Marx's contribution to the search for a theory of money

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The theory of money that Marx developed to go along with his theory of capitalism has long been neglected or subject to criticism. However, there are several reasons to revisit this theory at present: because it may require updating; to see whether it is a historically useful way of analysing 19th-century capitalism; to determine whether it remains relevant for analysis of 20th-century capitalism; and/or to compare it with some other, possibly less satisfactory, modern theories of money. These varying approaches are related to one another but are not the same.

The present text has opted to try to understand why Marx began Book 1 of *Das Kapital* with a theory of money in its market circulation form (I), its ultimate goal being to determine this concepts' relevancy to a few studies of the role that money plays in modern capitalism (II).

I. Money and capital according to Marx

Many of the authors who use Marx as a reference have dismissed the conception of money he presented right at the beginning of *Das Kapital*, either because they disagreed with his theory of labour value or because in their opinion this theory did not apply to money. Critical analyses of capitalism have rarely delved into the role played by money as such, preferring to focus on finance whilst disconnecting this particular sphere from the monetary conditions in which it is enshrouded. Hence the need to recall a few aspects of Marx's theory of money that are integrated into his analysis of commodities circulation and the access of workers to wage goods

1) Labour value and the role of money

Marx used his studies of the circulation of commodities and money to criticise other conceptions that would construe money either as a way of bartering commodities characterised by their different use values and/or as a mere unit of accounting. He criticised the dominant quantitative theory of money, which determined the value of money in reference to the quantity of money in circulation, with the price of money being defined as the inverse of the general price level, 1/P. Here higher prices for goods (a.k.a. inflation) would translate into a lower price for money; and lower prices for goods (a.k.a. deflation) into the opposite. After Marx, Keynes (1930) criticised the "tautological" nature of this quantitative conception;but after having first tried to find a substitute for it during his attempts to develop a monetary standard of prices, he ultimately gave up, stating in 1936 that the main attribute of money was its "liquidity" in comparison with other financial assets.

Marx thought that money does not have a price. It generates the monetary price of commodities, meaning that it cannot give a price to itself. Hence his central proposition that "commodities enter into circulation with a price and money with a value". To demonstrate that these two aspects are inseparable, one has to agree that money is more than a mere unit of accounting (although it is this as well) and that goods' monetary price comprise one condition of their social valuation by those who exchange them.

The present text does not seek to review the labour value of commodities nor the genesis of money in a commodity form (i.e., gold, construed here as a "general equivalent" for all other goods). The debate has already been very clearly presented and discussed elsewhere in the present papers*. But we do need to insist upon money's role as a price standard, and its relationship to credit operations.

2.) Gold standard and institutions

As Martha Campbell , Duncan K .Foley and other authors discuss in their contributions*, money in its commodity form (gold) possesses several functions and several forms. Marx highlighted its commodity valuation measurement function, indicating all the while that the value of gold, itself a product of labour, could also vary. Before him, Ricardo (1823) had sought an "invariable measure of value" to serve as a price standard for goods. As a commodity, gold also possesses its own unstable labour value, "but it is the only commodity that can serve as a standard so nearly approaching an invariable one".

Marx followed another approach, distinguishing between money as a measurement of value and money as a price standard. He did this by introducing the gold standard's institutional aspect, whereby the State ensures that a currency circulating across its territory can be converted into gold, meaning into a predefined weight gold. For example, in England one ounce of gold used to be worth "£3 17s 10.1/2 d" and currency units were freely convertible into gold. The gold standard's institutional regime also turned money into a unit of price accounting within any given national territory. This implied both forced intervention by the State and also specific monetary institutions. One was the Mint, where gold bars were turned into coins Sterling-denominated. Note that the Mint was a public entity reporting to the (Central) Bank of England. "Coins are the material form of bullion when currency is a legal tender" (124) and "coining, like the establishment of the standard, is the business of the State" (124-125). Money was seen as being able to assume a variety of forms, depending on the different functions it would be fulfilling in a given space of circulation. Within the frontiers of the State, it takes the form of a currency There are now gold, the "universal money", the gold standard connection between different States, and national currencies.

