

Sapiens Nihil Affirmat Quod Non Probat

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ABSTRACT *This paper responds to Ernesto Screpanti's critique of Guglielmo Carchedi's approach to Marx's transformation procedure. It argues that there is no logical inconsistency in that procedure once one introduces time, rather than denying it as Marx's critics do. Further, it examines Screpanti's critique and argues that, while Marx's algebra is correct, Screpanti's own 'refutation' of Marx is invalid because it balances neither in physical nor in algebraic terms. It finally examines some old critiques which, while presented by Screpanti as novel, are well-known acquaintances which have already been shown to be invalid. Two conclusions are reached. First, Screpanti concedes that the circularity critique does not hold when time is introduced in the analysis and, second, Screpanti's critique is an attempt to vindicate a method of inquiry (simultaneism) which is unsuited to understanding what really matters, a temporal situation, i.e. reality.*

1. One or Two 'Stuffs'?

In 'Guglielmo Carchedi's "The Art of Fudging" Explained to the People', Ernesto Screpanti brandishes the pen as if it were, as the old saying goes, mightier than the sword. By the time he is through, the Temporal Single System Interpretation (TSSI), and my version of it in particular, have been shown to be guilty of fundamentalist beliefs, theological irrationality, logical inconsistencies and tautologies, magical tricks, mystical dialectics, and creationist ontology, to mention only a few of the tricks temporalism supposedly holds in its bag of tools in order to deceive 'the people'. But it isn't all bad news for the temporalists. Towards the end of the paper, 'a way out' is offered to them, a chance to join the true, Sraffian, science.

Let us then see whether the temporalists should take advantage of Screpanti's generous offer. Let us begin by dealing with Marx's transformation procedure and Screpanti's critique. I summarize the transformation procedure as follows.¹

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¹This article contains some long quotations which unfortunately could not be avoided, given that the book in which the text criticized by Screpanti appeared has had a limited circulation outside Italy.

We have seen above that, no matter how one measures the units of abstract labour, they can always be expressed in money terms and that this holds irrespective of the ratio between money and value. Thus, in Table 1, figures can be read either as value units (hours of labour) or as units of money. Here, sector 1 produces a value of 120 but appropriates, due to a certain structure of demand, 130 while sector 2 produces a value of 140 but appropriates only 130. Or, the firms in sector 1 appropriate an extra surplus value of 10 while those in sector 2 lose a surplus value of 10. This is the transformation of values into prices: a redistribution of the total surplus value under the assumption that, given a certain structure of production as indicated by the structure of organic compositions of capitals, demand is such that sectors which would realise profit rates lower than the average (because of their high organic composition of capital) sell at a price which ensures them the average (i.e. a higher) rate of profit, while sectors which would realise profit rates higher than the average (because of a low organic composition of capital) realise lower profit rates, the average. In reality, the structure of demand will be such that the value realized per unit of capital invested will be higher in one sector and lower in the other. But then capital will move from the latter to the former and there will be a tendential equalisation of the profit rates across sectors. This is why the prices resulting from this equalisation can be taken as a convenient focus of analysis. This is Marx's transformation procedure from values contained to values realized, prices. It is not a transformation of something into something else qualitatively different, but a redistribution of value at the moment of and through exchange. (Carchedi, 2002, pp. 162–163)

In what does the charge of circularity consist? In essence, it holds that ‘the *same* means of production enter the production process at their non-transformed value and exit it, as outputs, at their transformed value. Given that the same commodities must be sold and bought at the same price, the reasoning is supposed to be circular’ (Carchedi, 2002, p. 169). In Table 1, the value of the means of production as inputs of the two sectors is $80 + 60 = 140$ while the value of the means of production produced by sector 1 is only 120. Supposedly, the *same* commodities are valued differently according to whether they are inputs or outputs. This is inconsistent. Moreover, the demand and supply of the means of production cannot match at their production prices because $130V$ is insufficient to purchase means of production whose value is 140. Supposedly the economy breaks down.

