Consistent, realistic, verifiable

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Money and theory

One of the major trends in the world economy in the last two years has been the collapse of the price of oil in world markets. From a peak of over $100 a barrel, the price plummeted to under $30 a barrel and is still only around $40. The explanation for this fall, as provided by mainstream economics, is simple. There has been a change in the supply and demand for oil. Economists then go on to discuss which is the more important factor: supply increasing or demand falling.

But this analysis of the price of a commodity and what is it is worth at the level of supply and demand - as taught in all economics textbooks in colleges - is superficial at best. There is a joke in financial investor circles, when discussing why the stock price of a particular company has suddenly fallen: 'Well, there were more sellers than buyers' - true to the point of tautology.

What explains why a barrel of oil is $40 and not $1? Why do 100 paper clips cost $1 and one car costs $20,000? In other words, we need to understand what something is worth in the marketplace beyond just supply and demand; we need a theory of value. From that, we can begin to explain the workings of a capitalist economy, where everything is produced for sale. And if we can measure changes in value we can begin to understand the laws of motion of a capitalist economy - and, Marxist economics would add, its key contradictions, because Marxist economics is not so interested in the changes in the price of one commodity as in the nature and causes of the overall trends and fluctuations in an economy. That is, macroeconomics - with a purpose.

Marxist value theory is based on the view that commodities are priced in the market according to the labour time expended on them. Actually, labour time is basic for all forms of social production by human beings. As Marx wrote,

> *Every child knows a nation which ceased to work, I will not say for a year, but even for a few weeks, would perish. Every child knows, too, that the masses of products corresponding to the different needs required different and quantitatively determined masses of the total labour of society. That this necessity of the distribution of social labour in definite proportions cannot possibly be done away with by a particular form of social production, but can only change the mode of its appearance, is self-evident. No natural laws can be done away with.*[1]

But Marx goes on:

> *What can change in historically different circumstances is only the form in which these laws assert themselves. And the form in which this proportional distribution of labour asserts itself, in the state of society where the interconnection of social labour is manifested in the private exchange of the individual products of labour, is precisely the exchange value of these products.*

This is why Marxist theory of value applies to capitalism, not previous modes of social organisation.

An alternative theory of value might possibly be based on the amount of material that goes into a commodity. There are physically much more steel, other metals and ingredients in weight that go into the production of a car than go into the production of a paper clip. Can this explain the difference in value or price? Hardly. The actual qualitative content of a car is different from a paper clip or, for that matter, a hat - and weight does not provide an abstract measure for all items. Indeed, there is no common physical attribute that we can find to compare their value.

But the amount of labour time that goes into each thing or service does provide a common measure. That is why the great classical economists of the late 18th and early 19th century quickly latched onto labour time as an abstract measure of value that removed the heterogeneity of different physical materials and also different skills and types of labour. Labour time in the abstract provides the base for the value of commodities sold on the market.

Of course, it is not as simple as that - unfortunately. Capitalism is a mode of production for the sale of commodities on the market (including the sale of labour, or the power of labour). The market decides whether certain amounts of labour time expended on producing particular commodities are 'socially necessary'. If it takes most of the labour time available (workers and hours of work) in an economy to make one car for sale, the car would be socially unnecessary, as there are no hours left for food, housing, clothing, etc. So the car is not made and such a society makes do without cars.

However, if cars can be produced with a lot less labour time due to improved technology and better productivity of labour, then they can make it to the market place. Some car manufacturers may be more efficient and so gain market share or perhaps even drive out of the market other less efficient manufacturers. Or other entrepreneurs may have an even better technology or a different product (electric cars) and so try to enter the market to undermine the position of the existing producers. Such is the dynamic motion of competition in capitalist production. Something that Marx was very impressed by.

Capitalism is also different from previous modes of production and exploitation. Capitalism is a mode of production where labour itself is exploited by forcing people to sell their labour-power on the market to the private owners of the means of production (factories, offices, materials, finance) for wages. And capitalism is a monetary economy, where workers get money wages and capitalists get money from the sale of the goods and services produced by workers. Capitalists employ workers and sell commodities that people need (or thought they needed) on the market and only do so if they get more money than they started with. This is the particular form of class exploitation that is capitalism. What drives competition and production under the capitalist mode is profit. Capitalism is a money-making, profit-making mode of production. Money enters the equation from the very beginning.

