories should be subject to falsification. After all, having avoided the empiricist road, we do not want to become mired in pure rationalism, the leisure of the theory class (a 'degenerative research program').

The discussion of skill coefficients below may seem reminiscent of Chicago tautologies about 'human capital': for that school, one worker is paid more than another despite equal education, IQ, etc., because of unmeasurable elements of human capital such as 'character.' The employer (or the market) is the only judge of human capital: no independent scale such as measures of comparable worth can be used. So the theory is not falsifiable.

The obvious distinction between that theory and *ex post* the skill coefficient calculus is that the latter is not a theory of wages. But more fundamentally, there is a difference of goals. The Chicago school aims to defend the 'free market,' against comparable worth and similar proposals. The skill coefficient calculus has an entirely different role.

What, then, is this role? For Marx, the 'reduction' of skilled to simple labour – which, as seen below, is part of the theoretical isolation of *snalt* – was just the prelude of the law of value. Unlike the Ricardian system, this law is not primarily a price theory.² It is an *accounting framework* for understanding capitalism as a social system. Once *snalt* has been isolated, it is used to answer the following main questions:

- A. Where do profits come from? (exploitation)
- B. How are prices determined? Why do they deviate from values? (competition)
- C. How are prices connected to values, despite this deviation? (socialized production.)
- D. Why and how are profits distributed among capitalists? (individual appropriation and unequal exchange.)
- E. How is the class nature of capitalism obscured by the capitalists competition? (commodity fetishism.)
- F. What are the laws of motion of the system? (accumulation and the contradiction between socialized production and individual appropriation.)

My use of the law of value to answer these questions appears elsewhere (Devine, 1989). The present paper suggests further that the simple/skilled distinction helps us understand

relations within the working class in the process of capitalist accumulation and class struggle, with other institutions such as the family. But as this paper aims only to refine core concepts, it can only be the prelude to science. This may help with explanation and other goals of political economy. But this is left for future papers and other authors.

Simple labor and skill coefficients

To decipher the 'reduction problem,' three steps are needed. First, the nature of the basic unit is discovered: what is Marx's 'simple labour'? Second, a simple accounting framework relating skilled and simple labour is set up. Third, the determination of skill coefficients is discussed.

What is Simple Labour? What, we must ask, is this creature that Marx called 'simple' labour? It is work 'which any average individual can be trained to do . . .' (Marx, 1970: 31). At first an image of some high-school student working at a fast food joint springs to mind. But then we realize that by the standards of five centuries ago that worker might be skilled, if such comparisons are possible, since the content of skills has changed so much. We thus agree with Marx's statement that 'Simple average labour . . . varies in character in different countries and at different times' (1967a: 44; cf. 1970: 31). Note also that the 'average individual' must be *trained* to do 'simple labour.' Thus, this labour is hardly an indivisible atom which forms a building block for the more exalted molecules of skilled labour. Nor is it 'zero-skill labour,' akin to 'zero-rent land.' A newborn infant, who has yet to be trained, is not a worker.

These are vital strikes against Hilferding's embodied-labour interpretation of skilled labour. The simple labour 'embodied' last year in today's skilled labour may be quite different in kind from simple labour done today, since societal standards have changed. Indeed, for Marx, 'Accidental circumstances . . . play such a large part that these two forms of labour [skilled and unskilled] sometimes change places' (1967a: 197–8n).

The disparity between today's simple labour and past simple labour is also one of magnitude: there is nothing to guarantee that the same number of hours of today's simple labour is needed to 'produce' a skilled prototype machinist as it took last year with the simple labour of the day. As with fixed capital valuation, current reproduction costs usually vary

from historical costs. This issue cannot be assumed away, since capitalism is inherently dynamic, with skill content and requirements changing frequently and often unpredictably. We do not live in an equilibrium utopia such as that of the neoclassicals or the Sraffians.