I answer this critique as follows:

The critique holds only in a timeless dimension. It vanishes once time is introduced, i.e. once the economy is seen as a succession of production and realization processes through time. Within this perspective, two things become obvious. First, given two periods, t_1-t_2 and t_2-t_3 , the means of production

Table 1. The Computation of the Prices of Production

| Sector | Value produced | Value realized |
|--------|--------------------------|----------------|
| 1 | $80c + 20v + 20s = 120V$ | 130V |
| 2 | $60c + 40v + 40s = 140V$ | 130V |

entering, at t_2 , the t_2-t_3 period as inputs are *the same* commodities which have exited another production process in the previous period, t_1-t_2 . Marx could not be clearer: ‘We had originally assumed that the cost price of a commodity equalled the value of the commodities consumed in its production. *But for the buyer the price of production of a specific commodity is its cost-price*’ (Marx, 1894, p. 164; emphasis added) . . . Second, in the sector producing means of production, the inputs entering the t_2-t_3 period as means of production are *not the same* means of production exiting the same period, at t_3 , as outputs. The former serve to produce, but are not, the latter (even if the latter can be an exact replica of the former). Thus, there is no reason to assume that they have the same price. And even if they had the same price, they would not be the same commodity. . . . To sum up, the price of the means of production is their transformed value as outputs of the previous period and it is also their not transformed value as inputs of the present period. This is the temporal approach. (Carchedi, 2002, pp. 169–170)

Consider Sector 1 in Table 1 (the same holds for Sector 2). During t_1-t_2 , Sector 1 produces a commodity, a , with a value of 120. It sells this commodity at t_2 for 130, the transformed, because quantitatively modified, value. This is thus the price, the value *the seller* receives for a . At the same point in time, t_2 , the buyer of a pays the same price (value), i.e. 130, in order to start t_2-t_3 . For *the buyer*, this is the cost of a as input of t_2-t_3 , the not-yet-transformed value, the value contained in a . The value of this input will realize itself only at t_3 , when the output, b , of which a is an input, will be sold. That is, the question is whether the buyer, who starts t_2-t_3 , will realize at t_3 more than, less than, or the same value as the value paid for that input, 130, the value contained in that input. That value of 130 is only *potentially* the value realizable by the buyer of a at t_3 , when b will be sold.

Screpanti regards this as little more than a trick: ‘What Carchedi has actually done is very simple: he has transformed the *definition* of prices’. In our critic’s elegant formulation, ‘the same stuff’ cannot be at the same time ‘two different stuffs’, meaning that the same price cannot be at the same time both a transformed, i.e. socially realized, value and a non-transformed, i.e. socially potential, value. Yet, it is quite obvious that ‘the same stuff’, the price of commodity a paid to the seller by the buyer, can be ‘two different stuffs’ at the same point in time (t_2): the value *actually* realized *by the seller* at t_2 (‘one stuff’, the price of production, the realized value) and the value paid by the buyer (value contained) *potentially* realizable by the buyer and to be realized *by the buyer only* at t_3 (a ‘different stuff’). *What is realized by somebody at one point in time is only realizable by someone else at a different point in time.*

Consider a couple of instances exemplifying the reasons why the value paid by the buyer for a at t_2 (as the starting point of t_2-t_3) is only a potential value. At t_3 , the value of a (130, the value it had at t_2 on the basis of the production price of t_1-t_2) might not realize itself at all (b might not be sold or might be destroyed) or it might realize itself only partly. This would be the case if there is a change in the average technique for the production of b so that that technique might require less of a . If b is sold after this change has taken place, the value of a will be only partly realized (on the assumption that all units of a realize the same price). Marx captured this aspect of reality when he argued that the social

value of a commodity 'is to such an extent relative that when the labour-time required for its *reproduction* changes, its value changes although the labour-time really contained in the commodity has remained unaltered' (Marx, 1972, p. 129; emphasis added). For example,

The introduction of power looms in England probably reduced by one-half the labour required to weave a given quantity of yarn into cloth. The hand-loom weavers, as a matter of fact, continued to require the same time as before; but for all that, the product of one hour of their labour represented after the change only half an hour's social labour, and consequently fell to one-half its former value. (Marx, 1867, p. 39)

Hence the producer who has bought an input whose reproduction value has fallen before the product is sold, loses value to the other producers who use a cheaper input when they sell their outputs. On the basis of these quite obvious observations, deriving from the other quite obvious observation that production occurs over a succession of periods, it can be easily concluded that there is absolutely no inconsistency in Marx's transformation: everything works smoothly and conforms to reality.