The circuit of money

And that, at last, is where Fred Moseley's new book, *Money and totality*, comes on stage. Moseley is professor of economics at Mount Holyoake women's college in Massachusetts and has been for decades. He is one of the foremost scholars in the world today on Marxian economic theory (as a theory of capitalism). He has written or edited seven books, including *The falling rate of profit in the post-war United States economy* (1991), *Marx's logical method: a re-examination* (1993), *Heterodox economic theories: true or false?* (1995), *New investigations of Marx's method* (1997), and *Marx's theory of money: modern appraisals* (2004).[2] Moseley says he has been working on his book for over 20 years and, as such, this book is Moseley's *magnum opus*. And it richly deserves that designation.

Moseley says, in *Money and totality*, that a Marxist analysis of the circuit of capital does not start with value as measured in labour time, which then has to be explained or transformed into money. A real capitalist economy starts with money, and Marx's value theory also does. From the capitalist point of view, money advanced must lead to more money, or forget it. M becomes M' (pp11-12).

Marx starts there, but sets out, with a theory of value, to explain how M becomes M’. He expands this trite formula into M - C - P - C’ - M’. Money (M) is advanced by capitalists to purchase raw materials and technology (means of production, C). Then money is advanced to workers for their labour-power (hours and skills) in production (P). At the end of the production process, a new commodity for sale is produced containing more value than before (C’), which is then sold on the market for more money (hopefully) that was originally advanced: M’. Money makes more money, but through exploitation of the workforce and the private appropriation of surplus value in the sale of the commodity.

This brings us to one of the key insights of Moseley’s book. The Marxist theory of value and his analysis of the laws of motion of capitalism is a macro-monetary theory. There is one real capitalist system, advancing money in order to make more money - namely a profit (a surplus of value) - over the money (or value in labour time) paid to the workforce and for the means of production (value contained in constant capital). We do not start with a certain value of labour time or a certain amount of physical units of workers and technology, and finish with that. We start with money and we finish with money.

Yes, beneath the process of money making money, we can show that this happens through the exploitation of labour and the amount of exploitation or extra money made can be explained by the appropriation of surplus labour time (beyond that needed to keep workers alive and in production). Thus money is value, or the form of value that we see.

As Moseley shows, so thoroughly and clearly, Marx’s value theory means that the total amount of money in an economy (excluding the impact of inflation and short-term fluctuations) matches the total amount of value (‘socially necessary’, ‘abstract’ labour, as measured in time). Total prices of production are equal to total value and total money profits in this one-world economy are equal to total surplus value (in labour time). Value *explains* money; surplus value *explains* profit.

From macro to micro

This is a macro theory, as Moseley explains, which looks at the total economy. But, when we go below the macro aggregates and consider individual prices of production for different products and individual profit rates for each capitalist, then values in labour time do not match prices. While the great classical economists - Adam Smith, David Ricardo, James Steuart and others - recognised that commodities produced should be valued in labour time, or the labour expended overall in an economy, they had serious flaws in their versions of the labour theory of value. David Ricardo thought individual prices had to match individual values in labour time; Adam Smith thought that prices were made up of inputs in value from separate ‘factors of production’: profit (value from the capitalist); wages (value from labour) and rent (value from land).

But Marx solved this issue of the macro to the micro by showing that because individual capitals compete amongst each other, as a result sectors with higher profitability get ‘invaded’ by other capitalists seeking to increase their profitability. In so doing, profit rates tend to be equalised between sectors. As Marx showed, this did not change the overall value created in an economy, but merely redistributed the surplus value over and above the cost of capital advanced from less efficient capitals to more efficient ones through the equalisation of profit rates across sectors. This transformation solution was a brilliant one that Marx was very proud of.