The trouble with a embodied-labour reading becomes clearer in the following:

Skilled labour counts as simple labour intensified, or rather, as multiplied simple labour . . . The different proportions in which different sorts of labour are reduced to unskilled labour as their standard, are established by a social process that goes on behind the backs of producers . . . (Marx, 1967a: 44)

'Reduction' is a societal process appearing to be 'fixed by custom.' This is no historical story of the accumulation of simple labour into stocks of skill carried by skilled workers.

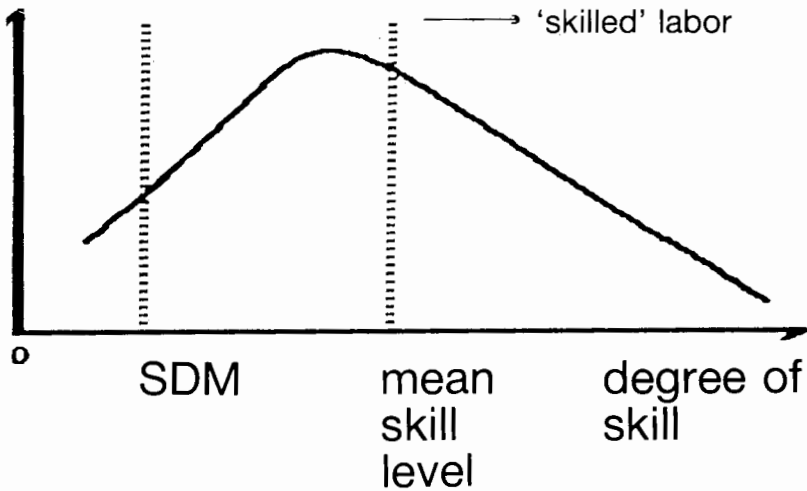
So far, so good. But within the passage a crucial ambiguity arises with the slip of a single word. At first, simple labour was referred to as 'average' labour. But the passage ends by bringing in 'unskilled' labour. Later in *Capital*, the two are combined as 'simple unskilled labour of average quality' (1967a: 198). Herein lies a problem that Böhm-Bawerk and later authors missed: unskilled labour is quite distinct from average labour.³ This conflation is one basis for the confusion in this literature.⁴

Diagram 1 contrasts average and 'unskilled' labour using a hypothetical frequency distribution.⁵ As noted, 'unskilled' labour is not zero-skill labour but has at least a *socially-determined* minimum (SDM) of skill: a century ago children went to work for pay at a much earlier age than they do today; in most of today's underdeveloped countries, the starting work age is still low. The SDM is determined historically by the vicissitudes of capitalist accumulation and class struggle, along with such organizations as the family. Though it changes over time, the SDM can be known with reasonable approximation in any period.

'Unskilled labour' might be identified with 'marginal' labour, at the SDM. Despite Marx, this clearly differs from the social average.⁶ In his time, it may have not been very wrong to equate marginal labour and average labour, if the frequency distribution was skewed to the left. He asserts that 'statistical

Diagram 1: Marginal vs. Average Skill Levels

Frequency



data show' that the 'greater part of the labour performed in bourgeois society is simple labour' (1970: 31) and predicts that labour will become more homogeneous and of lower skill (the famous de-skilling theory). Either way, marginal and average labour are similar. It is not a gross error to combine them, and can be seen as a first approximation for some purposes. But it is an error all the same. No matter how skewed the distribution, marginal and average labour differ, except in the irrelevant case where all workers are at the SDM.

