

On the TSSI and the Exploitation Theory of Profit

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Abstract

In a recent article in this journal, Kliman (2001) has argued that only a temporal single system interpretation (TSSI) of Marxian value theory preserves the fundamental Marxian theorem (FMT) and hence finds the origin of profit solely in exploitation. This paper first outlines the TSSI in order to emphasize the particular and controversial definition of value on which it depends. Kliman's logical demonstration of the FMT is then shown to fail on exactly the same grounds for which he indicts rival interpretations.

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1 Introduction

The Marxian account of exploitation is a theory of how surplus labour is extracted, and the form that this takes as profit. In formalizations of Marxian theory, the relationship between surplus labour and profit is expressed by the ‘fundamental Marxian theorem’ (FMT) that the existence of surplus labour is necessary and sufficient for the existence of profit. In a recent article in this journal, Kliman (2001) has argued that in any interpretation of Marx’s value theory in which prices and values of inputs and outputs are determined simultaneously, the extraction of surplus labour is insufficient, and in general unnecessary, for the existence of positive profit. He calls such interpretations ‘simultaneist’ and argues that because in such interpretations the FMT fails, they are all incompatible with Marx’s theory. By contrast, a ‘temporalist single system interpretation’ (TSSI) does indeed imply that surplus labour is both necessary and sufficient for positive profit. Elsewhere, for example in Kliman and McGlone (1999), it is argued that all of the major propositions of *Capital* can be replicated by the formalism of the TSSI, and that this is not true of any other interpretation in the modern literature. Consequently, the claim is that of all modern interpretations only the TSSI adequately represents the theory presented in the three volumes of *Capital*.

It is important to be clear about what is being asserted. Kliman is not assessing the adequacy of *any* theory, whether this theory be his own, Marx’s, or some other. While *desiderata* of a theory might include meaningfulness of assumptions, logical coherence, elegance, insight and testable implications, none of these is at issue here. Kliman is only presenting an interpretation of the theory of *Capital*. In order to decide between rival interpretations, the criterion he employs is whether an account can derive the major propositions of *Capital* (the ‘replication criterion’), and he sees this as a straightforward test which can decide between rival interpretations.

This paper focuses on Kliman’s claim that a TSSI interpretation can support a logically robust FMT, that is, one that is valid “*under completely general conditions*” (Kliman 2001, p.106, emphasis in original). For convenience, the paper identifies the TSSI with Kliman’s writings (as both single and joint author), but further references can be consulted in Kliman (*ibid.*). Section 2 recalls Kliman’s argument, using his notation and terminology. The next section emphasizes that his argument depends upon two assumptions. These are stated (*ibid.*, p.106, immediately before and after equation (7)), but it is easy to miss their significance. Adherents to what Kliman calls the ‘standard interpretation’ reject both of these assumptions; adherents to what he calls the ‘new interpretation’ reject one of them. Without both of them, Kliman’s demonstration of the FMT fails. The fourth section focuses on his definition of the ‘monetary expression of labour-time’ and shows that this definition

requires the two particular assumptions. Section 5 outlines the TSSI method. The following two sections consider whether a non-TSSI FMT is possible, and whether the TSSI proof of the FMT is valid according to the TSSI method. The answers are first, that Kliman has not conclusively shown that the demonstration of the non-TSSI FMT is flawed, and second, that if the non-TSSI FMT is flawed, then so too is the TSSI FMT, and for exactly the same reason. A short conclusion summarizes, and suggests that issues of rival interpretation are not perhaps the best focus for the construction of a coherent theory of today's world.

2 The TSSI FMT

Consider the TSSI interpretation as outlined by Kliman. Time is considered discretely in the following manner. Time t is a period in which inputs are purchased at the outset and then used continuously during the period. The period ends immediately prior to the appearance of output, and the appearance of output denotes the start of period $t + 1$. Output is instantaneously sold, providing profit to the seller and enabling the instantaneous purchase of inputs. A second period of production then ensues. Thus in the present context, temporality refers solely to an insistence that it takes time to *produce* commodities, so that the price of a commodity as input may be different from the price of that same commodity as an output. The following notation is used.

