WHAT DOES THE LABOR THEORY OF VALUE DO?

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Abstract: This article is a response to two other articles in this symposium by Tiago Camarinha Lopes and David Laibman. The article focuses mainly on the important question that both Camarinha Lopes and Laibman address in their articles: what does the labor theory of value do that other theories cannot do? In other words, what important phenomena of capitalist economies can Marx’s theory based on the labor theory of value explain that other theories, especially Sraffian theory, cannot explain? Sections 1 and 2 discuss Camarinha Lopes’ article, Section 3 discusses Laibman’s article, and Section 4 presents my answer to this important question of what does the labor theory of value do.

Keywords: Marx; transformation problem; explanatory power; exploitation

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Camarinha Lopes begins his article by asserting that “the transformation in the narrow sense is over,” without explaining what he means by “narrow sense.”

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three previous articles (including two in the *World Review of Political Economy*) (Camarinha Lopes 2013a, 2013b, 2021), he explained more fully that the reason why he thinks the transformation problem is over is that it is now widely recognized, on the basis of the Bortkiewicz–Sweezy solution to the transformation problem, that prices of production can be derived from values in a logically consistent way and thus is recognized to be “analytically valid.” However, he does not mention, either in this article or in his previous articles, the two damaging conclusions that are widely recognized to follow from this solution and that cast doubt on its validity: that one aggregate equality cannot be satisfied and that the price rate of profit is not equal to the value rate of profit.

Camarinha Lopes also argued in these two articles that a key figure in the general acceptance of the analytical validity of the labor theory of value and the Bortkiewicz–Sweezy solution to the transformation problem is, ironically enough, Paul Samuelson, the most famous mainstream economist of the postwar period. He argued that Samuelson’s criticism of the Bortkiewicz–Sweezy solution is that the labor theory of value is redundant (i.e., unnecessary), which he interprets to mean that at least it is logically valid without contradiction.

But that is not an accurate description of Samuelson’s criticism. Instead, Samuelson strongly argued that the labor theory of value has nothing to do with the determination of prices and the rate of profit. In Samuelson (1970), he assumed a Sraffian input–output model and thus adopted the standard Bortkiewicz–Sweezy–Sraffa interpretation of Marx’s theory. Samuelson first derived labor-values from these given physical quantities; then he introduced Bortkiewicz’s “transformation coefficients” for each commodity (ratios of price/value), which are multiplied by the value of each commodity in order to transform values into prices. However, Samuelson argued that, in this determination of prices, value is in the denominator of the price/value coefficient, which is multiplied by value, and thus values cancel out and play no role in the determination of prices. Prices are instead determined solely by the given physical quantities, as in Sraffa’s theory. Samuelson pointedly concluded with a famous “eraser” metaphor.

In summary, “transforming” from values to prices can be described logically as the following procedure: (1) Write down the value relations; (2) take an eraser and rub them out; (3) finally write down the price relations—thus completing the so-called “transformation process.” (Samuelson 1970; emphasis added)

This is not an argument that concedes the analytical validity of Marx’s theory that prices can be understood as “transformed values,” but need not be, as Camarinha Lopes argued. Rather, Samuelson’s critique is that prices cannot be understood as transformed values, that values play no role in the determination of prices in the
Sraffian-Marxian physical framework. The subtitle of his article ("A Process of Rejection and Replacement") emphasizes the rejection of Marx’s theory and its replacement by Sraffian input–output theory.

Ten years later, Dung Nguyen wrote a reply to Samuelson’s argument (Nguyen 1982), and he argued that both values and prices are derived from the same technical matrix and therefore the relation is not arbitrary and contradictory as Samuelson’s argument suggests. Samuelson (1982) replied that one could assume a bizarre third system in which the profit markup is only on raw materials, and then assume a Bortkiewicz-type “transformation” from this bizarre raw materials system to actual relative prices. The result would be the same as the transformation from values—the transformation erases the raw material system and replaces it with the actual price system. Relative prices and the rate of profit in this framework depend only on the technical matrix and do not depend at all on the bizarre raw materials system, just as they do not depend at all on the Marxian value system.