Which of these should we use for comparison of degrees of skill? The average is suggested by its dominant role in Marx's method in *Capital*, volume I.⁷ For example, he defines socially necessary labour-time as 'that required to produce an article under the normal conditions of production and with the average degree of skill and intensity of labour prevalent in the time' (1967a: 39). Further, in his discussion of the labour process:

. . . labour should be carried on under normal conditions . . . Then again, the labour-power itself must be of average efficacy. In the trade in which it is being employed, it must possess the average skill, handiness and quickness prevalent in that trade . . . This power must be applied with the average amount of exertion and with the usual degree of intensity . . .' (1967a: 196)⁸

The use of averages is part of Marx's study of the totality of capitalist production, by examining the typical microcosm. In volume I, he focuses on 'personifications of economic categories, embodiments of particular class-relations and class-interests' (1967a: 10). The many differences between workers and the relations among segments of their class were left, it seems, for the never-written volume on Wage Labour. To Marx, relations within the working class, including those between skilled and unskilled workers, are not essential to understanding exploitation and the dynamics of capitalist accumulation and class conflict, the main topics of *Capital*.

Not only is the method of averages preferred, but there is a clear link between simple labour and abstract labour. Marx's paragraph on the 'reduction problem' in *Capital* starts with abstract labour, 'the expenditure of human labour in general' or rather, 'expenditure of simple labour-power which, on average,

apart from any special development, exists in the organism of every ordinary individual' (1967a: 44). Again we see the emphasis on averages.⁹ In sum, the so-called 'reduction problem' is part of Marx's distinction between abstract and concrete labour, the abstraction from all but the shared characteristics of the diverse labours (1967a: 44–45). Crudely, simple labour *is* abstract labour.¹⁰ More correctly, as seen below, simple labour is SNALT, defined *ex post* in exchange.

An Accounting Framework. Next, we must break with Hilferding's additive approach in favor of Marx's multiplicative view ('Skilled labour counts only as . . . multiplied simple labour . . .') This suggests a different mathematical relationship than that presented before.¹¹

Marx's comment above that skilled labour is 'simple labour intensified' suggests that VCC is analogous to labour intensity. But there is a difference: intensity is defined in terms of labour done per hour of labour-power sold, the 'condensation of a greater mass of labour into a given period' (1967a: 410; cf. p. 524). This refers to greater expenditure of human muscles, nerves, brain, etc., per hour, similar to common notions of 'effort'.¹² On the other hand, VCC refers to the effectiveness of such effort.

This distinction suggests the following equation for the value created (VC) by labour-power X:

$$VC_x = VCC_x \epsilon_x LP_x \quad (1)$$

where VCC is value-creation per hour of labour, ϵ is intensity (hours of labour actually done per hour of labour-power hired), and LP is hours of labour-power \times hired.¹³

To Marx, intensity was relevant only if it differed from the average:

'The value created varies with the extent to which the intensity of labour deviates from its normal intensity in the society' (1967a: 524–5). 'If the intensity of labour were to increase simultaneously and equally in every branch of industry, then the new and higher degree of intensity would become the normal degree for the society, and would therefore cease to be taken account of' (1967a: 525)

If so, the average worker's labour intensity should equal unity:

$$\epsilon_a = 1 \text{ so that } VC_a = VCC_a LP_a. \quad 14$$

Second, the value-creating capacity of an hour of labour X is

$$VCC_x = \sigma_x VCC_a \quad (2)$$

where VCC_a is the VCC of an hour of the average worker's labourtime and the skill coefficient σ_x is a pure number. Since there can be no negative skill, $\sigma_x > 0$. The skill coefficient for marginal labour is less than unity. 'Unskilled' labour might be defined as that labour for which $\sigma < 1$. Similarly, 'skilled' labour might be defined as above-average labour. This fits the social determination of notions of skilled and unskilled.

Combining (1) and (2) gives

$$VC_x = \sigma_x VCC_a \epsilon_x LP_x \quad (3)$$

Note that equation (2) implies that $\sigma_a = 1$. Thus, similar to intensity, only the deviations of σ from the norm are relevant.¹⁵ Similarly, set VCC_a equal to unity.¹⁶

To understand the problem of different conceptions of skill coefficients, develop the formulae for the rate of surplus-value. Assume that value of an hour of X's labour-power is W_x *snalt* per hour. So the rate of surplus value for worker X is defined as:

$$RSV_x = (VC_x - W_x LP_x)/W_x LP_x = (\epsilon_x \sigma_x - W_x)/W_x \quad (4)$$

Similarly, for the average worker,

$$RSV_a = (1 - W_a)/W_a \quad (5)$$

Thus $RSV_x = RSV_a$ if and only if

$$\epsilon_x \sigma_x = W_x/W_a \quad (6)$$

Rates of surplus-value is equalized if and only if worker X's relative value of labour-power reflect that worker's intensity and skill relative to the average exactly. Adam Smith's theory of compensating differences must apply (as Marx assumed at one point (1967c: 142)).

