The Banking School and the monetary thought of Karl Marx

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1. Introduction

Extensive research has been carried out on both the Bullion and Currency Controversies since Wicksell's (1905) contribution. In this literature Marx's views on the Controversies have been inadequately explored. This is surprising when one considers Marx's theoretical preoccupation with Ricardo, the main exponent of the Bullionists. It is also surprising in view of the fact that Marx did the bulk of his economic research in London just after the peak of the Banking Controversy. Comments on the latter can be found throughout his mature economic work.

Amon (1984) has gone a long way toward filling this gap in the literature. His central argument is that Marx's mature understanding of money hoards (reserves) as regulators of monetary circulation was influenced by Tooke, the pillar of the Banking School. Amon also points out that Marx was influenced by Tooke's distinction between gold, fiat money and banknotes as qualitatively different forms of money.

Section 2 of this article is concerned with the latter point. There is no doubt at all that Marx's analysis of the forms and functions of money was influenced by the views of the Banking School. However, Marx also claimed that

[n]one of these writers take [sic] a one-sided view of money but deal [sic] with its various aspects, though only from a mechanical angle without paying any attention to the organic relation of these aspects either with one another or with the system of economic categories as a whole. (1970, p. 186; see also Marx, 1976, n. 35, p. 225)

This article argues that Marx's monetary theory attempted to establish the 'organic relation' of the various aspects of money, apparently lacking from the work of the Banking School. Put briefly, Marx started his analysis by positing money as the 'independent form of value', a commodity with its own value, and then proceeded to derive the functions of money. In deriving the latter he linked the evolving forms of

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1 Some seminal contributions in this literature are, Viner, 1937; Morgan, 1943; Fetter, 1965.

2 In Western literature, more accurately. Marxist treatments of the Bullion and Currency Controversies and of the theoretical issues regarding credit money, have been influential in Japanese literature. See, for instance, Aramaki, 1957, 1958; Hirata, 1961; Watanabe 1984.

3 For example, Chapter 34: The Currency Principle and the English Bank Legislation of 1844, in Capital III.

4 See also De Brunhoff, (1976), Part I, for some illuminating comments.
money to the performance of particular functions. Thus, gold coin and state fiat money were associated with the function of means of circulation. Credit money, a more developed and advanced type of money, was associated with the function of means of payment. No such theoretical order can be found in the work of the Banking School.

The structured approach preferred by Marx was not a mere fancy of his Germanic philosophical training, alien to the British pragmatism of the Banking School. Theoretical rigour allowed Marx to establish the characteristic behaviour of gold coin and fiat money in circulation (as well as to ascertain the tendency of fiat money to generate price inflation), whilst retaining his original view that money is a commodity. By the same token, for Marx, the feature of credit money qualitatively distinguishing it from gold and fiat money was that credit money returned to its point of issue (a cyclical path in circulation). The influence of the ‘law of the reflux’, the much-maligned theoretical innovation of the Banking School, can be detected here.1

This type of analysis is far from irrelevant for contemporary theory. Marx’s procedure suggests that the unqualified inclusion of depository money, banknotes and coin in a uniform monetary aggregate is problematic. It also suggests that the theoretical connection of depository money with money’s functions—means of payment and store of value—should be more fully explored with a view to establishing the specific way in which different types of depository money intervene in the sphere of exchange. The spirit of Marx’s analysis would lead us to expect significant qualitative differences among the various types of depository money, as well as significant qualitative differences between deposits and other forms of money.

There are further issues of substance in the theoretical relationship between Marx and the Banking School. Wicksell (1905, Vol. II, ch. IV, section 7) found that much of the critique of the Quantity Theory offered by the writers of the Banking School was ‘excellent’. Yet, according to him most of their theory was of a negative character: they powerfully criticised the Quantity Theory views of the Currency School, but offered no satisfactory positive arguments on how the presumed alternative direction of determination, i.e. from prices to money, actually worked. In more recent literature, Green (1982) has argued that the critique of the Quantity Theory by the Banking School and Marx was internally inconsistent on the grounds that both implicitly accepted Say’s Law.

