All Value-Form, No Value-Substance: Comments on Moseley's New Book, Part 3

Andrew Kliman, June 6, 2016

In this Part, I'm returning to a matter that could—in a better world—easily be decided by reasoned debate: Fred Moseley's rate of profit is determined by the same physical quantities—technological and real wage coefficients—that determine all other simultaneist theorists' rate of profit, and in exactly the same manner. I discussed this in Part 1 (Kliman 2016), but I'm returning to it now because Moseley (2016b) has since tried to challenge my argument.

In a longstanding effort to distinguish himself from other simultaneists-physicalists, Moseley describes his interpretation of Marx's value theory as "macro-monetary" and claims that his equilibrium rate of profit is quantitatively different from the equilibrium rate of profit of (other) physicalists (see, e.g., p. 307 of his new book (Moseley 2016a)). Whereas technology and the physical ("real") wage rate are the only proximate determinants of the equilibrium rate of profit of the Sraffians and other physicalists, Moseley contends that, in his interpretation of Marx, the equilibrium rate of profit is instead "determined by the ratio of the actual total annual surplus-value … to the actual total stock of capital invested" (Moseley 2016a, p. 36).

I have shown—in *Reclaiming Marx's "Capital": A Refutation of the Myth of Inconsistency* (Kliman 2007, pp. 172–4)—and shown again—in Part 1 of this set of comments—that this contention is false. Moseley has not found an error in either demonstration. But he refuses to give up.

In his new book, he tacitly conceded that the example in *Reclaiming Marx's "Capital"* showed that his rate of profit is quantitatively identical to that of other simultaneists-physicalists. But *he refrained from admitting this openly.* Instead, he tried to dismiss my demonstration on the grounds that my example was for a one-good economy. And he claimed—incorrectly—that "[the one-good-economy] assumption, *and only this assumption*, makes it possible to cancel the λ's (labour-values) on p. 173 and arrive at Kliman's conclusion" (Moseley 2016a, p. 307, emphasis added).

How do I know that this claim is incorrect? Because I constructed a *two-good-economy* example in Part I of these comments, and used it to show that—once again—the prices cancel out and, consequently, Moseley's rate of profit is physically determined.

In his reply to Part I, he does not repeat the falsehood that it is "only" in the one-good-economy case that his rate of profit is quantitatively identical to that of other simultaneists-physicalists. He tacitly concedes that this claim is false. But *he refrains from admitting this openly.*

- It is time for him to do so.

- He should also publish an erratum to his book that retracts the claim, and assure us that the claim will not appear in any future edition or re-printing of the book.

- He should also admit openly, which he still has not done, that his rate of profit is quantitatively identical to that of other simultaneists-physicalists in the one-good-economy case.

Instead of giving up, Moseley now claims that my two-good-economy example showed his rate of profit to be quantitatively identical to that of other simultaneists-physicalists "*only* because there is *only one capital good* (Sector 1) and *only one wage good* (Sector 2). … [E]quation (1″) cannot be derived from equation (1) if there are more than one capital goods and wage goods [sic]" (Moseley 2016b, p. 2, emphases in original).

Sound familiar?

Imagine that I show that this claim is false, by means of an example in which his rate of profit is quantitatively identical to that of other simultaneists-physicalists although there are three sectors and two "capital goods"? Will he then retract his unsubstantiated and false claims that my demonstrations "only" succeed in this case or that case? Or will he tell us that the latest demonstration succeeds only because there are two "capital goods" but still only one "wage good." And imagine that I produce an example with two "capital goods" *and* two "wage goods." Will this impel him to retract the whole kit and caboodle of unsubstantiated and false claims? Or will he complain about the lack of fixed capital "and" the equality of turnover times in my example, or tell us that the demonstration doesn't count because his fingers were crossed behind his back, or wave a "Get Out Of Jail Free" card in our faces?

Does Marxian economics mean never having to say you're sorry?