Skill Coefficients. What, then, determines the skill coefficients of different labours? There are at least four options: historical cost (Hilferding); *ex ante* current labour cost of commodities; relative wages or values of labour-power; and *ex post* definition in exchange. Below I argue that the last fits Marx's view best but that the other options can be useful.

Hilferding's historical-cost method is subject to Harvey's critique (1985: 96–98). Briefly, if historical costs determine both sides of equation (6), there is no reason for the equation to be true. In addition, we have the criticisms above.

The second conception is the *ex ante* current-cost method of finding skill coefficients. Here, the value creation of a skilled worker's jour of labour-power ($\sigma_x \epsilon_x$) is set equal to the value creation of the number of hours of average labour-power (LP_a) needed to produce the same use-value. If the intensity of worker X's work (ϵ_x) is known, then σ_x can be calculated using the following:

$$\sigma_x = LP_a / \epsilon_x \quad (7)$$

Even without this knowledge, $\sigma_x \epsilon_x$ can be calculated.

Ex ante skill coefficients are more consistent with the law of value than are historical-cost coefficients. A commodity's value is *not* the amount of labour-time actually used to produce it, the labour actually and literally 'embodied' in the product (as in the Ricardian tradition). Labour's physical productivity may have changes since the object was made – so that less labour is now required to (re)produce it than before (Marx, 1967a: 39–40). This contrast with 'embodied' training implies the case of 'supply-side' devalorization of skill: during the Industrial Revolution of the 19th century, for example, technical change allowed the replacement of skilled craft-workers by unskilled operatives. The skilled workers found that their value-creating capacity was decreased as a result.

But this *ex ante* framework is deeply flawed: the VCC of workers producing Apple computers cannot be compared to that of those producing orange crates (different use-values are not quantitatively commensurable). Further, the skill of a production engineer and an assembly line worker may be uncomparable since the former may be as poor on the line as the latter is at engineering. The *ex ante* method is more applicable to time-series comparisons in the same sector than in the cross-section. Even this falls apart as the nature or quality of the product changes over time.

More fundamentally, this solution assumes that labour is 'directly social,' i.e., that the extent of value creation can be known *ex ante*. Marx's critiques of notions of 'labour money' (1967a: 94n; 1970: 83–86; 1955: 68n) suggest that we cannot know the VCC before commodities exchange. It is exchange

that proves the value-creation. Marx put it in **The Poverty of Philosophy**:

'Is your hour's labour worth mine? That is a question which is decided by competition. Competition . . . determines how many days of simple labour are contained in one day's compound labour.' (1855: 46).

In *Capital*, he equated the *values* created by different labours:

'A commodity may be the product of the most skilled labour, but its value, by equating it to the product of simple . . . labour, represents a definite quantity of the latter labour alone' (1967a: 44).¹⁷

So the *ex ante* method is fundamentally flawed.

Sometimes relative values of labour-power (W_x) or wages are used to define relative value-creating capacities. Using the former works only if we assume that the RSV is the same for all workers. Thus we can read equation (6) from right to left, with the relative value of labour-power defining $\epsilon_x \sigma_x$. Using wages requires the further assumption that wages are proportional to the values of labour-power.

Either way, there are several problems. First, there is no textual indication that Marx followed this solution, which in essence makes exalted value-creation an automatic result of being paid more. He discussed the 'reduction problem' far before wages or the value of labour-power were treated (cf. 1967a: 44 n2). Second, this solution applies only when the theory of compensating differences applies.¹⁸ Finally, as above, this assumes that labour is 'directly social.'