Yet, determined as he is to find a logical inconsistency in Marx, Screpanti insists that I have changed *the* definition of prices. But what Screpanti calls *the* definition is nothing more than *his own* (simultaneist) definition of prices, rather than Marx's notion of prices. I might be excused for retaining Marx's definition, for, as Andrew Kliman (2002) has persuasively argued, there is good reason to do so. Kliman adopts Stigler's principle of scientific exegesis, according to which the test of an interpretation's validity 'is whether it can deduce the author's theoretical conclusions from her definitions and premises'. It follows that 'if the main conclusions of a man's thought do not survive under one interpretation, and do under another, the latter interpretation must be preferred' (Stigler, 1965, p. 448, quoted in Kliman). If we accept this principle (and if Screpanti does not, then he should say why), it is the TSSI that deserves to be considered as the correct interpretation of Marx's value theory, because it can replicate all of the results of that theory without any internal inconsistencies or contradictions.

Marx's method of inquiry oozes with time and makes sense only if time is a basic coordinate of research, just as it is a basic element of reality. Of course, one is free to play with 'Marxist' models in which time is absent, i.e. with simultaneism, but then (1) one should acknowledge that other plausible readings are available; and (2) one should stop insisting that Marx's procedure is marred by a logical mistake, i.e. circular reasoning, and that those who *show* that this is not the case are obscurantist believers. Marx is not guilty of a logical mistake. It is his critics who have surreptitiously smuggled into Marx's body of theory a simultaneist view which is antithetical to his dialectical, dynamic, and temporalist view. I might add that even if Marx had held a simultaneist view in transforming values into prices, the simple introduction of time in the transformation procedure would be sufficient to put things right.²

²Screpanti charges me with resorting to out-of-context quotations to support temporalism, although he does not produce any quotation to support his own view. More to the point, aside from the fact that Marx's text supports the temporal approach, the case for the TSSI rests on the fact that it can replicate Marx's results while Screpanti's and other interpretations fail to do so.

As far as Screpanti is concerned, ‘the transformation problem does not arise just because there are no labour value to transform . . . what really counts is to determine *relative* prices’. In other words, commodities are supposed to be use values endowed with relative prices and with ‘no labour value’. One would expect, then, that our critic would respond to my (and the TSSI’s) critique of physicalism and its associated price theory. But, on this point, Screpanti’s silence is deafening.

2. Whose Accounts Do Not Square?

Thus far, Screpanti’s critique has focused on my method of inquiry (temporalism and dialectics). Next, he proposes to show that my approach is algebraically wrong, that its ‘accounts do not square’. He argues that when input and output prices are unequal, as in Marx’s original transformation procedure and in the TSSI, supplies and demands (allegedly) do not match, leading to a spurious breakdown of the economy. Since algebra does not rest on initial assumptions, and since, as far as method is concerned, $A = A$ not only for the capitalists and the labourers but also for both Screpanti and me, this proof or ‘counter-example’ constitutes the definitive confirmation of my mistakes and ‘nothingness’.

To demonstrate Marx’s inconsistency our critic imposes the condition that ‘income distribution and techniques do not change. If there are to be no realization problems and the profit rates have to be uniform, the economy must be studied in the conditions in which Marx put it with the reproduction schemes. This implies that inputs and outputs are determined simultaneously, as Sraffa and the new interpreters do.’ Here, Screpanti confuses two separate issues. First, he imposes the condition that profit rates are equalized and that at the same time income distribution does not change (let us disregard technical change). Second, he imposes the further condition that the transformation be carried out under simple or expanded reproduction. Since, supposedly, neither of the two challenges can be met by me, temporalism fails and simultaneism wins. But is it really so?