I partially agree with Samuelson on this point—that the labor theory of value interpreted within the Sraffian input–output framework has nothing to do with the determination of prices and the rate of profit. However, I argue that the Sraffian interpretation of Marx’s theory is a fundamental misinterpretation and thus that Samuelson’s “eraser” criticism does not apply to Marx’s theory, properly understood, with two levels of abstraction (macro and micro) and the analytical framework of the circuit of money capital, as presented in Moseley 2016. Prices of production in Marx’s theory are not determined by multiplying given labor-values by (price/value) transformation coefficients in a physical input-output framework. Rather, the price of production of a given industry \((P_i)\) is determined by the sum of the given consumed constant capital and variable capital \((C_i + V_i)\) and the average profit in that industry \((\pi_i)\):

\[
P_i = (C_i + V_i) + \pi_i
\]

Where \(\pi_i\) is equal to the general rate of profit \((R)\) multiplied by the given total capital advanced in that industry \((M_i)\):

\[
\pi_i = R M_i
\]

and the general rate of profit is the ratio of the total surplus-value produced in the economy as a whole in a year \((S)\) to the total capital invested in the economy as a whole \((M)\):

\[
R = S/M
\]

And \(S\) is determined by the total surplus labor in the economy as a whole \((SL)\) and the money value produced per hour of abstract labor (and thus per hour of surplus labor):
Labor-values do not cancel out in Marx’s theory. Surplus labor determines surplus-value, which in turn determines (along with the quantities of money capital advanced and consumed) the rate of profit and prices of production. Thus, the widely accepted criticism of Marx’s theory (including Camarinha Lopes and Laibman) is based on a misinterpretation of the basic logical structure of Marx’s theory. I agree that “the transformation problem is over” (as the subtitle of Moseley [2016] suggests), but for a different reason than Camarinha Lopes: not because of the Bortkiewicz–Sweezy non-solution, but because of the macro-monetary summarized above, which is an extension of the New Interpretation of Duncan Foley and others.

Therefore, Marx’s theory is not “redundant,” but is instead a fundamentally different theory of capitalism than Sraffian theory and the Sraffian interpretation of Marx’s theory. And I will argue in Section 4 below that Marx’s alternative theory has much greater explanatory power than Sraffian theory.

2. What Does the Labor Theory of Value Do?

In Section 2 of his article (“So What Is the Question Now?”), Camarinha Lopes acknowledges that, even though the standard interpretation of the transformation problem is accepted as analytically valid, it is also regarded by critics as “redundant,” in the sense that it is not necessary to explain prices and the rate of profit, which can be explained independently of value magnitudes. As a result, Camarinha Lopes argues, Marxian economists are required to justify using the labor theory of value, as in the Bortkiewicz–Sweezy transformation of values into prices of production. So the question becomes: what does the labor theory of value do that other theories, and especially Sraffian theory, cannot do, which would justify the use of Marx’s labor theory of value? This question was also posed by Laibman in his article in this symposium, whom Camarinha Lopes cites.

My answer to this question will be given below: what the labor theory of value does is to provide superior explanatory power for a wide range of important phenomena of capitalist economies. Camarinha Lopes and Laibman do not mention this superior explanatory power of Marx’s theory in their discussions of this question.

Disappointingly, Camarinha Lopes does not provide an answer at all to his own crucial question. Instead of answering that question, he first argues it is an unfair question because mainstream economists are not required to justify their assumptions. He then argues that our answer to that question cannot be that our theory supports the working class, because non-Marxists would consider that answer “obstructionist.” He then argues that the standard interpretation of Marx’s theory is the result of the efforts
of many top-notch economists, both Marxists and non-Marxists, who have “integrated novel knowledge,” but he does not specify that novel knowledge is. So, we are left in effect with no answer to this important question.

3. What Does the Value Dimension Do?

David Laibman’s article in this symposium also addresses the same question: “what does the value dimension . . . actually do?” And he provides an original answer to this question, but a very unsatisfactory one. Laibman’s answer has nothing to do with a better theory of prices and the rate of profit. He fully accepts the Sraffian theory of prices and the rate of profit and (contrary to Camarinha Lopes) he agrees with critics (implicitly with Samuelson) that labor-values play no role in the determination of these key variables, including the all-important rate of profit. Instead, Laibman argues that the contribution of the “value dimension” is something very different—it provides a measure of the balance of power between capitalists and workers.