Marx’s analysis of capitalism in *Capital* was generally ignored by mainstream economics. But when attention *was* paid to it, it was attacked immediately. Eugen Böhm von Bawerk, [3] an economist of the ‘Austrian school’, launched in with the argument that Marx’s theory of value was contradictory, because it assumed that total prices equal total values in volumes one and two of *Capital*, but that prices of production were not equal to value in volume 3. How can prices be both equal to value and not equal to value? As Moseley comments,

> *Böhm-Bawerk did not understand Marx’s logical method of the two levels of abstraction: the total economy and individual industries. In Marx’s theory, total price = total value, but individual values = prices of production. There is no contradiction with Marx’s logical structure of the two levels of abstraction (p39, note 13).*

And this conclusion is the first overriding merit and insight from Moseley's interpretation of Marx's analysis of capitalism - a brilliant insight that is mostly Moseley's, although it had forerunners in the work of Roman Rosdolsky, Paul Mattick and David Yaffe, as Moseley attributes[4] (p23). The logical approach of Marx is to look at the macro first to show how money makes more money; and then look at the micro to see how that extra money is distributed among many industries and capitals through competition and the equalisation of profitability. The more efficient get a transfer of value from the less efficient through capitalist competition. But profits come from the surplus value generated by the labour force employed in the whole economy and appropriated by capital as a whole.

Realistic single system

Moseley shows that Marx's analysis is based on a realistic view of capitalism. The circuit and motion of capital starts with money and finishes with money. It does not start with value (labour time) or with physical things (labour and means of production) and end with value or things. So it does not need value or things to be converted or transformed into money. There are not two 'states of capitalism' (one with values and one with money or prices). Marx's view is a single-state system. So there is no 'mistake' or logical contradiction in Marx's explanation of the transformation of values into prices. The so-called transformation problem of values into prices and money does not exist.

The mainstream critiques of Marx's analysis make the mistake (deliberate or not) of arguing that Marx had two logical analyses - first based on values, which had to be transformed into prices. They say, if you start with 'inputs' of labour and means of production measured in values (as they claim Marx does), surely you must convert these values into money prices? And if you do so, then, using simultaneous equations, you find that total values no longer equal total prices and/or total surplus value no longer equals total profit. That is because your original inputs in value will also be converted into prices. Marx's analysis is thus indeterminate or logically inconsistent.

This is the kernel of the critique first pronounced by Ladislaus von Bortkiewicz in the early 20th century - "the most frequently cited justification for rejecting Marx's theory over the last century" (pxii). This critique was enthusiastically adopted by mainstream economics as finally crushing Marx's value theory of capitalism. It was accepted by hosts of Marxist economists like Paul Sweezy[5], many of whom spent many years trying to reconcile Marx's 'mistake' with a theory of capitalism or looking for alternative interpretations of value theory - a "long 100-year detour", as Moseley describes it.

In the post-war period, so-called 'neo Ricardian' Marxists reverted to a version of Ricardian theory: namely that value was determined by the labour time, as measured in physical production. Either money played no role or there was a money theory of capitalism (prices) and a value theory of capitalism (physical things), but the two could not be reconciled.

Indeed, one consequence of this 'correction' of Marx in the neo-Ricardian/von Bortkiewicz model was that money was tacked onto the capitalist system as a separate department of production: that of gold. In doing so, the price of gold, and thus the price of money under a monetary system based on a gold standard, diverges from its value. So the 'value of money' changes, further complicating and confusing the connection between value and price - another mistake of Marx, according to these critics.

But Moseley shows brilliantly that this is nonsense. Gold as money has no price of production and surplus value is not distributed in and out of the gold industry into other sectors. So total prices of all commodities in capitalist production still equal their total values. When gold acts as money, the price of a given quantity of gold (dollars per ounce) functions as a money measure of the value of a commodity. Gold itself has no price, but merely serves as a measure of value. So gold as money does not enter the equalisation process of values into prices of production. Gold is already money (p201).

As a result, money is the ‘monetary expression of labour time’ taken to produce a physical amount of gold, (Melt, in the modern Marxist jargon). Melt is not affected by any changes in the prices of production because, it is the measure of those prices. But if Melt changes it will affect the prices of production, because capitalism is a monetary economy. In a non-gold standard world, where money is just paper or even units of account in a bank, Melt will also vary if the quantity of paper money exceeds the quantity of money as measured by gold (commodity money).