$C(t)$ is the total expenditure on used-up means of production at the start of period t , measured in money.

$V(t)$ is the total wage bill advanced at the start of period t , measured in money.

$P(t + 1)$ is total revenue received from the sale of output (called 'total price' in the Marxian tradition), measured in money.

π^N is nominal profit, measured in money, and defined as

$$\pi^N = P(t + 1) - C(t) - V(t) \quad (1)$$

π^R is real profit, measured in money, and defined as

$$\pi^R = \frac{P(t + 1)}{1 + i} - C(t) - V(t) \quad (2)$$

where i is the discount factor which commensurates monetary magnitudes through time.

$\tau(t)$ is the monetary expression of labour-time at time t , or the amount of money that represents one hour of socially necessary labour-time at time t . Its inverse is the value of money, the number of hours of socially necessary labour-time represented by one unit of money at time t .

$L(t)$ is total labour purchased at the start of period t . While he is not explicit, Kliman assumes that this is also the labour-time performed in production during period t . It is therefore measured in hours of socially necessary labour-time. This assumption is not at issue for the argument of this paper.

$S(t)$ is surplus labour-time, measured in hours of socially necessary labour-time.

Kliman's argument is as follows. Surplus labour-time is the difference between total labour-time and the labour-time equivalent of the wages paid:

$$S(t) = L(t) - \frac{V(t)}{\tau(t)} \quad (3)$$

Kliman wants to show that this surplus labour-time is necessary and sufficient for the real profit of equation (2) to be positive. Now in the present specification, the only reason why a discount factor is necessary in equation (2) is that the monetary expression of labour-time might change. So define the discount factor as the period by period rate of change of the monetary expression of labour-time:

$$i = \frac{\tau(t+1) - \tau(t)}{\tau(t)} \quad (4)$$

so that

$$1 + i = \frac{\tau(t+1)}{\tau(t)} \quad (5)$$

Substituting for $1 + i$ in equation (2),

$$\pi^R = \frac{P(t+1)\tau(t)}{\tau(t+1)} - C(t) - V(t) \quad (6)$$

and substituting for $V(t)$ from equation (3),

$$\pi^R = \frac{P(t+1)\tau(t)}{\tau(t+1)} - C(t) - [L(t) - S(t)]\tau(t) \quad (7)$$

or

$$\pi^R = \frac{P(t+1)}{\tau(t+1)} - \frac{C(t)}{\tau(t)} - L(t) + S(t)\tau(t) \quad (8)$$

Kliman then asserts that value added in terms of labour-time is the difference between the labour-time equivalents of total revenue (total price) $[1/\tau(t+1)]P(t+1)$ and expenditure on the means of production $[1/\tau(t)]C(t)$, and this difference is equal to the living labour extracted $L(t)$, since the latter generates all new value (*ibid.* p.107). Hence the expression

in the large brackets in equation (8) is identically zero, whence

$$\pi^R = S(t)\tau(t) \quad (9)$$

Now consider again the large bracket of equation (8). Since for Kliman this is zero, it can be written as

$$\frac{P(t+1)}{\tau(t+1)} - \frac{C(t)}{\tau(t)} = L(t) \quad (10)$$

and hence in time 1,

$$\frac{P(1)}{\tau(1)} - \frac{C(0)}{\tau(0)} = L(0) \quad (11)$$

Assuming that P , C and L are each positive and finite in all time periods, then as long as $\tau(0)$ is positive and finite, so must $\tau(1)$ be positive and finite. Hence so is every member of the τ series. Therefore $\tau(t)$ in equation (9) is positive and hence positive surplus labour is both necessary and sufficient for real profit to be positive.

3 TSSI definitions

However, in addition to the assumptions stated, this demonstration depends upon definitions which Kliman treats as unproblematic. Both are contested by what Kliman calls ‘the standard interpretation of Marx’s value theory’ (*ibid.* p.99), and one is contested by what Kliman calls the ‘new interpretation’ (*ibid.* p.100). Consider each in turn.