I think I know the answer, but let's give Moseley the benefit of the doubt. Here is the three-sector-with-two-"capital goods" example he has demanded. Perhaps this will be enough to stop him from shifting the goalposts yet again?

Sector 1 produces a good used as the means of production in all three sectors. Sector 2 produces a different good, also used as the means of production in all three sectors. Sector 3 produces a good consumed by the workers of all three sectors.

We begin with the following "macro-monetary" "givens":

sector	C_1	C_2	V	S	W	π	P	r
1	20	12	8	12	52	20	60	50%
2	12	16	12	18	58	20	60	50%
3	8	12	20	30	70	20	60	50%
total	40	40	40	60	180	60	180	50%

where C_1 and C_2 are constant capital laid out for means of production produced by Sectors 1 and 2, respectively; V is variable capital (laid out for wages that the workers spend on the consumption good produced by Sector 3; S is surplus value; $W = C_1 + C_2 + V + S$ is the value of the sector's product; π is average profit = total S times the sector's share of total $C_1 + C_2 + V$; $P =$

$C_1 + C_2 + V + \pi$ is the price of production of the sector's product; and $r = \pi / (C_1 + C_2 + V)$ is the equilibrium (i.e., uniform) rate of profit.

Next, imagine that the rate of surplus-value (S/V) falls from 150% to 66.7%, while everything else *apparently* remains unchanged (as we will soon see, all of the physical input-output coefficients actually increase):

sector	C_1	C_2	V	S	W	π	P	r
1	20	12	8	6	46	10	50	25%
2	12	16	12	9	49	10	50	25%
3	8	12	20	15	55	10	50	25%
total	40	40	40	30	150	30	150	25%

Notice that the following relation[1] among the variables holds true in both cases:

$$\left[1-\left(\frac{C_{11}}{P_1}\right)(1+r)\right]\left\{\left[1-\left(\frac{C_{22}}{P_2}\right)(1+r)\right]\left[1-\left(\frac{V_3}{P_3}\right)(1+r)\right]-\left(\frac{C_{23}}{P_3}\right)\left(\frac{V_2}{P_2}\right)(1+r)^2\right\}$$

$$-\left(\frac{C_{12}}{P_2}\right)(1+r)\left\{\left(\frac{C_{21}}{P_1}\right)(1+r)\left[1-\left(\frac{V_3}{P_3}\right)(1+r)\right]+\left(\frac{C_{23}}{P_3}\right)\left(\frac{V_1}{P_1}\right)(1+r)^2\right\} \qquad (1)$$

$$-\left(\frac{C_{13}}{P_3}\right)(1+r)\left\{\left(\frac{C_{21}}{P_1}\right)\left(\frac{V_2}{P_2}\right)(1+r)^2+\left[1-\left(\frac{C_{22}}{P_2}\right)(1+r)\right]\left(\frac{V_1}{P_1}\right)(1+r)\right\}$$

$$= \quad 0$$

since

[1] Moseley (2016b, p. 1) wants to know how the two-sector version of this relation was derived in Part 1. The answer is that I worked backward. I began with the physicalist equation for the determination of the rate of profit, equation (1″). I then translated each input-output coefficient into its "macro-monetary" equivalent—for instance, $a_2 = \dfrac{p_1 a_2 X_2}{p_1 X_2} = \left(\dfrac{p_2}{p_1}\right)\left(\dfrac{p_1 a_2 X_2}{p_2 X_2}\right) = \left(\dfrac{p_2}{p_1}\right)\left(\dfrac{C_2}{P_2}\right)$. Next, I replaced the input-output coefficients in (1″) with the right-hand side "macro-monetary" equivalents, and finally I cancelled out the price ratios. I have used the same methods here.