When money as a "measure of value [form] becomes a price standard, its functional existence absorbs... its natural existence". (129). But this did not mean that the State controls its own currency, in the gold standard regime. The "universal money" form is not a sort of "international currency" shared by all nation-States. The international gold standard regime that operated between 1870 and 1914 did not abolish the division of the world into spaces comprised of nation States. There was both a consensus (the common Gold Standard) and competition between the main capitalist countries. Despite the global prestige of the Pound Sterling, sometimes considered to be "as good as gold", the Bank of England still had to build up gold reserves. The City of London's international financial role clearly played a crucial role. Bu at the same time, t the English monetary space extended well beyond the country's borders, running throughout the British Empire, which was much more widespread than the colonial possessions of France or any other capitalist country of the time.

The different capitalist States all needed gold reserves to "settle their national balances" via "means of payment" they could use with one another. According to Marx, gold alone, as "a universal equivalent form of all the commodities" (39) that human labour produces, possessed the quality of universal money. It remains that the division between national capitalist States led to "compulsory State action" (29), one result being that countries applied a gold standard to their own currencies. Gold standard was supposed to accomplish the goal "of integrating capitalist countries" (D.K.Foley) but its international adoption from 1880 until 1913, was far from eliminating rivalries between capitalist States.

3) “Monetary system” and “credit system”

Before later examination of the characteristics of the capitalist “credit system”, Marx had already introduced this topic at the beginning of *Das Kapital*. First of all, he saw credit as a modification of the Commodities/Money/Commodities exchange, which in a market circulation mode necessarily takes place in a *simultaneous manner*. Credit introduces the notion of time, i.e., the amount of time that elapses between C/M if the commodity buyer does not immediately pay the seller in hard cash. The two parties to this exchange, one having become a creditor and the other a debtor, are building up a specifically constrained *institutional* relationship that is governed by contract and law.

A credit contract possesses “the shape of a legal claim upon money” (136). This is money that has assumed two forms, one as a unit of accounting for sums due and the other as a means of payment for a final settlement. Contracts will establish a settlement date. “If the debtor does not pay, his commodities will be sold by the sheriff”. (136). What we have here is institutional constraint depicted as an inherent aspect of any credit relationship, the reason being that it constitutes the monetary relationship’s temporal manifestation. Marx extended this to other monetary settlements “beyond the sphere of the circulation of commodities” (140), i.e., to all contracts replacing “payments in kind with money payments”: rents, taxes, etc. Much in the same way as Rosa Luxemburg would later describe peasants in colonised countries, Marx saw this as yet another cause for agricultural poverty.

In his introduction to the credit system, Marx referred to the role played by “specialised [banking] institutions” that use an “artificial regime of settlements” to create a clearing system for loans and debts denominated in a given accounting currency. Here, money in its means of payment form becomes “loan money”, except if a crisis has broken out - in which case dematerialised credit money, in the form of the “ideal shape of money of accounting, [is transformed] into hard cash”. (138). So the curse of credit money has contradictory features. It functions as a closed circuit of financial transactions ,as if money was only a unit of account with a use value. But it can be disrupted by unexpected events –like big changes in prices of assets, settlements difficulties, and so on- which affect basic functions of money as a general means of exchange.

4) “The transformation of money into capital” (*Capital*, volume I, Part II)

Critiques of *Das Kapital* earlier section express the idea that Part II in Book I is the true beginning of Marx’s analysis, in the sense that it was here that he first presented his ideas on the existence of a capitalism-specific production relationship. In reality however this was Marx’s way of introducing one particularity of capitalism’s exploitation of a monetary wage-remunerated workforce. Contrary to what Sraffa said on this subject (1960), this sort of wage should not be assimilated with cattle feed or machine fuel. Nor is it a mere basket of wage-goods whose basic composition needs to be understood to help us assess worker consumption, an approach followed by Adam Smith and Ricardo in their attempts to ascertain which profit-affecting costs are incompressible.

After focusing on market circulation and monetary constituents, in Part II Marx briefly presented the worker-capitalist relationship, viewing this is an exchange between two owners of different types of commodities: one possessing a labour power to be sold to a “money-owner, Mr. Moneybags”, and the other making use of this power. When analysed thusly, the labour market functions via contracts between *de juro* equal actors. “Both are free, equal owners... and work together to their own advantage”. (147). According to Marx, this is the impression we would get if our analysis went no further than the circulation sphere. It is also the vision that generated the illusions of “Free Trade Vulgaris”.