Moreover, the fourth, *ex post* version, seems to fit Marx's view better. It is seldom noted that for Marx commodity demand has a role in making labour socially necessary. If the market 'cannot stomach' as much as labour produced, some labour turns out to be wasteful *ex post* and does not form part of value (1967a: 107). So the VCC of a worker's time is not directly social but is only proven in the market-place. Though the production of use-value (concrete skill) is necessary to VCC, it is not sufficient. Further, though differences in skill *appear* to be determined by custom (as Marx points out), in reality, it is the market test which is decisive under capitalism.

Thus, 'demand-side devalorization' of skill can occur. The market may not be sufficient to 'stomach' all of product of

skilled makers of buggy-whips. More crudely, unemployed workers lack VCC until they are employed. Similarly, even the most skilled housewives are paid nothing for their products and thus create no value. Products must be sold for the workers to create value.

The actual contribution of past training labour to the current VCC of labour depends on the final market test. As any teacher knows, much of the time spent training a future worker can be wasted, in the sense of not increasing a worker's ability to produce use-values. Moreover, even training that raises a worker's use-value productivity may not help boost the exchange-value productivity. It is not uncommon for a worker with an advanced degree to find that, despite long years of blood, tears, toil, and sweat, her or his product is valued by the market at a rate similar to that of a worker with less training.

The workings of the *ex post* method are simple. Suppose that (i) the value of the product of LP_a hours of average labour-power A equals that of the product of one hour of labour-power X ; (ii) the intensity of labour X is known; and (iii) commodities trade at value. Then, we can use equation (7). But here the commodities are assumed not identical in use-value but equal in exchange-value.

Here skill can be expressed as a one-dimensional variable. As mentioned in note 5, unidimensionality is usually only *assumed* by the literature. But, as with 'intelligence,' skill in the production of use-values cannot be reduced to a single dimension. A basic fallacy of 'IQ,' with its cultural biases, is that intelligence is reduced to a single number instead of a vector (Gould, 1981)¹⁹ Similarly, as Elster (1985: 131) argues, 'non-producible skills,' such as natural talents or skills based on secret information, imply 'truly heterogeneous labour.' This heterogeneity is the *normal* dissimilarity of useful or concrete labour. However, if skill coefficients in the production of exchange-value are determined *ex post* in exchange, it makes sense to write of unidimensional skill. It is capitalism that reduces skill to a scalar quantity.

At this point, we find an important limitation of this measure of skill coefficients. Most commodities are produced not individually but by collectives. If the skill coefficient is calculated by referring to exchanges of commodities, we often cannot measure the skill coefficients of individual workers.

The skills of the production engineer and line worker are merged together. This limitation does not seem severe, but instead appropriate, where exist synergy effects and externalities among the different labours.

We should drop assumption (ii). The intensity of labour is notably hard to pin down: no supervision technique is perfect, even with piece-wages, because product quality varies. So a skill coefficient may be impossible to measure. But there is no reason to despair: $\sigma_x \epsilon_x = LP_a$ can be reinterpreted as saying that skill and intensity can be substitutes for each other in the creation of value.²⁰ Crudely, a less-skilled worker has to work harder than a skilled worker. Moreover, the actual measurement of skill coefficients is less important than the understanding of its role in the law of value.

Assumption (iii) cannot avoid examination. Trading at value occurs in Marx's hypothetical world in volume I, where 'equal exchange' occurs between all traders. This might occur if there is no surplus-value production, no capital mobility between sectors, or no organic composition of capital (OCC) differences between sectors. In sum, equal exchange occurs if there is no capitalism. The concept of equal exchange – or rather, this high level of abstraction – allows a focus on class relations between workers and capitalists to the exclusion of relationships within classes. But in the real world of capitalism, prices and values differ.

