

# Comments on Moseley's 'Money and Totality'

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## 1 Overview

Indeed, 'Money and Totality' proves 'Transformation Problem' is a non-problem by clarifying key points like:

- One system – two abstraction levels
- *Capital* is monetary already from Vol. 1 onwards
- Dominance of money capital circuit
- Sequential instead of simultaneous determination
- Marx's three equalities hold

However, instead of digging into this, I'd like to focus my comments on following points

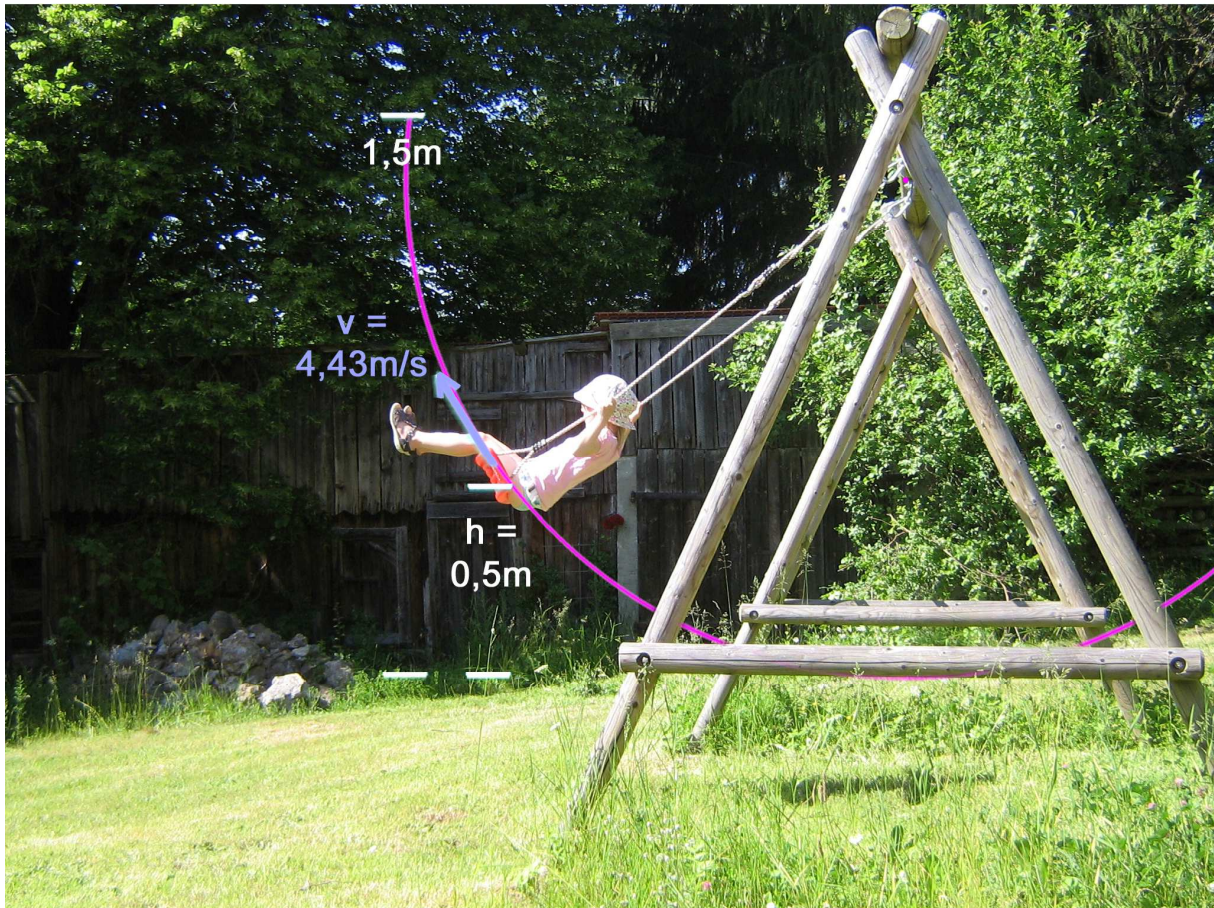
- long-run equilibrium assumption and consideration
- additions to simultaneous determination:
  - cutting off causality and explanation
  - adding bourgeois ideology
  - TSSI and Kliman's problem

Before going into more details, I'd like to talk about some characteristics of dynamic system analysis in general.

## 2 Some characteristics of dynamic system analysis

For this discussion it's only relevant to consider fixed period systems as this is what Marx assumes in *Capital* Vol. 3 Chapter 9.

E.g. a system like:



A question that immediately arises is, will grand daughter manage to keep the swinging height stationary or will it decrease so that grand pa has to stand up and push the swing again?