Ironically, as Moseley says, the end of the gold standard and commodity money actually rule out the neo-Ricardian argument for the gold sector to be included in the equalisation of profit rates across the economy. As money is no longer gold, the profit rate in the gold sector is irrelevant to the prices of production in commodities in the neo-Ricardian model. Marx’s theory of money fits into a macro-monetary analysis of capitalism - it is a real analysis, not a concoction by the neo-Ricardian critics that tries to tack money on to the transformation of values into prices.

‘Standard interpretation’

The Bortkiewicz-Sweezy ‘standard interpretation’, as Moseley calls it, culminated in its destruction with a seminal paper by the leading mainstream economist of the post-war period, Paul Samuelson, the author of the major academic textbook on economics in my days at college. Samuelson showed that if you started with two systems - one in values in labour time and one in prices - the labour values can be cancelled out and play no determination in the real world of prices. Prices are then determined by the quantities of things produced and the demand for them (supply and demand).

> *In summary, transforming from values to prices can be described as the following procedure: (1) write down the value relations; (2) take an eraser and rub them out; (3) finally write down the price relations - thus completing the transformation process! (p229).*

Samuelson’s sarcastic joke may have buried the ‘standard interpretation’, but his own mainstream theory of prices was equally irrelevant. What determines whether the price of a car is $20,000 or $2,000? - supply and demand. But why $20,000 and not $2,000? - well, because the market says it is so (revealed preference of individual consumers). Brilliant!

But, as Moseley says, Samuelson was right on the standard interpretation. If you interpret Marx to have two systems of capitalism - one based on values (in labour time or physical units) and another on prices - then you have to transform values into prices. But why bother? - values can be cancelled out. Marx’s value theory then becomes metaphysically unnecessary like the concept of god. We can explain all in the universe without god and god explains nothing.

But what Moseley shows in the body of his book is that the ‘standard interpretation’ is a misinterpretation of Marx’s analysis. He takes the reader carefully and thoroughly through all the competing interpretations of Marx’s value and price theory, starting with the standard interpretation, as expressed by the theory of Piero Sraffa, an epigone of Ricardo. He shows not only that Sraffa’s approach of looking at capitalism as ‘the production of commodities by means of commodities’ is unrealistic in the extreme;[6] it also has nothing to do with Marx’s analysis of capitalism as the process of money capital trying to make more money capital (pp230-43).

Sraffa ends up with a theory that implies capitalism can go on producing more things from things without any contradiction or limit - the example of automation (p233) shows that clearly. Marx’s own theory shows that there is an essential contradiction in capitalism between the production of things and services, on the one hand, and the profitability of doing it for private capital, on the other. That contradiction is much more real, explaining cycles of boom and slump, crises and the eventual demise of capitalism as a system. While Sraffa’s theory implies the universality of capitalism, Marx argues for its specificity.

Moseley then shows that other interpretations (Anwar Shaikh's iterative way, the 'new interpretation', *Rethinking Marxism*, etc) all fail really to break with the standard interpretation and thus cannot resolve the apparent logical inconsistency (Bortkiewicz) or irrelevance (Samuelson) of Marx's analysis. He goes into each in some detail for the reader to ponder.

Temporal or historic?

However, it is somewhat different with the temporal single-state interpretation (TSSI). The essential points of the TSSI group of Marxist economists[7] were summed up in another seminal work on Marx's analysis from Andrew Kliman in 2007, with his book, *Reclaiming Marx's Capital*.[8] Those points were that Marx's theory is temporal. Money advanced for means of production and the labour force are the initial capital, in time; the production of commodities and their sale on the market come later. So we cannot impute simultaneous equations in the conversion of value into prices, as the standard interpretation and others do. Second, Marx's theory is single-state. It is not a question of converting initial inputs (means of production and labour) as values into prices of production in the final commodity. Capitalists start with money (prices of production) and end up with money (prices of production). But they end up with a different value or price of production, as explained by the exploitation of labour-power, with its value ultimately measured in labour time in the whole economy.