Section 3 of this article turns to Marx’s critique of the Quantity Theory and examines the implications of this critique for Marx’s own monetary theory. The monetary analysis in Capital II is important in this connection. Capital II is mostly concerned with analysing the fundamental exchanges between producers of producer goods, producers of consumer goods and workers. The primary concern of Marx’s complex schemata was to establish theoretical feasibility conditions for the material and the value reproduction of the total social capital. Nevertheless, developed elements of a theory of monetary circulation—building blocks for the ‘alternative’ theory of the connection between aggregate prices and quantity of money—can also be found in this part of Marx’s work.

In Capital II Marx went some way toward constructing a model in which the movement of money is subsidiary to the movement of capital. In this model money hoarding appeared as a vital element of the reproduction of capital.

1 But see Skaggs (1991) for an unusually sympathetic account of Fullarton’s law, influenced by the recent free-banking debate. Skaggs (1991, p. 459) finds the law ‘[a]n essential part of a genuine theory of competitive banking’ and lays heavy emphasis on what he thinks is a clear distinction between the Reflux and the Real Bills Doctrine. He agrees with ‘standard texts’ that the latter is a fallacy but insists that in the actual work of Fullarton there is ‘[e]vidence against the claim that he subscribed to the Real Bills Doctrine in the form in which it is usually stated’ (p. 471).
Amon is, in my view, right to argue that Marx borrowed insights from Tooke on the issue of monetary hoards. However, Marx turned these insights into the foundations of a theory of circulating and hoarded money which went beyond the work of the Banking School. Marx's work was indeed in the anti-Quantity Theory tradition of Steuart (1767), Tooke, (1959) and Fullarton (1845), but it was also a significant development of that tradition.

2. The Banking School and Marx's view of the forms and functions of money

According to Marx (1970, p. 174), a characteristic flaw of Ricardo's monetary theory was its disregard of money's functions other than as a medium of circulation. All the money of a country at any moment in time was in circulation, actively facilitating the realisation of output. This implicit assumption allowed Ricardo (1951) to put forward his version of the Quantity Theory of Money, treating the issue of banknotes by the Bank of England as tantamount to gold production. Ricardo thus argued that increases in prices and decreases in the sterling exchange rate during the Napoleonic Wars resulted mainly from increases in the quantity of the notes provided by the banking system.

Marx's own theory had a highly structured view of the functions of money (Rosdolsky, 1977, pp. 135–6). His theory started with the essence of money (the 'universal equivalent' or 'independent form of value'), posited as the practical resolution of the contradictions between use-value and exchange-value (Marx, 1976, ch. 1). From this starting point, three functions were derived in strict logical sequence: measure of value, means of circulation and money as money (which includes the dimensions of money as hoard, as means of payment and as international money) (Marx, 1976, ch. 3). A logical (and historical) thread ran through the analysis, establishing the point that money is not what money does, but, on the contrary, what money does is a consequence of what money is. The derivation, put extremely sketchily, went as follows: the commodity 'universal equivalent' becomes established because other commodities express their value in its substance, hence its first function is to measure values and set prices. After prices have been set they have to be 'realised' in the market, therefore, the measure of value must pass from hand to hand and the 'universal equivalent' functions as means of circulation. (Marx, 1970, pp. 86–7). The first two functions follow from the fundamentals of market processes, they are (for lack of a better term) internal to market processes. However, regular and developed commodity exchange also poses the need for the 'independent form of value' to intervene in the markets from without. Circumstances regularly appear in which the 'universal equivalent' is called upon to confront exchange as an external social force, namely, agents have to be able to buy and sell at all times, deferred payments have to be settled, international transactions have to be settled. Money functions 'as money' in answering these needs.

The order of Marx's derivation is related to the development of the process of exchange: while measure of value corresponds to rudimentary exchange and means of circulation to generalised market processes, the full functioning of money as money takes place in advanced capitalist exchange. The development of the form of money is also central to the argument: the 'universal equivalent' is one commodity among the many and measures value in units of its substance, e.g. bags of salt, ounces of gold; performing the function of means of circulation leads to the emergence of metallic coin, and of state

1 The connection between form and function of money, the spontaneous emergence of symbol money and the function of store of value are more fully analysed in Lapavitsas (1991).
fiat money which symbolises and replaces metallic money naturally worn out in the act of circulation; performing the function of money as money leads to the emergence of credit money (banknotes) (e.g. Marx, 1976, pp. 221–2, 1970, p. 116), a point which I shall develop below.