2.1. Marx’s Scheme Does Balance

Let us consider the first condition, the equalization of the profit rates with unchanged distribution of value. What immediately strikes the reader is Screpanti’s remarkable confusion on this matter. Within a temporal approach, to ask for the computation of the production prices (i.e. of the average rate of profit) by imposing, as Screpanti does, the condition that the distribution of value remains unchanged is to ask for a trick that even Houdini could not have accomplished. One cannot change distribution (the heart of the formation of the production prices) by keeping distribution unchanged.

What Screpanti appears to have in mind is the classic critique by Bortkiewicz, i.e. that in Marx’s transformation procedure demand cannot equal supply if inputs are valued at one price (values) while outputs are valued at a different price

Table 2. Period t_1-t_2

| Sector | Inputs' physical composition at t_1 | Value produced during t_1-t_2 | Value realized at t_2 | Output |
|-------------|---------------------------------------|----------------------------------|-------------------------|--------|
| 1 <i>MP</i> | $60MP + 40MC$ | $60c_1 + 40v_1 + 40s_1 = 140V_1$ | 130V | 140MP |
| 2 <i>MC</i> | $80MP + 20MC$ | $80c_2 + 20v_2 + 20s_2 = 120V_2$ | 130V | 120MC |

(production price). To refute this critique consider Table 2, which is an extension of Table 1, the object of Screpanti's challenge.³

In this table, the numbers 1 and 2 indicate the two sectors, c indicates constant capital, v indicates variable capital, s is surplus value, *MP* indicates means of production, and *MC* indicates means of consumption. Thus, for example, Sector 1 starts with $60MP$, whose value is $60c_1$, and $40MC$ (wages), whose value is $40v_1$, and produces $140MP$ whose value is, given a rate of exploitation of 100%, $140V_1$. A further assumption is that each hour of labour produces one unit of value as measured in money terms.

If we assume the equalization of the two profit rates into an average rate of profit (ARP), both sectors must realize 130V and the two unit production prices must be

$$\text{Sector 1(MP): } \frac{130}{140} = 0.9286$$

$$\text{Sector 2(MC): } \frac{130}{120} = 1.0833$$

Now consider t_2 . At t_2 , $140MP$ are sold as outputs of t_1-t_2 . If production resumes on the same scale, $80MP$ are bought by sector 2 and $60MP$ are bought by sector 1. They are sold at the unit production price of 0.9286 and bought at the same price. Similarly, at t_2 , $40MC$ plus $20MC$ are sold at the unit production price and bought at the same price, i.e. 1.0833. They become the inputs of t_2-t_3 . The values invested in the *MP* and *MC* needed to start a new cycle at t_2 are

$$\text{Sector 1: } (60 \times 0.9286 = 55.714) + (40 \times 1.0833 = 43.333) = 99.05$$

$$\text{Sector 2: } (80 \times 0.9286 = 74.286) + (20 \times 1.0833 = 21.667) = 95.95$$

Up to now, all the $140MP$ and $60MC$ (out of $120MC$) have been bought as inputs by the capitalists. Given that both sectors have realized 130V, the revenue that the capitalists have to purchase the remaining $60MC$, is

$$\text{Sector 1: } 130 - 99.05 = 30.95V$$

$$\text{Sector 2: } 130 - 95.95 = 34.05V$$

³What follows draws upon Andrew Kliman's & Ted McGlone's refutation of Bortkiewicz' alleged proof of Marx's inconsistency (Kliman & McGlone, 1988, 1999). The issue Screpanti is 'explaining to the people' resuscitates a charge that was disproved more than 15 years ago, and several times since.

With this $34.05 + 30.95 = 65V$, the capitalists of the two sectors can purchase $65 / 1.0833 = 60MC$. Thus, $140MP$ are supplied and demanded at their production price and the same holds for $120MC$. All supplies and demands are equal, even though input and output prices differ. Bortkiewicz and Screpanti are proved wrong.