I single out TSSI from other interpretations, because I consider that it did provide the breakthrough in refuting the standard interpretation by returning Marx to the logic and reality of a money economy. And I have been a strong supporter of this interpretation in the past. Moseley agrees that TSSI made great strides in this task. However, he has two important disagreements with TSSI. He reckons it takes prices of production as short-term movements that change with each production cycle to equalise profitability within sectors. Moseley thinks this cannot be right, as prices of production are predetermined over the long term by the productivity of labour (new value) and the rate of surplus value in the class struggle (deciding the level of the real wage). So prices of production only change if productivity and real wages alter. Prices of individual commodities fluctuate around a 'centre of gravity' set by prices of production. Indeed, Moseley argues that, unless his interpretation of prices of production as long-term centres of gravity for individual prices is accepted, then the two aggregate equalities (total price = total value; and rate of profit = rate of surplus) would not hold over successive production periods, thus defeating the very objective of TSSI.

Second, Moseley disagrees that a temporal interpretation of Marx's circuit of capital means that the cost price of the advanced money capital (for means of production and the employment of the labour force) is fixed and historic after production has commenced. He reckons that, if the price of equipment and other means of production changes after production starts (as it does), it is still acceptable to upgrade the value of the commodity produced to include the current cost of the means of production, not the original cost. So it is not necessary or correct to use historic cost in the measure of constant capital or in the profitability of capital.

The Australian Marxist economist, Peter Jones, in a very interesting paper, attempts to reconcile the historic versus current cost approach in the light of this debate:

> *Standard current cost measures of the rate of profit compare profits over the course of the year to the stock of constant capital at the end of the year. Kliman's historical cost measure uses the stock of constant capital at the start of the year. I cannot see a good reason for either of these choices. Since profits are generated over the course of a year, a good measure of the rate of profit should take into account the changes in the stock of capital advanced over the course of that year. In both cases, the average rate of profit could roughly be thought of as an average of a series of 'snapshots' of the rate of profit over the course of the year.*[9]

That seems fairly close to Moseley's view on the issue.

This latter point is very important in any empirical analysis of profitability in modern capitalist economies. Andrew Kliman's view is that historic cost measures must be used and anything else is a distortion of Marx's measure of profitability. And this makes a difference when we try to measure the movement in the rate of profit in a major capitalist economy like the US.[10] Kliman's measure shows a 'persistent fall' in profitability of US capital since 1945 without any significant rise, even during the so-called neoliberal period from the early 1980s to now.[11] The current cost measure, on the other hand, shows a trough in the early 1980s and then a significant rise through to the end of the 1990s at least. Which is right has led to different views on the health of US capitalism, the role of the financial sector and what causes capital investment to change. However, perhaps the differences between the two measures are overdone because, as Deepankar Basu shows, over the long term, since 1945, the two measures have tended to converge.[12]

Empirically verifiable

Fred Moseley has made a major contribution to a clearer understanding of Marx's method of analysis, showing that a Marxist analysis delivers, with money, prices and values integrated into a single realistic system of capitalism.

Moseley shows that Marx had two main stages of analysis or theoretical abstraction. First, he analyses the production of surplus value in capital as a whole (volumes 1 and 2 in *Capital*) and then he analyses its distribution through the competing sectors of many capitals (volume 3). Marx starts with money, so there is no need to 'transform' an underlying system based on value into a system based on prices. At the beginning of the circuit of capital, money capital is taken as given, or 'presupposed'. So total value equals total prices in the 'totality' (this is what the title of the book alludes to[13]); and all that happens with many capitals is that the extra value (surplus value) created in each sector will be equalised by the market, so that the rate of profit is also equalised (or tends to equalise) across all sectors. Total surplus value equals total profit, but the prices of production vary in each sector to equalise profitability across all sectors. And the whole circuit of capital is one that takes place over real time and is not completed hypothetically and simultaneously, as critics argue.