But this means that capitalists need an access to money-capital. And in the same time, that workers’ monetary wages have become the social condition that will enable them to access indispensable consumption commodities. These ideas cannot be found in Adam Smith and Ricardo, preoccupied as they were by the minimal composition of a basket of wage-goods (salt, candles, leather, etc.) that are defined by their use values and therefore expressed in profit-affecting cost terms for employers For these authors, class division was a natural state of affairs in modern societies. And wage-earning was better than slavery or serfdom, since it allowed free access to the consumption goods that modern society produces. Walras, a neo-classical author, would later broach the same topic using an entirely different theory of value. Marx on the other hand, in introducing the labour exploitation relationship specific to capitalism, needed to demonstrate that the monetary wage is an exchange relationship that is indispensable - Monetary wages and money capital are conditions of the capitalist relationship of production.

Another aspect of this same issue is Marx’s criticism of labour-money-l, a system where purchasing vouchers are distributed to workers based on the number of hours they put in. This was an anti-capitalist reform that had been suggested by the socialists Owen and Proudhon. Marx said that this sort of money has no more value than a theatre ticket. Moreover, in his opinion it inferred that wages distribution can comprise a social division of labour between individual workers, a proposition that is in contradiction with capitalism.

We have seen why and how money became a crucial element in the analysis of capitalism that Marx derived from his conception of labour value. But what has survived from this idea now that money is no longer embedded in a commodity form such as gold?

II. Money and modern capitalism

Credit money issued by banking systems is the form of money in modern capitalism. Within countries, currencies are the national units of account, without any reference to gold since 1971. For international transactions, they are convertible into one another, by means of different regimes of rates of exchange Marx’ theory of money looks to be obsolete . If it still suggest analytical elements for understanding contemporary money , we have to look at the meaning of the “dollar standard “ and the constraint of money as means of payment.

At a theoretical level, utility value began to replace labour value as far back as the 1870’s, even as the gold standard regime was starting its international career. The financial sphere also started to develop considerably between 1870 and 1914, something analysed by R. Hilferding (1911), who ultimately abandoned the idea of a labour value of money. This was also a period marked by the development of national price index statistics and tabular standards. Earlier concerns about monetary price standards were replaced by a new focus on the levels of and variations in prices that are denominated in national units of accounting defined by the States themselves.

Post-World War I theoretical work focused mainly on exchange rates between European national currencies that were no longer convertible into gold; and on the inflation crisis besetting Germany. 1917 had seen the birth of the national currencies’ “Purchasing Power Parity” theory, which compares currencies’ ability to buy a good trading freely internationally. This notion remains in regular use today, much the same way as Milton Friedman's post-World War II monetarism transplanted the old quantitative theory of money onto the neoclassical theory of utility value.

What we are suggesting here is that Marx's ideas do allow for criticism of certain modern conceptions of monetary phenomena, whilst providing us with clues about which paths we should be following when researching money. The present text does not purport to discuss different value theories It rather tries to show that neo-classical formulations of real magnitudes are unable to introduce monetary prices, and that some Pos-Keynesian interpretations are in the same case. Non of them can be applied to the social reality of money.

1) *Discussion of three modern analyses of variations in monetary prices*

-A modern Quantity Theory of Money

The old quantity theory of money was revised by I. Fisher in The Purchasing Power of Money, (1911), According to Fisher the nominal price level, P, depends only on three causes: the quantity of money in circulation, M, the velocity of circulation, V, and the volume of real trade, Q .These factors provide the famous equation of exchange, MV=PQ. Fisher argues that "the value of money" is generated like the value of anything else by the general conditions of demand and supply", and that the stability of prices depends on M when V and Q are given. Money has "a fundamental peculiarity: it has no power to satisfy human wants except a power to purchase things which do have such power.

After World War II, M. Friedman developed a modern quantity theory of money (called "Monetarism" in 1968 by K.Brunner). His notion of money was the same as t Fisher's : the value of money for individuals comes from its ability to purchase real goods .However a demand for money was introduced in the equation of exchange: MV= Py' : y' is the "global net income at constant prices" , to which individuals' demand for money holding is proportional.