2.2. Screpanti's Counter-example Does not Balance

But matters are actually worse for Screpanti. Since simple reproduction is reproduction of the economy on the same scale, the supply (output) of both the MP and the MC at the end of t_1-t_2 must be the same as the demand for both categories of goods as inputs of t_2-t_3 . Demand and supply must be in equilibrium. This holds both in physical terms and in value terms. Consider the physical terms, i.e. commodities as use values. In Table 2 above, the economy uses $60MP$ in sector 1 and $80MP$ in sector 2. This is the demand side. The supply side is given by sector 1 which produces $140MP$. Thus, $D = S$. The same holds for the means of consumption, whose supply is $120MC$ and whose demand is also $120MC$ ($60MC$ demanded by the capitalists and $60MC$ by the workers).

Consider now Screpanti's Table 2, the much touted 'counterexample', the application of 'a method often used to falsify a theory which pretends to be general'. Besides commodity B , the means of production, he introduces commodity A which 'can be used both as a means of production and as a consumer good' (his reason for introducing this new category will become clear shortly). His sector 2 supplies $140B$ (means of production). But the demand for those means of production is only $(60B + 40B) = 100B$. Thus, $D \neq S$. Consider next sector 1. The demand for A for t_2-t_3 is $20A + 20A = 40A$ as means of production plus (since both wages and profits can only be spent on means of consumption) $20L + 40L + 20P + 40P = 120A$ as means of consumption (where L and P are means of consumption consumed by the workers and the capitalists respectively). Thus, total demand for A is $120A$ as means of consumption plus $40A$ as means of production, i.e. $160A$. But the supply of A is $120A$. Thus $D \neq S$ in sector 1 too. However, if $140B$ are supplied and only $100B$ are demanded and if $160A$ are demanded and only $120A$ are supplied, *no simple reproduction* is possible in physical terms. It follows that *Screpanti's counter-example is invalid*.

But this is not all. Being blissfully unaware that his demand and supply do not match in physical terms, Screpanti proceeds to compute the demand side in price terms. In Screpanti's words, 'Assume that, to produce 120 units of A , it is necessary to use $60B$ units of B and $20A$ units of A as means of production; and that, to produce 140 units of B , it is necessary to use $40B$ units of B and $20A$ units of A '. That is, $20A + 20A = 40A$ units of A are *means of production*. Having set out the physical composition of the inputs, Screpanti computes the demand for A in price terms as follows

$$DA = 1.0833[(20A + 20A)] + (20 + 40)L + (60)P = 163.3$$

But now $20A + 20A$ have become means of consumption. In fact, Screpanti multiplies $20A + 20A$ by 1.0833, which is the production price of the means of

consumption. Screpanti thus *first considers* $20A + 20A$ to be means of production, then assigns to them the (production) price of the means of consumption, and finds . . . that demand and supply are not in equilibrium in price terms! We now understand why Screpanti introduces the category of good A. The reason is simply to be able to consider $40A$ as means of production while attributing to them the price of the means of consumption in order to confute my argument. It is on the basis of this elementary mistake, and on the basis of a reproduction scheme that does not reproduce, that Screpanti's 'counter-example' rests and that I am 'proved' wrong!⁴

2.3. Marx's Production Prices are also Reproduction Prices

Finally, Screpanti challenges me to show that the formation of the production prices is consistent with Marx's conditions of simple reproduction. Consider Marx's requirement for simple reproduction: $c_2 = v_1 + s_1$, where c_2 indicates the (value of the) means of consumption to be exchanged for means of production and $v_1 + s_1$ indicates the (value of the) means of production which must be sold for means of consumption. In terms of Table 2 above, $80c_2$ must be exchanged for $40v_1 + 40s_1$, i.e. a value of 80 incorporated in some means of consumption must be exchanged for a value of 80 incorporated in some means of production. But this balancing condition follows from the assumption that commodities exchange at values. Here, however, we are considering exchange at production prices. Do I have a problem, as Screpanti seems to think? Is simple reproduction incompatible with the formation of the ARP? Not at all.