Laibman argues that the wage share of net output tends to equal the worker share of power and thus the wage share of net output is the appropriate starting point for the derivation of a measure of the balance of power between capitalists and workers. Laibman’s derivation of the worker share of power is as follows:

1. The real wage per unit of labor \( w \) is taken as given. However, this assumption is not acceptable because workers in capitalism are paid a money wage, not a bundle of wage goods (more on this point below).
2. The given real wage (a set of wage goods) is converted into an “equivalent quantity” of commodity \( A \). But this conversion is illogical because physical goods as physical goods cannot be equated with each other. There is no such thing as an “equivalent quantity” of different physical goods. A quantity of apples as apples cannot be equated with a quantity of oranges as oranges.
3. The quantity of net output in the economy as a whole is also taken as given and is also converted into an “equivalent quantity” of commodity \( A \) (\( A_N \)). This conversion is even more illogical because the entire net output as a collection of physical goods is “equated” with commodity \( A \).
4. The worker share of power \( \omega \) is then defined as the wage share of net output: \[ \omega = \frac{wL}{A_N}, \] where \( L \) is the total current labor.
5. Finally, the wage share of net output is decomposed into: \[ \omega = \frac{wL}{A_N} = \frac{w}{A_N} \frac{L}{A_N} \] and he interprets \( L/A_N \) as the value per unit of the net output. Therefore, he interprets the wage share of net output as the product of the real wage and the unit value of the real wage. And this is what the “value dimension” \( (L/A_N) \) “does,” according to Laibman—it provides a labor-time measure of the wage share of output and thus of the worker share of power.
I argue that there are two main problems with Laibman’s interpretation of what the value dimension does: (1) it provides no theory of prices and the rate of profit (and thus no theory of all the other important phenomena of capitalist economies that Marx’s theory explains, which will be discussed in the next section) and (2) it is based on illogical “equivalent commodities” between different physical goods.

Also, Marx specifically criticized a similar ratio of the classical economists in terms of the division of the product and the value-product between workers and capitalists in Chapter 18 of Volume 1 of *Capital*:

> When the political economists treat surplus-value and the value of labour-power as fractions of the value-product . . . they *conceal the specific character of the capital-relation*, namely the fact that variable capital is exchanged for living labour-power, and that the worker is accordingly excluded from the product. Instead of revealing the capital-relation they show us the false semblance of a relation of association, in which worker and capitalist divide the product in proportion to the different elements which they respectively contribute toward its formation. (Marx [1867] 1977, 670–671)

Of course, Laibman does not argue that capitalists contribute to the formation of the product, but his wage share of net output does not provide an argument against this “false semblance.” The correct measure of the relation between capitalists and workers is the *rate of surplus-value*, the ratio of the surplus-value produced by workers to the variable capital (or money wage) exchanged to purchase the labor-power of workers, which Marx discussed in the first section of Chapter 18 and which correctly describes “the specific character of the capital relation.”

### 4. The Superior Explanatory Power of Marx’s Theory

This section presents a brief discussion of my answer to the question of “what does the labor theory of value do?” A more complete discussion of this important subject is presented in Moseley (2021 and forthcoming).

**Money**

Money is obviously a very important part of a capitalist commodity economy. Marx’s theory of money is presented at the foundation of his theory along with his fundamental theory of value in Part 1 of Volume 1 (“Commodities and *Money*) (125 pages) of *Capital* (Marx [1867] 1977), beginning with the very important but often ignored Section 3 of Chapter 1 (“The Value-Form, or Exchange-Value”). In Section 3, *the necessity of money* in a commodity economy is derived as the objective socially recognized form of appearance of the value contained in
commodities. Chapter 2 describes how commodity-owners come to perceive the necessity of money, and Chapter 3 discusses the three main functions of money (measure of value, medium of circulation, and the only adequate form of value).

In striking contrast, in Sraffa’s book (1960), there is no money at all (0 pages). Instead, an arbitrary commodity (or even a group of commodities, including the entire net output!) is chosen as the numeraire unit in which prices are expressed. In Pasinetti’s (1977) seminal presentation of Sraffa’s theory in *Lectures on the Theory of Production*, money is not in the Index. Similarly, in Kurz and Salvadori’s *Theory of Production* (1995), which has joined Pasinetti’s book as an authoritative source on Sraffa’s theory, money is again not in the Index, clearly indicating the absence of money in Sraffa’s theory. How can there be a theory of capitalism without money?