Close association of form with function allowed Marx to derive strong conclusions, entirely consistent with his initial premise of commodity money. State fiat money suffers from a key weakness; it is means of circulation par excellence, belongs exclusively to the sphere of circulation, and has no value outside it.

Once the notes are in circulation it is impossible to drive them out, for the frontiers of the country limit their movement, on the one hand, and on the other hand they lose all value, both use-value and exchange-value, outside the sphere of circulation. Apart from their function they are useless scraps of paper. (Marx, 1970, p. 119, italics in the original)

The lack of an obvious way out of domestic circulation gives to the quantity of circulating fiat money a peculiar determination: the state appears capable of augmenting this quantity at will, but has difficulty in effecting downward adjustments. This peculiarity of Prussian paper Thalers, Russian paper Roubles and, above all, French Assignats, was central to Marx's understanding of the hyperinflations of the eighteenth century. Repeated and frequent issues of such money (other things, such as commodity values, metal value and velocity of money, being roughly equal) led to a collapse of its exchange ratio against commodities. The reason was that, unable to exit from circulation, the quantity of fiat money ballooned while the quantity of metallic money replaced by it (and determined by commodity values and velocity) remained unaffected. Therefore, each unit of fiat money tended to symbolise less and less of metallic money (Marx, 1976, pp. 224–5). Since commodity prices (expressing unchanged labour-time) were denominated in units of fiat money, it followed that, for their nomenclature to be preserved, prices had to rise commensurately with the depreciation of fiat money.

There was no assumption in this account that increases in the quantity of money led to a rising eagerness to spend and thus, eventually, to higher prices. Despite formal similarities with the Quantity Theory, Marx did not argue that increases in fiat money represented fresh money demand, other things being equal. Rapid fiat money inflation was instead seen as the outcome of a blind, ineluctable process of re-adjusting the measurement of value. This was a process similar to the turbulence precipitated by a change in the value of the monetary metal:

If that value falls, the fall first shows itself in a change in the prices of the commodities which are directly exchanged with the precious metals at their source. The greater part of all other commodities, especially at the less developed stages of bourgeois society, will continue for a long time to be estimated in terms of the former value of the measure of value, which has now become antiquated and illusory. Nevertheless, one commodity infects another through their common value-relation so that their prices, expressed in gold or silver, gradually settle down into the proportions determined by their comparative values, until finally the values of all commodities are estimated in terms of the new value of the monetary metal. (Marx 1976, p. 214)

By this token, fiat money inflation was the way in which the disturbed measure of value became once again compatible with the function of means of circulation. Through inflation, commodity circulation re-asserted its pre-eminence over the state's apparent ability to determine at will the quantity of fiat money (Marx, 1970, pp 118–22).

This theoretical treatment of fiat money immediately reveals how much Marx owed to the Banking School, but also shows the superior explanatory power of his approach.
Tooke (and Fullarton) clearly distinguished between Assignat-type money and banknotes (typically those of the Bank of England, but also of country banks). Tooke accused his opponents of not understanding the difference between these two types of money and, thus, trying to impute Assignat-like tendencies to banknote credit money (Tooke, 1959, ch. III). The Banking School argued that Assignat-type money was unrelated to credit processes and could well generate sustained price inflation. However, they did not account for the mechanism of such inflation with precision equal to Marx's, and similarly free from the notion that more money creates fresh demand. Arnon (1991, pp. 110–112) noted that the mature Tooke had an 'income theory of prices', a barely elaborated view which held that aggregate money prices ('general prices' in Tooke's terminology) were determined by the sum of money which constitutes the income of consumers, hence effective demand. Fluctuations in the amount of convertible banknotes stood for mere changes in the composition of such demand. Fluctuations in the amount of inconvertible fiat money represented changes in the level of demand. Tooke (1959, pp. 70–1) argued that,

A compulsory government paper, on the other hand, while it is in the course of augmentation, acts directly as an originating cause on prices and incomes, constituting a fresh source of demand in money, depreciated in value as compared with gold, but of the same nominal value as before.