3.1 First definition: labour power and wages

The first assumption underpins equation (3). Kliman presumes that aggregate variable capital in value terms is equal to aggregate wages divided by the monetary expression of labour-time. Now aggregate variable capital in value terms could be one of two products. It could be the value of an individual labour-power multiplied by the number of workers hired, or it could be the value of labour-power per hour of labour hired multiplied by the total number of hours hired. The ‘standard interpretation’ generally uses the first product, in which the value of labour-power is a number of hours, and the ‘new interpretation’ generally uses the second product, in which the value of labour-power is a fraction between 0 and 1. I will consider each in turn.

3.1.1 The ‘standard interpretation’ objection

The ‘standard interpretation’ treats the value of labour-power as the value embodied in the commodities purchased by the wage, or, in shorthand, the value of wage-goods. If λ is the vector of unit values, and \mathbf{b} the vector of wage-goods purchased per hour of labour performed, then this means that at any time t , total variable capital in labour value terms is $\lambda\mathbf{b}L$. Since V is total wages, then its labour-time equivalent for Kliman is V/τ . Hence a ‘standard interpretation’ position can only interpret Kliman as saying

$$\lambda\mathbf{b}L = \frac{V}{\tau} \tag{12}$$

which means that, at each t , τ has to satisfy

$$\tau = \frac{V}{\lambda\mathbf{b}L} \tag{13}$$

As long as the assumption of ‘equal exchange’ or ‘exchange of equivalents’ is made, then equation (13) will hold, for all money prices will be proportional to their corresponding labour values. But as soon as different compositions of capital are combined with the equalization of the rate of profit, then ‘unequal exchange’ will be the norm, and the ensuing prices of production will not relate in any simple way to the ‘prices proportional to values’ of Volume 1 of *Capital*. In such circumstances, equation (12) only holds in certain rather special cases, and in general does not hold. Hence anyone holding to the ‘standard interpretation’ of Marxian value theory will not find convincing Kliman’s demonstration of the FMT. For outside of an equal exchange world, equation (3) is mis-specified. In the standard interpretation, Kliman’s demonstration of the FMT depends upon an equal exchange assumption in circumstances in which equal exchange in general will not occur.

3.1.2 The ‘new interpretation’ agreement and justification

The ‘new interpretation’ argues that the ‘standard interpretation’ of the value of labour-power is incoherent outside of a Volume 1 world. This can be shown as follows. First, labour-power is an attribute of human beings, and human beings are not (in capitalism) produced as commodities. So the value of labour-power cannot be measured by the socially necessary labour embodied in human beings, because there is none. The reason labour-power is a peculiar commodity is that it has no relative form of value. But it does have an equivalent form. There are only two possible choices for that equivalent form: either the wage (divided by the monetary expression of value) for which labour-power is sold, or the value of the bundle of commodities which the worker uses the wage to buy. If the

assumption is made that value equivalents are exchanged, then either of these possibilities can indifferently be used (as long as all the wage is spent). But as soon as explicit account is taken of the different compositions of capital involved in the production of the various wage-goods, no wage-good will in general sell at its value, and hence the money wage (divided by the monetary expression of value) will not be equal to the labour value of the wage-bundle of commodities.

However, the unequal exchange forced by differing compositions of capital combined with the competitive equalization of the rate of profit does not apply to the exchange of labour-power for a wage, because no compositions of capital or rate of profit are involved in the ‘production’ of people. Hence in general the value of labour-power is the money wage (divided by the monetary expression of value), and only in the special (Volume 1) world of equivalent exchange will this also be the value of the wage-bundle of commodities. In general, the value of labour-power per hour of labour hired is the hourly wage rate (divided by the monetary expression of value); multiplying up by the total number of hours of labour hired gives the variable capital of equation (3).

This means that proponents of the ‘new interpretation’ accept equation (3) as a correct specification, and indeed, have an analytical argument in favour of it, rather than treating it just as a definition.¹ Hence there is no difficulty in deriving equations (7) and (8).