Inasmuch as the capitalists' freedom to search after higher profits is not hampered, this search will ensure (especially through capital movements and price competition) that tendentially all capitalists will realize the ARP, whether they sell their products within their sector or not. For example, the producers of *MP* selling within sector 1 and realizing lower profits rates will start selling to producers in sector 2 or move to sector 2, if the rates of profit there are higher. This creates the conditions for the tendential equalization of the profit rates for the whole of the economy. The condition $c_2 = v_1 + s_1$, then, reflects the use values that will have to be exchanged in order for simple reproduction to be possible, but these commodities will be exchanged on the basis of the ARP com-

⁴Screpanti's mistake can be corrected. If $40A$ are *MP*, they should be called what they are, $40B$. If these $40B$ are divided equally between the two sectors, we have the following table.

Table 3. Screpanti's Revised Example

| Sector | Good | Output | Destination of the output | Production prices |
|--------|---------------|---------|-----------------------------|--------------------|
| 1 | <i>A (MC)</i> | $120MC$ | $(60B + 20B)MP + 20L + 20P$ | $130/120 = 1.0833$ |
| 2 | <i>B (MP)</i> | $140MP$ | $(40B + 20B)MP + 40L + 40P$ | $130/140 = 0.9286$ |

The reader can easily check that demand and supply now match in both sectors in physical terms. As for the demand for A in price terms, it is not 163.3 but $160 \times 1.0833 = 173.3$. If $40A$ (actually $40B$) times $1.0833 = 43.3$ is subtracted from 173.3, we get 130 Q.E.D.

puted for the whole of the economy. This follows from Section 2.1 above which has shown that production prices are also reproduction prices. This is why, in discussing simple reproduction, Marx remarks that, if ‘prices diverge from values . . . there is the *same exchange of the same quantities of products*, although the individual capitalists are involved in *value relations no longer proportional to their respective advances* and to the quantities of surplus-value produced singly by everyone of them’ (Marx, 1885, p. 397; emphasis added).

While, contrary to Screpanti’s claim, Marx’s algebra is correct, we have seen that Screpanti’s own ‘refutation’ of Marx balances neither in physical nor in algebraic terms. It is with this impressive armoury of weapons of mass self-destruction that our critic purports to falsify Marx.

3. Some other Worn-out Critiques

Having performed poorly in methodological and algebraic terms, Screpanti tries his hand as a critic of abstract labour.

Following Marx, I discuss labour first as concrete, i.e. specific, labour, and then as abstract labour. I note that labour is simply ‘an expenditure of human brains, nerves, and muscles’ (Marx, 1867, p. 44), and then add: ‘*For example*, they all consume calories irrespective of the specific activity [in which they engage]’ (Carchedi, 2002, p. 158; emphasis added). Thus, abstract labour *is not* the consumption of calories; it is the expenditure of human energy in the abstract which *can be exemplified* by the consumption of calories. Or, this consumption could be used as one possible measure of the expenditure of abstract labour, given a proper system of data gathering and analysis. Just as a yardstick is not length, the consumption of calories is not value. Thus, contrary to textual evidence, Screpanti attributes to me views which I have never expressed. But let us disregard this ‘oversight’ and proceed.

Second, ‘Animals too exert abstract labour’ observes Screpanti. Don’t they produce value, then? Anticipating my answer, he acknowledges that I ‘could rebut by observing that Marx only talks of *human* brains and muscles’. The question, then, would seem to be settled. Yet, further on Screpanti claims that I arbitrarily exclude ‘abstract animals or machines’ from the production of value. What has happened to my rebuttal? Why is it invalid? He does not say. Actually, he *cannot* adduce any counter-arguments because, if one starts from a *definition* of something (value as human labour), the exclusion of something else (value as animal labour) on the basis of that definition is anything but arbitrary; it is a logical consequence. But never mind, let us proceed.

The ‘arbitrariness’ of excluding animals or machines or peanuts from the category of the creators of value, far from being a new critique, is an old acquaintance. The point is that all theories (including Screpanti’s) must start from some initial assumptions which need not be proved and whose validity can be assessed only *a posteriori*, on the basis of such criteria as the logical consistency of the theory built upon it, its practical usefulness, etc. This holds also for Marx’s definition of value as abstract human labour under capitalist production relations. According to this definition, animals’ labour, mineral resources, peanuts, etc are not value inasmuch as they are not appropriated by humans under capitalism.