This is a partial return to the Quantity Theory, the result, first of Tooke's lack of a theory linking money's essence to its forms and functions and, second, of his rudimentary theory of price formation. There is no such lapse in Marx.

The theoretical relationship between Marx and the Banking School was substantially more complex as regards credit money. For the Banking School, banknotes were a way of advancing bank credit, primarily in the discount of bills. Precisely because they were a type of bank credit, banknotes also tended to flow back to the banks as customers repaid their debts, purchased gold, or opened deposits. On the basis of this 'law of the reflux', the Banking School countered the Ricardian theory of 'overissue' of banknotes as the explanation for price rises and exchange rate falls.

The Banking School view that credit money differs qualitatively from other forms of money was echoed by Marx:

> Credit money belongs to a more advanced state of the social process of production and conforms to very different laws. (1970, p. 116, italics in original)

Marx, however, also related credit money to the functions of money. Money functions as means of payment in the settlement of debt, i.e. in relations of credit and in the supersession of simple buying and selling; for Marx this is where credit money 'takes root'.

But it may be noted in passing that just as true paper money arises out of the function of money as the circulating medium, so does credit money take root spontaneously in the function of money as the means of payment. (Marx, 1976, p. 224)

Thus, while state fiat money is plain means of circulation, banknotes are a complex form of money, related to credit operations and to the function of money as money (means of payment).

1 Arnon (1984; 1991) does much more justice than Gregory (1928) to the great man's views. Arnon discusses the mature views of Tooke as well as the path of Tooke's mental development.

2 The clearest exposition of 'the law of the reflux' was given by Fullarton (1969, pp. 67–68).
It is not unreasonable to surmise that some version of the 'law of the reflux' underpinned Marx's view of what constitutes the distinctiveness of credit money. There are several pointers in this direction. Marx himself attributed the discovery of the 'law' to Steuart (1767): 'The second law discovered by Steuart is that currency based on credit returns to its point of departure' (Marx, 1970, p. 166, italics in original). Rosdolsky, (1977, p. 144, n. 11), has also noted that in the Grundisse Marx mentions the tendency of banknotes to return to their point of issue—the 'bent-back on itself' character of their movement. More significantly, only in the light of the reflux can it be appreciated why Marx devoted considerable effort to elaborating the movement of gold money in circulation. He stressed that gold coin tended to move farther and farther away from its point of entry in circulation, its path having a random shape (Marx, 1970, p. 102; see also 1976, p. 210). The random path of metallic money stands in stark contrast to the cyclical path of the banknote, indicating a qualitative difference between the two.

Associating credit money with the function of means of payment is an appealing aspect of Marx's theory, but it should be stressed that credit money was not analysed by him in a manner comparable to fiat money. The 'very different laws', alluded to above, were largely untheorised in the corpus of his work. Presumably, Marx's method dictated that the analysis of credit money should follow that of interest-bearing capital and banking, work which he left unfinished in Capital III. Whatever the reason for it, this lacuna weakens the power of Marx's discussion of monetary and credit crises in Capital III. In this respect, and despite the lesser rigour of their theorising, the Banking School have left a fuller legacy for monetary theory.

Modern monetary theory is not particularly interested in the path of money in circulation: different types of deposit, banknotes and coin are indistinguishable qua means of circulation. Marx's analysis suggests that credit money (primarily deposits in the modern banking system) should be systematically related to the function of money as money, particularly means of payment and store of value. If a cyclical movement is indeed the differentia specifica of credit money, there is surely some significance to the fact that modern Central Banks have the monopoly of banknote issue (collapsing all points of entry and exit from circulation into one), as well as to the fact that modern banknotes are not issued in bill discount. Furthermore, the cyclical movement of depository money (involving the cancellation of such money as debt is repaid) could also be fruitfully examined as part of the study of the supply of money and of the money multiplier. In this respect, the functional equivalence between different types of deposits, typically assumed by mainstream theory, has to be demonstrated and cannot be taken for granted.