To understand the role of skill coefficients, consider the familiar deviations between prices and values arising from differences in the OCC. *Caeteris paribus*, a product with above-average OCC sells for more than its value, while a product with below-average OCC sells for less than its value. But we cannot see mechanization as analogous to skill or intensity in raising VCC, since to Marx, machines do not create value.²¹ Instead, mechanization is a substitute for intensity or skill as a basis for the ability to *claim* part of the aggregate surplus value: a capitalist with high-OCC production who receives prices in proportion to values will stop investing, allowing the capitalist a claim on the total surplus-value (Devine, 1989).

If values and prices differ, how are skill coefficients, or even intensities of labour, relevant? They relate to the production of value, which in turn represents an aggregate constraint on all of the individual claims on value. How are skills and intensities to be measured? They cannot be measured empiri-

cally. Rather, they are core concepts that help us understand capitalism and to develop more complex hypotheses.²² Even so, we can get a first approximation by using any of the other measures of skill coefficients. This should be adequate for many purposes.

In the end, we do not have to choose between the four concepts of skill coefficients. All four have their role, for example, in a construction of Marx's never-written tome on Wage Labour. It might be possible to measure the historical-cost and *ex ante* concepts. The contrast between historical cost or 'old' *ex ante* VCC and current *ex ante* VCC gives us a notion of supply-purpose of value, unlike for Ricardo's labour theory of price (cf. Mohun, (1984–5)). Similarly, we must abandon Hilferding's embodied-labour interpretation of skill and re-examine the purpose of the whole enterprise. The VCC of skilled labour does not simply reflect the unskilled labours used to enhance the worker's skill. Rather, that capacity is socially determined at the time of sale of the labour's product. Second, the goal of analysis is not price derivation but the dissection of capitalism as a societal mode of production.

Turn now to Harvey's more specific criticisms. First, in Hilferding's 'solution,' the VCC of skilled labour is totally dependent upon the training labour done while that of 'simple' (here meaning marginal) labour is independent of such labour. Above, this asymmetry disappears. All labour can create value only after training. A worker below the SDM would not survive. The only 'asymmetry' is that the VCC of skilled labour is defined relative to that of simple labour (i.e., *snalti*). This limited asymmetry arises because of Marx's focus on the social average.

Second, in Hilferding's schema, a skilled worker's lifetime VCC is simply that of a simple worker (P) plus the total (T) of the simple labours spent on training of the worker. There is no labour-saving quality to skill. So why not hire P+T simple workers, since hiring the skilled worker would use the same amount of simple labour? Harvey (1985: 90) suggests that its greater physical productivity differentiates skilled labour from simple labour. In most cases, this is true. But in the *ex post* solution to the 'reduction problem,' productivity in the making of use-values is only necessary to establishing value-creating capacity. It is not sufficient. It is the relative ability to create exchange-value for the capitalist that establishes skill

coefficients.

Third, Harvey's 'Root of the Problem' (1985: 94–5) is that

'when no determinate relationship exists between the value-creating capacities of various types of labour and the value . . . of the corresponding type of labour-power [as in Hilferding's solution], then the link between socially necessary labour [i.e., value] and prices of production is completely broken' (1985: 94).

This, in Harvey's view, makes values irrelevant.

Instead of values, we should drop Ricardian conceptions of value and transformation, to embrace the 'New Solution' to the transformation problem.²³ This suggests that the price calculation from values is at best tangential to Marx's law of value: prices and values are determined simultaneously by real-world market processes, not by mathematical models. Instead, macro-societal relations between money claims on value (i.e., prices net of intermediate materials costs) and the actual value creation becomes crucial. The equations $\Sigma \text{net prices} = \Sigma S + V$ and $\Sigma \text{profit} = \Sigma S$ become conservation principles that organize the understanding of capitalism.²⁴ Much of the 'transformation problem' is thus resolved into a tautological accounting framework, in which deviations of prices from values are just as important as their resemblance: the difference between individual price claims on aggregate value and the contributions to this total is one way of stating the contradiction between individual appropriation and social production under capitalism, giving us a deeper understanding of crises and inflation (Devine, 1989).