Whatever precious minerals a distant planet might hold, they are not value yet; whatever crops might be harvested, they are not value if they are not the result of the work performed by agricultural labourers under the employ of capitalists.

In this connection, Marx's distinction between value and wealth is fundamental. The labour of horses is relevant for the creation of value only if those horses labour for capitalists through human labour, i.e. only if the productivity of human labour is enhanced through the appropriation of those forces of nature. For Marx, horses, machines, etc do not produce value but they increase labour's *productivity*, i.e. the quantity of use values (output) per unit of capital invested. Actually, inasmuch as they replace people, they *decrease* the value produced while *increasing* the quantity of use values produced. This, the production of an increasing quantity of use values embodying a decreasing quantity of value, is the basic contradiction pointed out by Marx, the core of his reconstructed theory of crises. One can agree with this definition of value or not. But one can also defend it, as I have done, by establishing the inadequacy of other candidates for the role of creators of value.

There are two such candidates. As I wrote:

The first is a category, any of the physical properties of commodities or any one of their components. For example, iron inasmuch as it is a component (directly or indirectly) of all other commodities. Then a commodity would be more valuable the more iron it contains (directly or indirectly). This is not only impracticable, in that one would have to go back from commodity to commodity (there are millions of them, not to mention the commodities produced abroad) to determine the quantity of iron present in a commodity. It is also wrong on several grounds. The most fundamental one is that the different quantities of iron embodied in the different commodities are what make those commodities different and thus not comparable and thus qualitatively unequal and thus not exchangeable. A car contains more iron than a shoe. But this makes a car a car and a shoe a shoe, rather than making a car and a shoe homogeneous and exchangeable in different quantities (so that a car is more valuable than a shoe). These different iron quantities can make commodities exchangeable only if iron itself contains something that is not iron, i.e. that negates its being iron as a use value, and which therefore, rather than being the differentiating factor among commodities, is their homogenizing factor. Only in this case can iron quantities determine exchange ratios. Abstract labour is a homogeneous substance common to all commodities, something that makes different commodities homogeneous and thus exchangeable (in different proportions). (Carchedi, 2002, pp. 163–164)

To this Screpanti objects that iron itself can be reduced to its 'chemical element Fe'. But, in this case, it is the different proportions of Fe that determine the different physical qualities of the commodities. In short, the problem re-emerges and persists as long as one keeps shifting from one concrete, physical component (iron) to another (Fe). Abstract labour, on the other hand, has by definition no concrete features left.

I continue:

The second candidate is also a category, machines. But, if machines produced value, the more the machines used the greater the value produced. At the

limit, a fully automated economy would be the most productive of value. But this is incompatible with the capitalist economy, which is based on the existence of the owners of machines (means of production) and the labourers, the sellers of labour power to the owners of machines. Given that value is also money's purchasing power, if the labourers were to disappear, so would value and the labourers' purchasing power: to whom could the owners of the means of production sell their products? They could sell them to each other. But then we would not have labourers and thus exploitation anymore; we would not have a capitalist society. It follows that the more the machines used, i.e. the less the labourers employed, the less and not the more the value produced. (Carchedi, 2002, p. 164)

Screpanti's objection, that 'capitalists could sell commodities to each other and *value would not disappear*', simply assumes a capitalist system without labourers, a weird notion, to say the least, which in any case has nothing to do with Marx's or my notion of capitalism or with the socio-economic system being analyzed. It follows that, indeed, 'there remains only labour' (Carchedi, 2002, p. 164).

The notion that the 'capitalists could sell commodities to each other and *value would not disappear*' reveals a conception of capitalism as producing commodities as exclusively *use values*. Even Screpanti would find it difficult to deny that use values are created by somebody. Yet, for him, the 'axiom' that 'value is created by somebody' is 'unbelievable; as the idea that the universe is created by somebody'. Why should a 'creationist' attitude concerning the production of use values be acceptable and the same attitude concerning the creation of value be an unbelievable axiom? In any case, the point is that, as the above discussion shows, there are no logical reasons to reject the assumption that labour is created and that it is created by human abstract labour under capitalist production relations, notwithstanding Screpanti's protestations.