3.2 Second definition: value and price of means of production

However, in deriving his FMT as equation (9) from equation (8), Kliman assumes that

$$\frac{P(t+1)}{\tau(t+1)} = \frac{C(t)}{\tau(t)} + L(t) \quad (14)$$

and this is his second definition. For equation (14) to hold, one has to accept the assertions following equation (8) above, that total gross value is the labour-time equivalent of total gross revenue (or total price) $[1/\tau(t+1)]P(t+1)$ and that the total value of the means of production is the labour-time equivalent of total expenditure on the means of production $[1/\tau(t)]C(t)$.

3.2.1 The ‘standard interpretation’ objection

Proponents of the interpretation that value and price systems are distinct and different will not be able to attribute any meaning to these aggregate proportionalities. It is true that

¹Kliman first asserts the assumption in his brief outline of the ‘new interpretation’ (ibid. p.101), but he does not explain it.

proportionality might be explicitly assumed for total value and total price (as a normalization condition of the transformation problem), but, outside of special cases, that same proportionality *cannot* hold for the sub-aggregates of total wages and total variable capital in value terms (as already discussed), and total expenditure on means of production and total constant capital in value terms. Exactly as for the relation between total wages and the value of the wage-good bundle, it cannot be the case in an unequal exchange world that the total value of the means of production is in general the labour-time equivalent of total expenditure on the means of production. For ‘standard interpretation’ Marxists, Kliman’s demonstration of the FMT only holds in the equal exchange world of Volume 1 of *Capital*, and cannot hold in the unequal exchange world of Volume 3 of *Capital*.

3.2.2 The ‘new interpretation’ objection

Consider further the two proportionalities assumed by Kliman, that total gross value is the labour-time equivalent of total gross revenue (or total price) and that the total value of the means of production is the labour-time equivalent of total expenditure on the means of production. First, these are not independent conditions: either must imply the other if there are proportionalities between price and value of total variable capital, and between profit and total unpaid labour-time. Since in the ‘new interpretation’ both of these latter conditions hold, it suffices to concentrate on just one of the proportionalities assumed by Kliman.

Consider then the proposition that the total value of the means of production is the labour-time equivalent of total expenditure on the means of production. Kliman presents no justification for this assumption. But the assumption is not a trivial one, because it implies that additivity cannot be maintained. The labour value of each individual means of production when added together will not in general equal in the aggregate Kliman’s labour-time equivalent of total expenditure on the means of production. The reason is the same as that already outlined. Since the production of each means of production has in general a different composition of capital, the competitive tendency towards equalization of the rate of profit will force price-value deviations across all means of production, and the summation of all prices of production of these means of production will not therefore stand in a proportionality relation with the summation of their values.

3.3 The TSSI definition of value

This in turn means that if aggregate proportionality is to be maintained as Kliman asserts, *then value is being defined differently from how it is conventionally understood*. The con-

ventional understanding interprets Marx to say that value is the sum of the abstract labour directly and indirectly embodied in the production of a commodity, so that at unit level,

$$\lambda_i = \sum_j a_{ji}\lambda_j + l_i \quad (15)$$

where a_{ji} is the quantity of good j required to produce one unit of good i , and l_i is the number of hours of labour required to produce one unit of good i . Multiplying by the gross output x_i , and summing,

$$\lambda \mathbf{x} = \lambda \mathbf{A} \mathbf{x} + L \quad (16)$$

where \mathbf{A} is the matrix of input-output coefficients. But for Kliman, value at unit level is the sum of the living labour performed and the value equivalent of the money laid out on means of production. Moreover, since production takes time, output appears one period after inputs are employed, and hence two monetary expressions of value are involved. That is, at unit level for inputs of time t and outputs of time $t + 1$,

$$\frac{p_i(t+1)}{\tau(t+1)} = \frac{1}{\tau(t)} \sum_j a_{ji} p_j(t) + l_i(t) \quad (17)$$

and at the aggregate level,

$$\frac{P(t+1)}{\tau(t+1)} = \frac{1}{\tau(t)} \mathbf{p} \mathbf{A} \mathbf{x} + L(t) = \frac{C(t)}{\tau(t)} + L(t) \quad (18)$$

which is of course equation (14) again. Clearly, Kliman's definitions are different from what would be accepted by either the 'standard interpretation' or the 'new interpretation'.