$$\left[1-\left(\frac{20}{60}\right)(1.5)\right]\left\{\left[1-\left(\frac{16}{60}\right)(1.5)\right]\left[1-\left(\frac{20}{60}\right)(1.5)\right]-\left(\frac{12}{60}\right)\left(\frac{12}{60}\right)(1.5)^2\right\}$$

$$-\left(\frac{12}{60}\right)(1.5)\left\{\left(\frac{12}{60}\right)(1.5)\left[1-\left(\frac{20}{60}\right)(1.5)\right]+\left(\frac{12}{60}\right)\left(\frac{8}{60}\right)(1.5)^2\right\}$$

$$-\left(\frac{8}{60}\right)(1.5)\left\{\left(\frac{12}{60}\right)\left(\frac{12}{60}\right)(1.5)^2+\left[1-\left(\frac{16}{60}\right)(1.5)\right]\left(\frac{8}{60}\right)(1.5)\right\}$$

$$= \quad 0$$

and

$$\left[1-\left(\frac{20}{50}\right)(1.25)\right]\left\{\left[1-\left(\frac{16}{50}\right)(1.25)\right]\left[1-\left(\frac{20}{50}\right)(1.25)\right]-\left(\frac{12}{50}\right)\left(\frac{12}{50}\right)(1.25)^2\right\}$$

$$-\left(\frac{12}{50}\right)(1.25)\left\{\left(\frac{12}{50}\right)(1.25)\left[1-\left(\frac{20}{50}\right)(1.25)\right]+\left(\frac{12}{50}\right)\left(\frac{8}{50}\right)(1.25)^2\right\}$$

$$-\left(\frac{8}{50}\right)(1.25)\left\{\left(\frac{12}{50}\right)\left(\frac{12}{50}\right)(1.25)^2+\left[1-\left(\frac{16}{50}\right)(1.25)\right]\left(\frac{8}{50}\right)(1.25)\right\}$$

$$= \quad 0$$

It also holds true in general.

Now note that, in Moseley's (2016a, p. 324) interpretation, the prices of production, *P,* are "long-run equilibrium prices," and therefore "input prices are equal to output prices." In other words, the per-unit prices of the means of production and workers' consumption goods—which partly determine C_1, C_2, and V—are constrained to equal the per-unit prices of the products—which partly determine *P*. (Although Moseley denies that he is a simultaneist—proponent of simultaneous determination of input and output prices—he does, as we see, explicitly state that, when a uniform rate of profit prevails, input prices must equal output prices. That is exactly what the rest of us mean when we say that input and output prices are "determined simultaneously.")

Because, and only because, the per-unit prices of Moseley's inputs and outputs are constrained to be equal, every fraction in equation (1) can be rewritten either as an input-output coefficient (physical amount of the input required to produce one physical unit of the output) or as the product of a price ratio and an input-output coefficient:

$$\frac{C_{11}}{P_1} = \frac{p_1 a_{11} X_1}{p_1 X_1} = a_{11}$$
$$\frac{C_{12}}{P_2} = \frac{p_1 a_{12} X_2}{p_2 X_2} = \left(\frac{p_1}{p_2}\right) a_{12}$$
$$\frac{C_{13}}{P_3} = \frac{p_1 a_{13} X_3}{p_3 X_3} = \left(\frac{p_1}{p_3}\right) a_{13}$$

$$\frac{C_{21}}{P_1} = \frac{p_2 a_{21} X_1}{p_1 X_1} = \left(\frac{p_2}{p_1}\right) a_{21}$$
$$\frac{C_{22}}{P_2} = \frac{p_2 a_{22} X_2}{p_2 X_2} = a_{22}$$
$$\frac{C_{23}}{P_3} = \frac{p_2 a_{23} X_3}{p_3 X_3} = \left(\frac{p_2}{p_3}\right) a_{23}$$