One implication of Moseley's interpretation of Marx's analysis as a macro-monetary one, that starts with money and finishes with money, is that it is perfectly open to empirical verification. There is a view among some Marxist economists - as eminent as Paul Mattick Jr for one[14] - that it is impossible to measure empirically a Marxian rate of profit on capital and use official price data to evaluate trends in modern capitalism. That is because value cannot be calculated from money prices and Marx's theory of capitalism is a value theory. We are left with just recognising that Marx was right because of the very occurrence of exploitation and crises. This is a bit like saying that we cannot determine the existence of black holes in the universe because their mass is so great and gravity so strong that nothing comes out of them. So we can only tell they exist because of the wobbles they cause in other objects in space nearby.

But if we interpret Marx's as a single system - an actual capitalist monetary macro-economy - then it is perfectly possible (with all the caveats of measurement problems and data) to carry out empirical analysis to verify or not Marx's laws of motion of capitalism. Indeed, Marx did just that, as Tapia Granados reminds in a forthcoming paper.[15] In 1873, Marx wrote to Frederick Engels that he had been "racking his brains" for some time about analysing"those graphs in which the movements of prices, discount rates, etc, etc, over the year, etc, are shown in rising and falling zigzags".Marx thought that by studying those curves he "might be able to determine mathematically the principal laws governing crises". But he had talked about it with his mathematical consultant, Samuel Moore, who had the opinion that "it cannot be done at present". Marx resolved "to give it up for the time being".

Times have moved on and now we have lots more data and better methods of analysing it. Tapia concludes:

> *To develop scientific knowledge is to advance concepts that are useful to describe reality, to make testable predictions and to be ready to assess any hypothesis by contrasting it with empirical data … Phlogiston had not a place in chemistry and economic crises of a fuzzy character shall not*

> *have a place in social science.*

Indeed.

Michael Roberts

Notes

1. Marx to Kugelmann, July 11 1868, shortly after the publication of *Capital*.

2. See www.mtholyoke.edu/acad/facultyprofiles/fred_moseley.

3. E von Böhm-Bawerk *Karl Marx and the close of his system* (1896): https://mises.org/library/karl-marx-and-close-his-system.

4. R Rosdolsky *The making of Marx's 'Capital'* London 1977; P Mattick Jr *Some aspects of the value-price problem* London 1983; D Yaffe *Value and price in Marx's 'Capital'* (1974): www.marxists.org/subject/economy/authors/yaffed/1974/valueandpriceinmarxcapital.htm.

5. See P Sweezy *The theory of capitalist development* Oxford 1942.

6. P Sraffa *Production of commodities by means of commodities* Cambridge 1960.

7. TSSI from Guiglelmo Carchedi, Alan Freeman, Andrew Kliman, Ted McGlone and several others: http://en.wikipedia.org/wiki/Temporal_single-system_interpretation.

8. www.amazon.co.uk/Reclaiming-Marxs-Capital-Inconsistency-Dunayevskaya/dp/0739118528/ref=sr_1_1?ie=UTF8&qid=1323255230&sr=8-1. See my review: www.amazon.co.uk/Great-Recession-Michael-Roberts/dp/144524408X/ref=sr_1_1?s=books&ie=UTF8&qid=1323255509&sr=1-1.

9. P Jones *Depreciation, devaluation and the rate of profit* (2012): http://gesd.free.fr/jonesp12.pdf.

10. See my post at https://thenextrecession.wordpress.com/2013/12/19/the-us-rate-of-profit-extending-the-debate.

11. A Kliman *The failure of capitalist production* (2012): www.amazon.co.uk/Failure-Capitalist-Production-Underlying-Recession/dp/0745332390/ref=sr_1_1?ie=UTF8&qid=1323254965&sr=8-1.

12. D Basu *Replacement versus historic cost rates* (2012): https://thenextrecession.files.wordpress.com/2012/11/basu-on-rc-versus-hc.pdf.

13. The subtitle for Moseley's book is *A macro-monetary interpretation of Marx's logic in 'Capital' and the end of the transformation problem* - a mouthful for most.

14. P Mattick Jr *Business as usual* (2011): www.amazon.com/Business-Usual-Economic-Failure-Capitalism/dp/1861898010.

15. J Tapia *Investment, profits and crises - theories and evidence* (as yet unpublished).