The stock of money, M, includes currency held by the public and private demand deposits in commercial banks. It is an aggregate Ms, supplied by the monetary authorities, the Federal Reserve System. The aggregate of Individuals cannot issue Md in proportion to their demand for money, This divorce between money supply b under a monetary policy and the quantity demanded by individuals is the main cause of disequilibrium between Ms and Md and of unstable price level.
On the demand side, changes in global output and changes in the amount of money that the pubic desires to hold relative to its income can be measured in the long run, because they are relatively stable over a long period. This relative stability should provide a rule for the supply of money by the Federal Bank System. The System cannot control price level, but it can control the money supply. It should adopt a fixed rule of money increase . This proposition means that the choices of individuals are rational, and that the aggregate monetary transactions of the private sector would be self-stabilizing.

So the main risk of price level instability comes from the discretionary policy of the Central Bank. It was said that monetarism integrated money theory in "the general theory of choice" that is the neo-classical one , or in a "synthesis" (Tobin 1992) with some Keynesian elements. However the neo-liberal conception included in monetarism was an obstacle to such a synthesis. And the affirmation by M. Friedman that unemployment is a matter of choice for each individual, that is "voluntary", was repelled by K.J.Arrow (1981) These questions are fundamental. They concern the meaning of monetarist policies applied in 1979-1981 by Thatcher and Reagan, and the quantity rules of the management of the euro by the new European Central Bank.

The most important point to be examined here is the ambiguity of the status of money in monetarism. As a centralized institution, money is not only an exogenous quantity of tokens. It is also the general unit of account for transactions within a country, different from a "numéraire". However this is not specified in the monetarist conception of money. There is no "social convention" or common domestic habit within a given national territory. Modern Fiat money is simply a quantity of purchasing power units, the price of which being 1/P. It has no intrinsic use value. Money is “neutral”.

The demand for money holding introduces money as an asset with special characteristics, that is with a return equal to zero. But the aggregate demand implies that all individuals take the unit of account and the general use of money as granted. It means that the “acceptability” of money by all individuals is required. How is this possible? The use of money, rather than a rational individual choice, is a mimetic behavior monetary transactions are accepted by individuals because other individuals accept them . There is neither a rational individual choice, nor a social constraint in this conception.

So on both sides of the equation of exchange, the “acceptability” of money has no foundation .It is taken for granted. When the specific function of money as a common unit of account disappears, the meaning of a monetary standard of prices also disappears, and the relationship between multiple currencies cannot be understood .We’ll examine that when we come back to the notion of price standards and units of account.

-The Post-Keynesian NAIRU conception

The NAIRU (Non-Accelerating Inflation Rate of Unemployment) model tries to chart a statistical relationship between variations in wage-earner unemployment rates and the general level of prices. Falling joblessness will supposedly lead to a rise in consumption spending, hence to higher prices. This model, born in United States in the 1970s (Dean Baker, 2001), is still being used today by international institutions such as the OECD.

This model assumes that there is an unemployment rate at which prices are stable – and that if unemployment falls below this level, inflation will ensue. Yet statistical observation of the period 1995-2001 showed that the quasi full employment in US was not accompanied by any significant jumps in wages and in commodities prices. Asides from this lack of correlation, the NAIRU model also conveys an erroneous conception of the way monetary price variations occur.

Some economists said that the model failed for not accounting for the reverse relation between higher goods prices and the following adaptation of wages. But at a deeper level, NAIRU would appear to be a statistics-dominated instrument of wage supervision to be used by those who fear that low unemployment might undermine wage moderation. However the numerous economic and political neo-liberal measures since the early 1980s that have established a balance of power that is clearly unfavourable to workers and favourable to capitalists . These measures enforced wages discipline It is a reminder that wages variations are basically a variable dependant on capital accumulation conditions. Higher wages may temporarily lessen capitalist profits. But this is a matter of distribution, and it does not concern the general level of prices.

The NAIRU model was developed by Post Keynesian economists According to Paul Davidson, "an income policy could limit wage and price movements". This Post-Keynesian author identifies the "production cost" to the wage cost. "Wage restraint over time is a necessary adjunct to developed capitalist economies" .(1981 : p.167) .How Such an income policy could stop inflation ? Its link with Keynes "effective demand " is not clear. There is no analysis of the inflation process ."Money is assumed to accommodate" , and "money wage is the linchpin of the price level". .These assumptions are substitutes for a money theory.