4 On the monetary expression of labour-time

Kliman defines the monetary expression of labour-time in terms of equation (10), as the ratio of total price to total value,

$$\tau(t+1) = \frac{P(t+1)}{\frac{C(t)}{\tau(t)} + L(t)} \quad (19)$$

and he compares this with the analogous expression defined not in terms of the ratio of gross price to gross value, but in terms of the ratio of value added in money terms to value added in labour-time terms. He then correctly shows that the ratio is the same whether defined in gross or net terms (Kliman 2001, p.109). But again his argument is premised on his

identification of the total value of the means of production with the labour-time equivalent of total expenditure on the means of production, that is, on his definition of value by equation (17) and hence (18). If one were to specify the value equations more conventionally as equation (15) and hence (16), then a ‘temporalist’ definition of the monetary expression of labour-time becomes

$$\tau(t+1) = \frac{P(t+1)}{[\lambda Ax](t) + L(t)} \quad (20)$$

Hence, cross-multiplying and subtracting $C(t)(1+i)$ from both sides,

$$\tau(t+1)[\lambda Ax](t) - C(t)(1+i) + \tau(t+1)L(t) = P(t+1) - C(t)(1+i) \quad (21)$$

Rearranging, and using equation (5),

$$\tau(t+1) = \frac{P(t+1) - C(t)(1+i)}{L(t)} - \frac{\tau(t)[\lambda Ax](t) - C(t)}{L(t)}(1+i) \quad (22)$$

For Kliman the second fraction on the right hand side in equation (22) is *defined* to be zero, because its first term $\tau(t)[\lambda Ax](t)$ is $[pAx](t)$ which is $C(t)$. This will not in general be the case for a more conventional definition of Marxian value. And under a more conventional definition of value, equation (22) cannot be signed.

5 The TSSI method

Thus far, this paper has spelled out Kliman’s assumptions and definitions. The only criticism made is that two definitions crucial to the argument have not been highlighted to the extent that they perhaps deserve. What then is at issue is the definition of value. Kliman is arguing that only the TSSI definition can be used to replicate the Marxian account of exploitation and profit. He concludes:

“Of the existing interpretations of Marx’s value theory, only the temporal single-system interpretation ... implies that surplus labor is both necessary and sufficient for real profit to exist, *under completely general conditions.*” (*Ibid.* p.106.

Italics in original)

Kliman and McGlone argue for the TSSI on two grounds. First, they present textual evidence which “strongly suggests” that it is “at least plausible” that the TSSI faithfully reflects Marx’s categories of value and price. Secondly, something that is “even more compelling”, they argue that the TSSI replicates Marx’s major propositions (concerning value, price and

profit), and hence can “make sense out of crucial aspects of his value theory that the standard interpretation (and others) have always found to be incoherent” (Kliman and McGlone 1999, pp.38, 55). Consider each in turn.

Precise textual evidence confirming the TSSI definition of value as reflecting Marx’s category of value does not exist. Instead, passages from *Capital* have to be interrogated with questions such as ‘could this plausibly be interpreted as meaning that value is the labour-time equivalent of price?’ for the various aggregates with which the TSSI is concerned. Such interpretative issues are notoriously difficult to resolve. This is compounded by the difficulty that only Volume 1 of *Capital* was prepared by Marx for publication, and the remainder of what became Volumes 2 and 3, and the three volumes of *Theories of Surplus Value* were put together out of Marx’s notebooks (some written before, and some after, Volume 1) after Marx’s death. Hence textual evidence is at best ambiguous and inconclusive. Kliman therefore argues for the more hermeneutical approach that quotations are not decisive: a textual interpretation should not depend upon this or that quotation, but should rather be able to understand the text as a coherent, unified whole.

Understanding the text as a whole requires a broader understanding of context, focusing on replication of the theoretical results of the text. An accurate textual interpretation is one which can, on the basis of (an interpretation of) the text’s premises, derive (and hence replicate) its theoretical conclusions. This, for Kliman, is the criterion of decidability between rival interpretations. Consequently, while a critic of TSSI might struggle with the apparent contrast between the TSSI definition of constant capital and Marx’s account (Marx 1976, pp. 317-19), this is less significant than the criterion of replication, for only the latter addresses the issue of overall coherence.