Harvey's final problem is that in a world of commodities selling at value, capitalists hire workers on the basis of the difference between their VCC and the value of their labour-power (W). If this gap is higher for skilled workers, as is quite possible since there is often no clear link between VCC and W , then the skilled workers will be hired. If it is lower for skilled workers, then the unskilled will be hired. But Harvey points out that this means that the value of the commodity depends not only on the VCC of the workers, but on relative values of labour-power. This is contrary to the received vision of Marx's law of value.

Again, this can be answered by the New Solution. Of

course, commodities do not trade at value. Capitalists do not care about the value of labour-power in making their decisions. Indeed, they do not care about values at all (Marx, 1967c: 873). They do not see, nor can they act on, socialized production. Under capitalism, prices and values are determined simultaneously by market exchange, so that neither are derived from the other. Prices and values are linked at the macro level, with the latter limiting the former: individuals cannot claim more value than is produced.

It is thus not the connection between VCC_x and the individual value of labour-power (W_x) that matters. Indeed, if there is some relation between W_x and worker X's wage, there might well be a connection between W_x and the price of the product of X's labour. Instead, to the New Solution, what is important is the link between the value-creation for all of society and the aggregate value of labour-power. To Marx, it is these aggregates that must differ, so that total value created by labour $>$ total W . Of course, Marx often stated these social relations not in aggregate terms but with representative social averages. But it is seldom noticed that not only is 'simple labour' a social average (as argued above), but Marx defines the value of labour-power in terms that can only represent an average for the entire working class:

'the sum of the means of subsistence necessary for the production of labour-power must include the means necessary for the labourer's substitutes, i.e., his children, in order that the race of peculiar commodity-owners [i.e., the working class] may perpetuate its appearance in the market' (1967a: 172).

In these terms, the W is the *smal* needed to reproduce the 'race' as a whole, divided by the number of workers hired (or for the framework above, the hours of labour-power sold).

In sum, Harvey's objections apply very well to demolishing Hilferding's 'reduction' and Ricardian views of value but they do not contradict the view that simple labour is abstract labour and that skill coefficients are determined *ex post*. Nor does his analysis contradict the New Solution, which of course was crafted partly in response to similar objections to the Ricardian interpretation of value.

1. This confusion is found even in the erudite work of Elster (1985: 130).
2. This paper makes some unsubstantiated assertions concerning Marx's goals, methods, and conclusions. Though he is quoted at length, this is not a paper on 'what Marx (really) said.' The true 'reduction problem' is the reduction of theory to Marxology. Needed instead is the perfection and application of Marx's method and theories.
3. Similarly, Rowthorn (1980: 234) suggests that Marx used 'socially necessary' to denote both the minimum and the average labour requirement.
4. In another translation of *Capital* (1977: 135, 304–5), this conflation does not occur, except on page 305. Nevertheless, both Böhm-Bawerk (1896: 81f) and Hilferding (1904: 136f), who did not rely on translations of Marx, focus on unskilled labour. Assuming that the 1977 translation was erroneous, I focus on the 1967 translation and on Marx (1970). Our analysis should get us beyond scholasticism and its dependence on translations, by relying on dialectics, logic, and empirical knowledge instead.
5. Note that I have assumed, as in most of this debate, that 'skill' is one-dimensional.
6. I assume that the social average is the arithmetic mean, not some other type of average. Also, it would be unreasonable to call the social average labour 'unskilled,' since that would imply that marginal labour has *negative skill*.
7. He does use the marginal criterion in the theory of rent. That criterion seems pertinent to volume III, concerned with 'the ordinary consciousness of the agents of production' (1967c: 25). The average is relevant to setting up a societal accounting framework.
8. Marx's criterion that no materials be wasted which follows this quote violates his usual use of the average. To be consistent, we might want to assume that there is a socially-average degree of waste. But Marx's inconsistency here fits with another theme of *Capital*: his critique applies to not only the real world of capitalism with monopoly, waste, and so forth but to ideal, competitive, capitalism. That is, he meets bourgeois economists on their own ground.
9. Also, abstract labour ('human labour in general') is said to exist 'in the form of average labour which, in a given society, the average person can perform . . .' (1970: 31).
10. Abstract labour is not some mental abstraction, but the shared characteristics of all concrete labours, i.e., the 'productive expenditure of human brains, nerves, and muscles' (Marx, 1967a: 44). Anyone who uses the word 'labour' without qualification, rather than saying 'the billions of diverse labours' is implicitly using some concept of abstract labour. Marx's contribution was to clarify the concept. (N.B.: in this context, 'productive' refers to creation of commodities, rather than production of surplus-value, as in Marx's more developed concept.)
- In addition, it is a mistake to conflate abstract labour with 'homogeneous' labour as Elster (1985: 130) does. The use of the concept of abstract labour does not deny the importance of the almost infinite variations among useful labours.
11. The exponential approach ('more complicated labour' is 'simple labour raised to a higher power' (1970: 31)) seems merely metaphorical.
12. But 'effort' has connotations of subjective willingness to work, while