- The reference of national currencies rates of exchange to Purchasing Power Parity

At an international level and in the absence of a gold standard, national currencies' exchange rates ostensibly depend on the market and on private financial traders. The main currencies are to-day traded against one another at a floating exchange rate, without any official rate being set as a benchmark. Cassel's 1917 Purchasing Power Parity theory had tried to provide a real market foundation for all exchange rates regimes between currencies . It is still being used today to ascertain whether national currencies are "overvalued" or "undervalued" against one another. The aim here is to turn the floating exchange rate system into a benchmark for different regimes and monetary policies.

The principle of PPP is well known. A commodity (or a basket of commodities) having everywhere the same qualities and use value , and produced in several countries at once and circulating freely amongst them , has varying national monetary prices. These prices are supposed to reflect variations in national currencies' purchasing power in terms of the identical commodity .This refers to "the law of one price " on a competitive international market. . P and P* are the domestic prices of the universal commodity within two countries, and the rate of exchange between their currencies is quoted as the number of units of domestic currency per unit of foreign money. The equilibrium rate of exchange should be $e=P/P^*$. Measured in the same currency used as an accounting unit , the commodity should have the same equilibrium price when $P/e.P^* =1$This would provide a solidly embedded yardstick for currency exchange rates.

Why are different versions of this PPP story still used to-day ? It implies the dream of a perfect competitive world market where some commodities are submitted to "the law of one price". But the critic cannot be limited to real market imperfections. It should consider that in the PPP theory, money functions are reduced to only one, the unit of account, which can be used only within a country, or as a universal standard..This means that national currencies could be homogenous as if they were domestic units of account of the same international tabular standard.

J..M. Keynes 1930) used tabular standards to measure the purchasing power of money upon commodities and "labour units". He rejected "the alleged intrinsic value of money". .But he criticized "the law of one price" included in PPP conception According to him, any international price standard should be different from notional currency standards. These depend on domestic consumption expenditures and labour wages which have national determinations. Other differences between countries generate "international complications" when there is an international money standard ."The immediate interests of countries may be divergent. The balance of power between them may be affected by political initiatives, for instance when a powerful country can influence the international situation to suit herself" .It was the case for Great Britain during the gold standard regime, from 1880 to 1913. After the World War I, " owing to her immensely holdings of gold, the U.S. was able to obtain the combined advantage of a local and an international standard "(1930, II, 337) . Keynes proposed that any international standard, gold or world commodities standard, was managed by a

"Supranational Authority" .A PPP self-regulating mechanism of international equilibrium has no sense.

Marx had distinguished "national spheres of circulation" ,where "the establishment of a standard of prices is the business of the state" from the international market where gold circulates as "money of the world", which functions as "a means of payment in the settling of international balances" of nations.. In his notes edited by F.Engels (Capital, vol.3,1883), Marx tried to show how capitalist crises are extended from England to all countries through their balance of payments problems . However the specific position of London as "the center of the world money-market" was evocated by F.Engels interpolation (1883 :370) but this does not show how the central position of Great Britain was supported by the British Empire . All nations are under the pressure of an international "law of value" but thy have unequal positions..

2) The significance of the Dollar standard

Since the world war II, the dollar is the universal unit of account, and it is used, for instance, to qualify GDP differences and relative poverty in different countries. .In financial transactions, dollar is the main currency vehicle for inter-banks foreign exchange trade. In line with traditional functions of money, dollar is the main reserve currency for non American Central Banks, and a safe haven for private owners of foreign currencies.

This does not mean that the US dollar is a world currency. Its benchmark status requires a common assent from countries that compete with United States. Since the end of the Second World War this assent had different aspects. The Bretton Woods agreements in 1944 had established a "gold exchange standard" regime based on fixed but adjustable exchange rates. The main capitalist States' currencies could no longer be converted into gold-money when they circulated domestically, although they could be converted by Central banks into gold bars (at a fixed price) when foreign trade operations were involved. The late 1960s Dollar crisis, one aspect of which was the outflow of one-half of all U.S. gold reserves, killed this system in 1971. In 1973 a regime predicated on floating exchange rates between the major currencies was established. This was followed by several "currency wars", mainly between the Dollar, the D-Mark and the Yen. Exchange rates fluctuated considerably. For example, in 1979 a Dollar could be purchased with 5 French Francs, versus 10 French Francs in 1982.