**Working Day and Intensity of Labor**

Marx’s theory can explain, and Sraffa’s theory cannot explain, the effect of the *length of the working day* on the amount of profit. According to Marx’s theory, an increase in the working day increases surplus labor and thus increases surplus-value (profit). Therefore, capitalists have an objective interest to increase the working day (especially when wages are by the day as in the 19th century), which is generally contrary to the objective interests of workers. Thus, Marx’s theory provides a straightforward explanation of the prolonged class conflict over the length of the working day in the history of all capitalist nations. Marx’s famous Chapter 10 on “The Working Day” in *Capital* (Marx [1867] 1977) is a detailed history of this class conflict in 19th century England, which is explained by Marx’s labor theory of value and surplus-value (determined by the surplus labor portion of the working day).

The same conclusions follow with respect to a change in the *intensity of labor* of workers in the production process. According to Marx’s theory, an increase in the intensity of labor is equivalent to an increase in the hours of labor and thus increases the value and surplus-value produced; and thus, it is again in the objective interest of capitalists to increase the intensity of labor of their workers, which is generally against the interest of workers. Thus, Marx’s theory also provides a straightforward explanation of the ubiquitous conflict over the intensity of labor of workers in almost all capitalist workplaces (as every worker knows).

Sraffa’s theory, on the other hand, cannot explain the effect of a change in the length of the working day or in the intensity of labor on the amount or the rate of profit. The length of the working day and the intensity of labor are *not variables in Sraffa’s theory* and thus the effects of their changes cannot be analyzed. Instead, the labor input coefficients are “technological givens”—the quantities of labor-hours required to produce a unit of each kind of output. These technological labor input coefficients are not affected by an increase in the working day or in the intensity of labor, and thus the amount and the rate of profit are not affected.
Exploitation

Marx’s theory also provides a theory of the unique characteristics of exploitation in capitalism, which also refutes an important piece of capitalist ideology—that the exchange of the money wage between capitalists and workers is an \textit{exchange of equivalents} and thus there is no exploitation in capitalism. As mentioned above, workers in capitalism are paid a money wage; this payment of a money wage creates the illusion that workers are paid for all the hours of labor that they perform (especially when wages are paid by the hour), and thus makes it appear as if workers do not perform surplus labor and are not exploited. However, Marx’s theory explains that the payment of the money wage is just the \textit{first phase} of the relation between capitalists and workers in the sphere of \textit{exchange}, and this first phase is followed by a \textit{second phase} in the sphere of \textit{production} in which workers produce more value than the money wages they are paid, and thus workers do perform unpaid surplus labor and are exploited by capitalists. Thus, Marx’s theory dispels the illusion fostered by the payment of the money wage and capitalist ideology that the exchange between capitalists and workers is an \textit{exchange of equivalents}. Marx’s theory demonstrates that there is only an apparent exchange of equivalents between capitalists and workers in the sphere of circulation, which is followed by the exploitation of workers by capitalists in the sphere of production.

In contrast, Sraffian theory does not provide a theory of exploitation. Since, according to Sraffian theory, workers do not produce value, they also do not produce surplus-value. Some Sraffian Marxists argue that their interpretation does provide a theory of exploitation in the sense that workers producers a surplus product. However, there are two problems with this argument. In the first place, there is no such thing as a “surplus product” because a surplus product requires knowledge of the real wage (surplus product \(=\) net product \(-\) real wage) and the real wage is not known. Workers in capitalism are paid a money wage, not a bundle of wage goods, and each worker decides which goods to purchase and even whether or not to save a part of their wages. And even if this objection is set aside and a given real wage is assumed, this real wage could not be subtracted from the product produced by each worker because the product is a different good from the real wage. One cannot subtract apples from oranges.

Fixed Capital

Another important area in which Marx’s theory is superior to Sraffian theory is the analysis of fixed capital, a very important feature of capitalist economies and an important determinant of the rate of profit and more and more so as technology develops. Sraffian theory has a very difficult time incorporating fixed capital into its theoretical framework of physical quantities of inputs and outputs and the simultaneous determination of the prices of inputs and outputs. In order to make this work, fixed capital (i.e., physical means of production) is assumed to be is
entirely consumed in every period (i.e., fixed capital is in effect treated as if it were circulating capital), and the output of production in every period is assumed to include hypothetical “partially used machines,” whose prices are determined simultaneously in every period along with the prices of actual commodities.