$$\frac{V_1}{P_1} = \frac{p_3 b_{31} X_1}{p_1 X_1} = \left(\frac{p_3}{p_1}\right) b_{31}$$
$$\frac{V_2}{P_2} = \frac{p_3 b_{32} X_2}{p_2 X_2} = \left(\frac{p_3}{p_2}\right) b_{32}$$
$$\frac{V_3}{P_3} = \frac{p_3 b_{33} X_3}{p_3 X_3} = b_{33}$$

where $a_{11}, a_{12},$ and a_{13} are the amounts of good 1 needed to produce one unit of goods 1, 2, and 3; $a_{21}, a_{22},$ and a_{23} are the amounts of good 2 needed to produce one unit of goods 1, 2, and 3; $b_{31}, b_{32},$ and b_{33} are the real wage (units of good 3) per unit of goods 1, 2, and 3; X_1, X_2, and X_3 are the amounts of goods 1, 2, and 3 produced*;* and p_1, p_2, and p_3 are the per-unit prices of goods 1, 2, and 3 (both as inputs and as outputs).

Thus, equation (1) can be rewritten as

$$\left[1 - a_{11}(1+r)\right]\left\{\left[1 - a_{22}(1+r)\right]\left[1 - b_{33}(1+r)\right] - \left(\frac{p_2}{p_3}\right) a_{23} \left(\frac{p_3}{p_2}\right) b_{32}(1+r)^2\right\}$$

$$- \left(\frac{p_1}{p_2}\right) a_{12}(1+r)\left\{\left(\frac{p_2}{p_1}\right) a_{21}(1+r)\left[1 - b_{33}(1+r)\right] + \left(\frac{p_2}{p_3}\right) a_{23} \left(\frac{p_3}{p_1}\right) b_{31}(1+r)^2\right\} \qquad (1')$$

$$-\left(\frac{p_1}{p_3}\right)a_{13}(1+r)\left\{\left(\frac{p_2}{p_1}\right)a_{21}\left(\frac{p_3}{p_2}\right)b_{32}(1+r)^2+[1-a_{22}(1+r)]\left(\frac{p_3}{p_1}\right)b_{31}(1+r)\right\}$$

$$= \quad 0$$

or, equivalently, as

$$[1-a_{11}(1+r)]\{[1-a_{22}(1+r)][1-b_{33}(1+r)]-a_{23}b_{32}(1+r)^2\}$$

$$-\ a_{12}(1+r)\{a_{21}(1+r)[1-b_{33}(1+r)]+a_{23}b_{31}(1+r)^2\} \qquad (1'')$$

$$-a_{13}(1+r)\{a_{21}b_{32}(1+r)^2+[1-a_{22}(1+r)]b_{31}(1+r)\}$$

$$= \quad 0$$

Equation (1″) is the standard physicalist equation for the uniform rate of profit.[2] Note that the price ratios—$\left(\frac{p_1}{p_2}\right)$, etc.—cancel out. As a result, what remains are just ratios of physical quantities—the *a*'s, the *b*'s, and the rate of profit, *r*, which is determined by the *a*'s and *b*'s.

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[2] The left-hand side of (1″) is the determinant of the matrix **H** = $\begin{bmatrix} 1-a_{11}(1+r) & -a_{12}(1+r) & -a_{13}(1+r) \\ -a_{21}(1+r) & 1-a_{22}(1+r) & -a_{23}(1+r) \\ -b_{31}(1+r) & -b_{32}(1+r) & 1-b_{33}(1+r) \end{bmatrix}$. If input and output prices are forced to be equal, then **p** = **p**(**A** + **B**)(1 + *r*), where **p** = $[\ p_1 \quad p_2 \quad p_3\ ]$, **A** = $\begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ 0 & 0 & 0 \end{bmatrix}$, and **B** = $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ b_{31} & b_{32} & b_{33} \end{bmatrix}$. It follows that **p**[**I** – (**A** + **B**)(1 + *r*)] = **pH** = 0. The solutions are the three values of *r* that render the determinant of **H** equal to zero. The standard physicalist solution for *r* is the smallest of these three values.