These events recall that the US dollar is not a universal money .Whatever the superiority of American economy may be ,the dollar standard needs an international support that has different political forms. For instance, the American president R. Reagan asked to the leaders of the major capitalist countries to intervene , in 1985 and 1987, first to avoid an excess rise in the dollar market exchange rate , and later to avoid an excessive fall . Such ad hoc monetary did not concretise institutionally. However the main Central banks intervene in the odd occasion. The floating rates of exchange is not self regulating . But no regime of exchange rates can be quite self supporting We have suggested above that the eminent role of sterling as a standard during the gold standard system was supported by the British imperial policy .The access of national currencies to gold as "universal money" was different and unequal

After World War II, the "-gold-dollar-standard" worked until 1971. Then the new situation of the U.S. which was on longer an international creditor but had become a debtor , generated gold drains, while within this leading country inflation surged . In 1971 President Nixon disconnected gold from the dollar. In 1973, the main capitalist countries, agreed to a new regime of exchange rates, a floating one, supposed to be a-self regulating market process. However, "(t)he absence of a world nominal anchor to take the place of gold, the pound of the dollar ",generates" a conflict inherent in the dual role of the dollar as America's currency and the world currency"(Jeffrey Frankel 1992:701). In 2003 we may see how direct imperial measures try to solve this contradiction. The neo -liberal order and the stability of the currency market are not self regulating. Does this mean that there is some international law of value which becomes more active when there are increasing economic conflicts between national interests?

We have seen that the international standard has a function of means of payment, -reserves of non American Central banks, safe haven for private owners of foreign currencies. However there is a recurrent debate about the constant American current account deficits and the growing external debt .which must be financed by foreign funds. The debate over the conditions attached to the currency standard role did open up again in 2003 as a result of the dollar's relative weakness versus the Euro, a trend that began in mid to late 2002 and lasted in 2003., but the constant deficit in the country's external current accounts was presented in many different ways. One was that constant rises in U.S. external debt are inevitable since the U.S. acts as locomotive for world growth. Most experts feared that the dollar standard regime could be damaged This would mean however that if dollar is to remain the international currency standard, its deficits will have to be financed by non-American countries or private investors. They think that the floating rates of exchange is the best guaranty for currencies' PPP.

The discussion focused upon the China currency, the Yuan, which is, like some other Asian currencies, pegged to the US dollar(The Economist, 30august 2003), and in terms of PPP this currency is undervalued . The Yuan should be allowed to float, to correct its undervalued status, a weapon that gives China exports to the US an unfair advantage, and increase the American trade deficit . The Chinese government is pressed to let the Yuan float. However the Chinese monetary authorities invest their reserves in the US public bonds , thus financing the American deficit, and consolidating the dollar standard ; the floating exchange rate regime is a cause for concern, given that one day Chinese private investors may be free to do something else with their dollars asides from purchasing US public bonds.

There is no universal money standard forced upon all nations by a world State. The gold standard regime did not survive to imperial competition between the main capitalist countries. We don't know now long the dollar standard will maintain its current role. The contemporary capitalist credit system is not delivered from the "monetary constraint" which is inherent in commodities trade. The attempt to force a system of o world capital markets and credit relations on all nations paves the way to the dollar standard . But the U.S. nation is not a world Empire.. Other capitalist nations are her rivals, even if they accept the dollar' hegemony. .Integration of the world capitalist economy is a contradictory process: it reflects "a law of value", but it is submitted to national differences between production territories The complex relationship between capitalism and imperialism should be once more discussed .

These suggestions should be fleshed out by an analysis of the role that a "law of value" plays in determining the conditions of circumscribing international capitalism's operations today. The affirmations made in the present text are limited in scope, the goal having been to show that currently dominant economic reasoning lacks a satisfactory theory of money (or of the functions thereof). By using Marx's analyses (with or without gold, in its commodity form or a gold standard) we can highlight contradictions in a capitalist credit regime that manifests, in a variety of new forms, a persistent money question that is concretised in the role played by a currency standard that is much more than a mere unit of accounting. This question includes an analysis of states intervention, and of the balance of power between capitalist states. There is no self-regulating market equilibrium of currencies. Money is never "neutral". How does this translate a "law of value" a la Marx? This is a question for all of us.

* The present text was written to enhance further discussion at a seminar organised by Fred Mosely. The references accompanied by an asterisk refer to other texts presented at this same seminar.

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