4. A Way Out . . . for Whom?

Throughout most of his paper, Screpanti repeats some well-known critiques, without considering the counter-critiques which have been given in the course of many debates. But towards the end of the paper, in the very short penultimate section entitled 'A Way Out', the reader is suddenly shaken out of a feeling of *déjà vu*. This section begins uneventfully with a repetition of the injunction that we should take a simultaneist view when theorizing a static situation, i.e. 'when income distribution and techniques do not change'. However, the tune changes when dealing with a dynamic situation 'in which techniques and distribution change during the production period'. In this case, Screpanti makes a startling assertion (for a simultaneist): 'output prices of the t_0-t_1 period are equal to input prices of the t_1-t_2 period. Since technique and the income distribution change during the t_1-t_2 period, output prices in t_2 will be different from output prices in t_1 '. This sounds pretty much the same as my (and the TSSI's) temporalism, doesn't it? But let us see what the consequences are for Screpanti.

To begin with, as far as the method of inquiry is concerned, one can start from a very simplified depiction of reality in order to proceed to more and more

complex and realistic depictions, but on the condition that each further step should be based on the retention of the basic, fundamental assumptions upon which the previous stage of research rested, rather than on their rejection. If, at a later stage of the analysis, one rejects those initial assumptions, then one rejects the previous analysis (the more simplified one) and thus creates a disjuncture rather than a bridge between the different stages of the analysis. In Screpanti's case, if he starts from a static analysis based on simultaneism, he should proceed to a dynamic analysis also based on simultaneism. Since he does not, and indeed cannot, do this, his analysis of a static situation is severed from, and becomes useless for, further analyses of dynamic situations. In other words, a timeless dimension cannot be the starting point of an analysis of reality because it denies reality (time) rather than distilling its most pregnant aspects and using them as the starting point of the inquiry. Even if simultaneism would hold, it would hold only for a situation which has nothing to do with reality, a timeless reality.

Thus, given that simultaneism is the antithesis of temporalism, rather than the initial condition for a temporal approach, and given that reality is temporal, simultaneism is reduced to theoretical insignificance and it is temporalism which should be accepted as the relevant framework and developed. Time should be present from the very beginning of the analysis. Screpanti's diatribe is an attempt to vindicate a method of inquiry which is unsuited to understanding what really matters, a dynamic – because temporal – situation, i.e. reality.

However, even if one wanted to ignore this critique, the admission that simultaneism does not hold in a dynamic situation amounts precisely to the admission that the circularity critique, which is based on a simultaneist view, does not hold under dynamic conditions. *This much has been conceded by Screpanti, that the circularity critique does not hold when time is introduced in the analysis*, and this is what the TSSI has been arguing all along. Second thoughts are best. However, true to the end to his penchant for fudging the issues, Screpanti considers taking time on board as 'a way out' for temporalism whereas in reality it is Screpanti's own escape from simultaneism. It is a way to escape conceding the errors of simultaneism, by saying that simultaneism would not be in error in (a non-existent) static equilibrium. Thanks to his theorization, simultaneism's walls have begun to crumble and they are taking the simultaneist critique of the TSSI (and of Marx) down with them. For all its clamour, Screpanti's paper is in the end an admission that the temporalist view is the correct approach if one wishes to understand actual reality (dynamics) rather than virtual reality (statics).

5. Conclusions: a Short Reflection on a Modern Crusader

When the dust raised by Screpanti's wild ride through the TSSI settles down, the nature of his mission becomes clear. His simultaneist logic reveals his failure to understand the dynamics of Marx's transformation procedure, his faulty 'counter-example' reveals the emptiness of his critique of the TSSI, and his muteness on my and other TSSI authors' critique of simultaneism and physicalism reveals the weaknesses and vulnerability of his own position. Such are the achievements of our self-appointed defender of 'the people' against Marx's (and the TSSI's and my) alleged obscurantism.

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