Note the usage of the term ‘stationary’ rather ‘constant’, as we have a dynamic system where the height is continuously changing and just not constant. What shall be expressed with the term ‘stationary’ is instead that the system setup or system parameters remain the same for every period<sup>1</sup>.

Whether a system is in a *stationary state* or not is a major system characteristic. Even for systems where the probability of reaching stationary state is close to 0, often stationary state models are applied, as here systems can be studied in their generic purity. This leads to the paradox of system analysis that what is generic and fundamental appears in real world only as a special case.

Looking at the picture, it cannot be seen whether the system is in stationary state or not. This is, because the picture is only a *snapshot*. It happens at a certain moment in time but in itself has no time notion. In stationary state and when snapshots are synchronously repeated for every period height  $h$  and velocity  $v$  have same fixed value in every such period. They are

<sup>1</sup> the difference between ‘stationary’ and ‘constant’ was not reflected when translating simple reproduction chapter of *Capital*. Cf. „Quantitativ dagegen können die Umsetzungen der verschiedenen Teile des Jahresprodukts nur so proportional stattfinden wie oben dargestellt, soweit Stufenleiter und Wertverhältnisse der Produktion **stationär** bleiben und...“ [MEW 24, S.407]

“ Quantitatively, however, the exchange between the various parts of the annual product only takes place in the proportionate way depicted above to the extent that the scale of production and the value ratios involved in it remain **constant**, and...” [Marx 1992, p.484] – my emphasis

interlinked by a stationary state relation SSR(h,v):  $A \cdot h + v^2 = C$ , with in our case  $A=19,62$  and  $C=29,43$ . As can be seen, time is not a parameter in this relation. SSRs are *simultaneous*.

This SSR means that when  $v$  is changed,  $h$  has to change too, as  $h = f(v) = (C - v^2)/A$ . So pure mathematically speaking,  $v$  determines  $h$ . From a *relation*, also the inverse function can be derived. In this way,  $h$  determines  $v$ .

But both are *not a causal* determination. It's not the height  $h$  that causes the swing of having velocity  $v$ . It's the energy entering, staying and leaving the swing, essentially grand pa's working power when pushing it that *causally* determines *both*  $h$  and  $v$ . For finding this, however, one has to look *outside* the simultaneous SSR and consider the *process* of swinging alongside a *succession* of periods.

And the succession can be a stationary or non-stationary one.

Let's take simple reproduction as another example. A SSR here is  $I_{(v+s)} = II_C$ . This relation is the *condition* for simple reproduction taking place. Though one can write capital value  $I_{(v+s)} = f(II_C)$  or capital value  $II_C = g(I_{(v+s)})$ , it's obvious that  $II_C$  does not cause  $I_{(v+s)}$  or vice versa.

### 3 Long-run equilibrium assumption and consideration

In 'Money and Totality' the reasoning takes place under the assumption of the economy being in long-run equilibrium.

Bortkiewicz's dual system model, the basis of the 'Transformation Problem' where Marx's 3 equalities do not hold, is also an equilibrium model. And it crucially depends on it, as otherwise there would not be enough constraints to get 3 equalities into contradiction.

Therefore, as a consequence, *for rejection of 'Transformation Problem' it is logically completely sufficient to only consider equilibrium condition.*

However, for best promoting the "end of 'the transformation problem' ", is it the best approach to limit oneself to this special state of a capitalist economy?

The model context where Marx was setting up his 3 equalities was not restricted to equilibrium condition. His model context was not this special condition, but a more general one. Therefore, wouldn't it be better to assert the 3 equalities not only in special equilibrium but also the general case? <sup>2</sup>

It was Bortkiewicz, who, by slightly modifying Marx's numerical example preceding his 3 equalities argumentation, *squeezed* him into an equilibrium context<sup>3</sup>. And Bortkiewicz knew, what he did:

"Modern economics is beginning to free itself gradually from the successivist prejudice, the chief merit being due to the mathematical school led by Léon Walras. The mathematical, in particular the algebraic method of exposition clearly appears to be the satisfactory expression for this superior standpoint, which does justice to the special character of economic relations." (Bortkiewicz 1952, p. 35)

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<sup>2</sup> [Panzer 2017, ch. 1] contains an assertion for the general case

<sup>3</sup> For more details see [ch. 2.1]

Walras superior standpoint is his famous 'General Equilibrium Theory'.

I would prefer to find in 'Money and Totality' a demarcation from all of this, probably even in the wording – that's why I prefer 'stationary' rather than 'equilibrium'.

#### 4 Additions to simultaneous determination

In 'Money and Totality' it is rightly pointed out how important it is to apply sequential rather than simultaneous determination. In this context, however, I believe some aspects deserve being added.

##### 4.1 Cutting off causality and explanation

From swing example we know why sequential determination is so important: it's only here where the dynamic *process* is under consideration and causality, or, in other words, explanations can be found. Simultaneous determination is a derivative from SSR (stationary state relation) that plays in the domain of a mere *image* of the system, a pure mathematical determination that *excludes* causality.