Two counter-arguments to the TSSI are then possible: first, if it could be shown that a satisfactory non-TSSI FMT goes through, and second, if it could be shown that the TSSI FMT does not go through on the basis of Kliman’s assumptions, Either would mean that (at least as regards the FMT) the ‘replicability criterion’ would not be able to distinguish rival interpretations and hence rival definitions of value.

6 Is a non-TSSI FMT possible?

Define the ‘simultaneist monetary expression of labour-time’ σ as the ratio, in net rather than gross terms, of the money value of output to its labour value (the first term on the right hand side of equation (22) if the time argument is dropped):

$$\sigma = \frac{P - C}{L} = \frac{p[l - A]x}{lx} = \frac{py}{lx} \quad (23)$$

Then if profit is defined as the difference between net output in money terms and total wages, and using the argument of Section 3.2.2 above that variable capital in labour value terms is total wages divided by the monetary expression of labour-time, it follows that

$$\pi = \sigma S \tag{24}$$

This summarizes Kliman's equations (3)-(6) (Kliman 2001, p.101). Kliman's objection is as follows.

1. Negative net products are a feature of the real world.
2. Hence it is possible to find prices such that net output in money terms $\mathbf{p}y$ is negative. This makes $\sigma < 0$, and hence profit and surplus value have different signs, in which case the FMT fails.
3. The FMT only goes through if net output in money terms is guaranteed to be positive. But this assumption renders the FMT inapplicable in any study of the real world.

That there are some negative net products is undeniable. Whether there are prices such that aggregate net output in money terms is negative is more doubtful. Kliman insists that prices can be chosen arbitrarily, because a general FMT has to hold under all possible prices and any arbitrary choice of price (yielding a negative net product in money terms) is one such possible set. But this is a misconception. Kliman does not explain how his numerical examples (*ibid.* pp.100, 104-5) could emerge in any economically meaningful way out of the valorization process of competing capitals each of which are attempting to maximize profit. Indeed, no economic structure is specified at all. It is true, but trivial, that combinations of numbers, interpreted as output and price vectors, can be found such that (for some choice of length of time period) a non-TSSI FMT cannot be proved. But economies in disequilibrium still have some structure; if they are technologically and economically viable they can reproduce themselves, prices are not random, and behaviour is not arbitrary. A disequilibrium state is *not* one in which absolutely anything can happen. Kliman's numerical examples give no indication as to whether their outcomes are economically possible in the sense of arising out of economic behaviour. To be convincing, a numerical example has to display an economic structure capable of physical reproduction, in which net products are profit-maximizing, and in which a price path is determined by some rule other than imagination. Then at some particular time, multiplying the vectors of net product and prices together to determine the money value of aggregate net product has to result in a negative number. The best that can be said about Kliman's numerical examples in these

terms is that they are seriously incomplete. He has not therefore shown conclusively that an aggregate net product in money terms is economically possible.

7 Is the TSSI proof of the FMT a valid one?

In order to prove the FMT, the TSSI makes the following assumptions.

1. temporality as defined by equation (4);
2. an understanding of value as defined by equation (17) and hence equation (18); or, equivalently, the labour value of the bundle of wage-goods is the labour-time equivalent of total wages, and the labour value of the total means of production is the labour-time equivalent of the value in money terms of that total;
3. P , C and L are positive and finite in all time periods;
4. a period 0 in which $\tau(0)$ is positive and finite.

These are all necessary conditions underpinning Kliman's assertion of the superiority of the TSSI approach in replicating Marx's account of the relation between exploitation and profits. Note in passing that it is not only temporality which distinguishes Kliman's approach from that of rival approaches; temporality as defined by equation (4) is indeed a part of the story and a necessary one, but no more so than the other definitions and assumptions. Whereas the non-TSSI FMT requires the positivity of aggregate net output in money terms in order that its monetary expression of value σ be positive, the TSSI FMT requires assumptions (3) and (4) above in order to ensure that its monetary expression of value τ be positive in any period. Call these the TSSI sign restrictions.