intensity is also affected by the objective conditions of work.

13. Lipietz (1985: 25) uses a similar formula. The units of these numbers are as follows: VC_x are hours of SNALT, VCC_x is hours of SNALT per hours of labour done by X, and ϵ_x is hours of labour done per hour of labour-power sold.

14. Also, to make any sense, average intensity should equal the intensity of the average hour of labour-power. That is,

$$\sum \epsilon_x LP_x / \sum LP_x = 1 \text{ hour of labour/hour of labour-power.}$$

Assuming that 'labour done' equals $\epsilon_x LP_x$, this can be restated as total labour done = total labour-power hired.

It may seem strange that the above-average work more than one hour per hour hired. This is an artifact of the normalization $\epsilon_a = 1$, which defines the units of labour done.

15. Further, for the concept of average to make sense, the average value-creating capacity per hour of all labour (AVCC) should equal the value-creating capacity of the average worker's labour (VCC_a). The former is

$$AVCC = \sum_{x=1}^N VCC_x/N = (\sum_{x=1}^N \sigma_x/N) VCC_a$$

where N = the total number of hours of labour done or hours of labour-power hired ($\sum \epsilon LP = \sum LP$). Since AVCC should equal VCC_a , the average of the skill coefficients (the number in parentheses in this equation), should equal unity. So the skill coefficients should add up to N .

16. This assumption is needed for Foley's (1982) assumption that value created is proportional to hours of labour-power hired.

17. The ellipsis replaces the word 'unskilled.'

18. Himmelweit (1984) suggests that the RSV should be equal between sectors given equal organic compositions of capital and profit rates. This restricts us to a very high level of abstraction. A realistic picture allows technical differences and frictions in capital mobility.

19. The same criticism might be leveled against unidimensional comparable worth (CW) measures of use-value-producing skill. But CW is not a measure of VCC. Rather, it is an independent measure of 'human capital,' a way of testing and criticizing a theory of relative wages. Second, CW is a measure of factors necessary but not sufficient to value creation.

20. The relationship may be more complex than in the equation, in that ϵ may be a function of σ or *vice-versa*.

21. Rather, the value of the machinery used up is transferred to the product. An individual capitalist can make a profit by buying a machine below value or by introducing new machinery that allows production below social value. But on the societal level, this only redistributes value.

22. If $\epsilon_a \sigma_a VCC_a = 1$, as assumed, then the total value creation equals the total number of hours of labour-power hired.

23. See Duménil (1983-4, 1987); Foley (1982); Lipietz (1982, 1986).

26. Values and prices are stated in different units (SNALT per unit and pesos per unit). Here, the value of money (in SNALT per peso) is set equal to unity so that values and prices can be directly compared.

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