This shows that Moseley is wrong to allege that the prices (or values) cancel out, and consequently that his rate of profit is physically determined, only in a one-good economy. It also shows that he is wrong to allege that the prices (or values) cancel out, and consequently that his rate of profit is physically determined, only in a two-good economy in which there's only one "capital good" (means of production).

It is instructive to analyze exactly why Moseley's rate of profit falls from 50% to 25%. Note that (again, because input and output prices are constrained to be equal), $\frac{P_1 - \text{total } C_1}{\text{total } C_1} = \frac{p_1 X_1 - p_1 A_1}{p_1 A_1} = \frac{X_1 - A_1}{A_1}$, where A_1 is the total physical amount of good 1 used as an input by all three sectors. $\frac{X_1 - A_1}{A_1}$ is the *relative physical surplus* of good 1—the percentage by which the amount of it that's produced exceeds the amount of it that was used up in production throughout the economy. Before the technical change, $\frac{X_1 - A_1}{A_1}$ was equal to $\frac{P_1 - \text{total } C_1}{\text{total } C_1} = \frac{60 - 40}{40} = 50\%$. After the technical change, it fell to $\frac{50 - 40}{40} = 25\%$.

Similarly, $\frac{P_2 - \text{total } C_2}{\text{total } C_2} = \frac{p_2 X_2 - p_2 A_2}{p_2 A_2} = \frac{X_2 - A_2}{A_2}$ is the relative physical surplus of good 2, where A_2 is the total physical amount of good 2 consumed by workers in all three sectors. And $\frac{P_3 - \text{total } V}{\text{total } V} = \frac{p_2 X_2 - p_2 B}{p_2 B} = \frac{X_2 - B}{B}$ is the relative physical surplus of good 3, where B is the total physical amount of good 3 consumed by workers in all three sectors. Plugging the relevant data from the tables into $\frac{P_2 - \text{total } C_2}{\text{total } C_2}$ and $\frac{P_3 - \text{total } V}{\text{total } V}$, we find that these relative physical surpluses likewise fall from $\frac{60 - 40}{40} = 50\%$ to $\frac{50 - 40}{40} = 25\%$. Hence, the reason that Moseley's rate of profit falls from 50% to 25% is that the relative *physical* surpluses fall from 50% to 25%.[3]

[3] In his reply to Part 1, Moseley (2016b, p. 1) claims that "Kliman states that the quantity of output in Sector 1 is also reduced from 18 to 15." I did not. The numbers 18 and 15 are the *total price* of Sector 1's output before and after the technical change. Above, I have made it clearer than I did in Part 1 that, although I am computing the relative *physical* surpluses of each good, the computations use the *monetary* sums given as data in the tables. This is valid because Moseley's interpretation is simultaneist and therefore the relative physical surpluses are equal to the analogous monetary ratios (e.g., $\frac{X_1 - A_1}{A_1} = \frac{P_1 - \text{total } C_1}{\text{total } C_1}$).

Thus, even in multisector examples in which prices and values differ—***AND IN WHICH THERE IS MORE THAN ONE "CAPITAL GOOD"***—Moseley's rate of profit is determined by the same physical quantities—technological and real wage coefficients—that determine all other simultaneist theorists' rate of profit, and in exactly the same manner. That he expresses his rate of profit as the ratio of surplus-value to capital value advanced, instead of as a ratio of physical coefficients, makes no difference. It is all value-form and no value-substance.

Finally, let me note that Moseley (2016b, p. 1) claims that I insulted him "and other Marxian economists in the opening paragraphs of Part 1, and he says that he'll "try to keep the discussion on a higher plane." I'll deal with the alleged insult in a future installment of these comments. Here, let me just say that his persistent argumentative tactics—continual shifting of the goalposts and continual refusal to openly admit that my demonstrations have disproved his claims, are *not* discussion on a higher plane. They are insulting in the extreme.

References

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