Further unrealistic assumptions about fixed capital in Sraffian theory include: (1) all the different types of fixed capital goods in an industry (including both buildings and different types of equipment) are assumed to have the same lifetime, so they can be analyzed together as a “plant,” with only one price for all the fixed capital goods in the “plant”; (2) the “age distribution” of every type of fixed capital good is assumed to be uniform; i.e., the quantity of all ages of each given fixed capital good is assumed to be the same, and the total quantity of each type of capital good must be an integer multiple of its lifetime (e.g., Sraffa’s [1960, 68] example of 20 tractors with a lifetime of four years are equally divided into four age groups of five tractors each). Without this assumption, there is no solution to the system of equations. Surely this is not the way the actual rate of profit and prices of production are determined in the real capitalist economy!

By contrast, Marx’s logical method of the circuit of money capital and the sequential determination of the prices of inputs and outputs has no problem incorporating fixed capital. The quantity of fixed capital is taken as given (as a component of the initial money capital advanced to purchase means of production at the beginning of the circuit of money capital) and depreciated as costs over the expected lifetime of the fixed capital goods, and thus there is no need to assume hypothetical “partially used machines” as “joint products,” whose hypothetical prices are determined simultaneously with the actual prices of actual commodities.

Unequal Turnover Times across Industries

Another important feature of capitalist economies in which Marx’s theory is superior to Sraffian theory is unequal turnover times across industries, which affects the equalization of the profit rate across industries. In order to make unequal turnover times compatible with simultaneous determination, all the different turnover periods in different industries must be converted to multiples of a hypothetical “unit time period” (e.g., Steedman’s “week”), and the result of production in every “unit time period” is assumed to include hypothetical “partially completed products,” whose prices are also determined simultaneously in every “unit time period,” along with the prices of actual commodities and the prices of the hypothetical “partially used machines” (lots of equations and lots of variables in this theory!).

In Marx’s theory, on the other hand, there is no need to determine input prices and output prices at the same time because Marx’s theory is based on sequential determination, not simultaneous determination. The initial quantities of money capital advanced to purchase the inputs and the prices of the inputs are taken as
given and used to determine the prices of the outputs. And thus, there is no need to assume hypothetical “partially completed products” in every unit time period whose prices are determined simultaneously with the prices of actual inputs and outputs.

We can also see from this discussion of fixed capital and unequal turnover times that the rate of profit that is determined in Sraffian theory is not the actual annual rate of profit, but is instead the rate of profit for this hypothetical unit time period, which includes imaginary profit on “partially completed products” and imaginary profit on “partially used machines,” even though these “commodities” are not actually sold on markets and profit is not actually received on these “commodities” and thus there is no competition to equalize the rate of profit. This fundamental difference by itself makes it worthwhile to consider Marx’s alternative theory of the rate of profit—at least it is about the actual rate of profit.

**Conclusion**

So, this is my conclusion concerning what Marx’s labor theory of value and his theory in general does—it provides a superior explanation of a wide range of important phenomena of capitalist economies discussed above, including especially else a theory of exploitation that explains the historically specific mechanism through which exploitation takes place in a capitalist economy—by workers producing more money value than their money wage.

In spite of the theoretical differences discussed above, I am all for joining forces with Sraffian economists in critical engagement with mainstream neoclassical economics. Criticism of mainstream economics has been a priority of mine for many years and still is, especially the marginal productivity theory of distribution. Some of my articles (Moseley 2015a, 2015b, 2012a, 2012b) focused mainly on the teaching of marginal productivity theory; I have received a number of positive comments from readers, especially from teachers who said that the articles are useful in the classroom. My other article (Moseley 2010) is a critique of aggregate supply/aggregate demand models in intermediate macroeconomics. As you can see from these titles, Mankiw has been a favorite target of my criticisms. (But he has never responded to my criticisms, in spite of repeated requests for a response.)

**Notes**

1. Responses by Tiago Camarinha Lopes and David Laibman to this article will be forthcoming in the following issue of *World Review of Political Economy*.
2. In another article, Samuelson (1971) argued that the Bortkiewicz transformation algorithm is logically equivalent to: price = anything x [price/anything].
3. See Moseley (forthcoming, Appendix 2.1) for further discussion of this topic.
4. See Moseley (forthcoming, Appendix 2.3) for further discussion of this topic.
References