As a deductive logic the TSSI FMT is not convincing. For consider again equation (10), which can be written as

$$P(t+1) - \frac{\tau(t+1)}{\tau(t)}C(t) = \tau(t+1)L(t) \quad (25)$$

or aggregate gross output in money terms less the used up means of production (which are adjusted for any change in the monetary expression of value) is equal to aggregate net output in money terms. But the TSSI sign restrictions are that τ and L are always positive and finite, and hence so is their product. That is, *the TSSI sign restrictions ensure that aggregate net output in money terms is always positive*. Hence if net output in money terms can be negative in the real world, the TSSI FMT is formally true but does not apply to the real world, and if it is insisted that the TSSI FMT does apply to the real world, the TSSI

sign restrictions must be abandoned in which case the TSSI FMT fails. Kliman asserts that the non-TSSI FMT has to assume the positivity of aggregate net product in money terms for the FMT to go through, and this renders it irrelevant. His account of the TSSI FMT is subject to exactly the same strictures.

8 Conclusion

The TSSI stresses that it is only an interpretation of Marx, and it stands or falls on interpretative issues. The claim is that only the TSSI definition of value, its notion of temporality, and the TSSI sign restrictions enable a replication of Marx's account of exploitation, so that the TSSI must be the correct interpretation. How should this claim be assessed?

1. Kliman is correct that an aggregate negative net product in money terms invalidates the non-TSSI FMT.
2. Kliman has not convincingly demonstrated that an aggregate negative net product in money terms is a real possibility.
3. The TSSI assumptions rule out any possibility that an aggregate net product in money terms could be negative.
4. It is not therefore possible to decide between TSSI and non-TSSI approaches through an examination of the FMT.

This does not mean that it is not possible to discriminate between TSSI and non-TSSI approaches. But the criterion is not replication. An alternative criterion of demarcation might consider the assumptions required to construct a contemporary theory of capitalism within the Marxian tradition and how the resulting theory fares in terms of empirical explanation of today's world. The recovery of Marxism as an analytical tool does partially depend on answers to the question 'what really did Marx say and mean?'. But only partially; it also depends upon what a Marxist understanding can tell us about the world in which we live. What is required is not an assessment of rival interpretations, but a theory for today's world and its use in empirical analysis. The construction of such a theory might well seek inspiration from Marx's own writings, but it is a coherent theory for today's world that is the goal.

On coherence, the TSSI is problematic. One reason that the TSSI excites controversy is that its definition of value and its temporality together amount to a proportionality between prices and values, whether or not equivalent exchange is assumed. Values are fully specified by a knowledge of current labour, prices and the time path of the monetary

expression of value. Hence the TSSI value of the means of production, for example, bears no necessary relation to the labour-time that was expended in the production of those means of production, nor to the labour-time that would have to be expended were those means of production all to be replaced today. This notion of value as independent of labour directly and indirectly expended, save through the monetary expression of value, is not obviously compatible with any understanding of a labour theory of value. And as soon as fixed capital and technical change are allowed, then careful distinction must be made between changes in the quality and quantity of labour employed on the one hand, and changes in the money value of inventories and fixed capital due to price changes on the other. With the TSSI insistence on historic cost accounting, and its definition of values by prices and the monetary expression of value, the careful distinctions necessary between changes that are due to changes in labour expended, and those that are due to changes in prices, are all too easily confused. And on empirical analysis, it is doubtful that historic cost accounting can be of much analytical help.

Many variants of Marxism have the potential to say interesting things about today's world. Whether this includes the TSSI remains an open question, because the TSSI restricts itself to 'interpretation of the text'. But theoretically and empirically engaging with the world today is surely a rather more important issue than that of deciding which interpretation has most fidelity to a 135 year old text.

References

- [1] Kliman, Andrew J. (2001), 'Simultaneous Valuation vs. the Exploitation Theory of Profit', *Capital & Class* 73: 97-112.
- [2] Kliman Andrew J. & Ted McGlone (1999), 'A Temporal Single-system Interpretation of Marx's Value Theory', *Review of Radical Political Economy*, 11.1: 33-59.
- [3] Marx, Karl (1976), *Capital*. Volume 1. Harmondsworth: Penguin.