Sequential determination may well be used to consider a stationary state system, as it is done in 'Money and Totality'. Of course, stationary state does not exclude causality. But, in mathematical terms, it may formally much look like its SSR. What makes the difference, however, is the *meaning* or the *semantics* that come along with it. Consider Marx's scheme of simple reproduction. If you look at its formal pattern only, there is also no information about time and exploitation of labour power. It's coming through the textual reference Marx is making, when discussing it.

Now, let's go back to the quote of Bortkiewicz above: his trick is to put succession and (simultaneous) algebra into *opposition*. This way he can get rid of the causality of surplus value generation and profit. And this he does *on purpose*, as he charges Marx of constructing "a model in which profit exists, without any norm other than law of value" ... "by making value-calculation precede price-calculation" [ .p 81].

##### 4.2 Adding bourgeois ideology

Sraffa has created a non real imagination of the capitalist economy in the form of an equation system. It's a snapshot of an assumed stationary economy, a SSR. The difference related to the examples above is that relation parameters are now not scalars only but *vectors* and *matrices*:

$$\text{SSR}(\{p, r\}, \{A, bL\}) : p = (pA + pbL) (1 + r)$$

There are 2 types of parameters in this relation: price-vector  $p$  and profit rate  $r$  are monetary,  $A$ ,  $b$  and  $L$  are physical quantities.  $A = \{ a_{ij} \}$  is a matrix layout of quantities of product  $j$  required to produce one unit of product  $i$ ,  $L$  is the respective working time and  $b$  is a vector of quantities of means of subsidiary to reproduce labour power for one working hour.

Sraffa intends to use the relation to determine something. For doing so, some parameters have to be taken as given. A *scientific* approach would be to check them in turn and argue what are

best candidates. But this is not Sraffa's approach. For him it is upfront clear that it is the *physical* quantities that are the givens. But is there something wrong with that?

In the real economy it is not so that upfront the layout of physical quantities is fixed and then economic activity is started. In contrary. Economic activity takes place, namely driven by the *purpose of profit maximization*. The consequence is that certain products (those with solvent demand) are produced, others – may be socially and ecologically much more important ones – not. Also the preliminary products are not simply pre-determined, but among the many alternatives those with highest profit promise are selected. The whole layout/tableau of physical quantities is in reality only a snapshot, i.e. *the result of a logically preceded value and especially surplus value production process*. The information of workers' exploitation (including its quantitative side) is codified, i.e. encrypted into the tableaux.

A scientific error in combination with his upfront interest lets Sraffa chose the determination of monetary figures, namely profit, by physical quantities. Interest driven scientific errors are the way ideology is created.

Instead of looking outside of SSR's mere result world, he declares SSR's pure mathematical determination as being of a causal and semantic nature.

So, Sraffa completes Bortkiewicz's cutting off of explanation by adding a new ideological one. Sraffa is not an alternative scientific approach related to Moseley's interpretation. While the latter is scientific, the first is mere ideology, just the opposition to science.

Content wise, what Sraffa does is nothing else but the superficial affirmation/apology of existing capitalist economy and social exploitation conditions.

One word related Samuelson and Steedman: clear, once true explanation is rubbed out and replaced by some wrong ideological pseudo explanation, one can easily declare the first one as being redundant or superfluous.

#### **4.3 TSSI and Kliman's problem<sup>4</sup>**

Also here I'd like to add some points that I have not found in 'Money and Totality'.

Kliman does not correctly understand the difference between stationary state and stationary state relation (SSR). As he is (rightly) promoting succession, he is fighting Bortkiewicz's simultaneist SSR scheme. But as he (wrongly) confuses this with a stationary state consideration of the system, i.e. a system where for a given period input prices = output prices, he also fights this.

On the other side, he knows that for refuting Bortkiewicz, he has to do it just for simple reproduction, i.e. the stationary case.

The question is why this does not bring Kliman into a contradiction?

Kliman has a poor understanding about what simple reproduction schemes are about. For him, it's equality of the supply and demand, and with this he means the physical quantities only.

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<sup>4</sup> for references and more material see [Panzer 2017, Addendum A] ]

Owing to this erroneous understanding, he has the opinion of having solved stationary case issue by setting up a scheme where physical quantities are stationary, but monetary figures (prices) are not.

So, he makes two errors that combine in such a way that he believes of having refuted Bortkiewicz, but in reality he has not.

Tragic consequence is that TSSI developers Kliman and McGlone are able to demonstrate that ‘Transformation Problem’ is a non-problem and can show this for all cases except one: the stationary case. Unfortunately, this is the most relevant case, as it is the only one that enabled Bortkiewicz to construct the ‘Transformation Problem’.

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