3. Monetary circulation and the role of money hoards in the accumulation of capital

Exogenous changes in M

It is well known that Marx and the Banking School writers rejected the Quantity Theory of Money: the direction of determination runs from prices to money and not vice versa. This is tantamount to stating that the quantity of money is the endogenous, dependent variable of the process of exchange. For this assertion to have any theoretical weight—particularly under conditions of metallic money in circulation—it must also be argued that the whole of the money stock of the economy is divided into an actively circulating part and a hoarded part. Hoards are then the repository of money which becomes disengaged from circulation as well as the source from which fresh money is added to circulation.
The existence of hoards makes it possible for determination to run from prices to money as the money stock is appropriately and continually readjusted between hoard and circulation. Of necessity the Banking School (Tooke, 1959, ch. II; Fullarton, 1845, ch. IV) stressed the existence of hoards and emphasised the hoarding function of money. Money hoarding is very important to Marx's analysis of domestic monetary circulation, in which hoards act as regulators of the circulating quantity of money by constantly absorbing and releasing money (e.g. Marx, 1976, pp. 231–2). Amor (1984B) has pointed out that in this respect too Marx was influenced by the Banking School. Green (1982) makes much the same point. It is worth stressing that, similarly to Tooke and Fullarton, Marx also emphasised the role of money hoards in international trade and in the settlement of foreign balances. A unique and extremely interesting feature of Marx's monetary theory (Marx, 1970, pp. 126–36), moreover, was to discuss hoards as a repository of social power in class societies.

In his influential article, Green (1982) argued that the classical opponents of the Quantity Theory (in which he includes mainly the Banking School and Marx) accepted Say's Law of Markets and assumed that saving and investment were identical. According to Green (ibid., p. 62), Marx thought that 'output simply expressed the stage of accumulation' and consequently failed to provide an analytical mechanism identifying the level to which output would tend in the event of a crisis of overproduction. Green, following Garegnani (1978–79), further argued that Ricardo, the main advocate of the Quantity Theory in the nineteenth century, also accepted the identity of saving and investment. Thus, for Green, neither the supporters nor the opponents of the Quantity Theory were in a position to develop a theory of output determination.

To demonstrate the significance of this for monetary theory, Green employed the $MV=PY$ form of the equation of exchange, $Y$ being total output rather than the number of commodity transactions. Naturally, velocity $V$ no longer reflects the circulation of a stock of commodities but the rate of expenditure of a flow of income (corresponding to a flow of output) (Green, 1982, p. 63). Say's Law implies that both $Y$ and $V$ are fixed exogenously. For the opponents of the Quantity Theory, furthermore, $P$ was determined independently (on the basis of the law of value) therefore $M$ was the dependent variable in the equation. The problems, as Green sees them, appear when theory has to analyse exogenous increases in the money supply. Since $Y$ is constant either $P$ or $V$ will have to adjust to a change in $M$. The Banking School and Marx argued that $V$ rather than $P$ would do so (through hoarding or dishoarding). Given, however, that they had failed to rebut Say's Law, and so implicitly accepted an exogenously determined $V$, their opposition lacked 'logical consistency'. Ricardo's argument that $P$ would adjust to the change in $M$, at least possessed consistency. Marx and the Banking School should have provided a theory of saving and investment determination if they wanted to be consistent. Green sees this as the crucial flaw of their attack on the Quantity Theory.

The claim that Marx's critique to the Quantity Theory was internally inconsistent on account of his acceptance of Say's Law is surprising. It is well known that Marx unequivocally rejected Say's Law, 'childish babble' unworthy of a Ricardo (Marx, 1969, p. 502), and dismissed its 'insipid' originator (Marx, 1970, p. 168). Say's Law was not important to Marx's monetary analysis, either explicitly or implicitly. To establish this we shall turn to the monetary dimension of Marx's capitalist reproduction schemata. Green (1982, p. 62) observes in passing that the reproduction schemata developed by Marx are evidence that he accepted Say's Law. I shall argue below that those models actually demonstrate the remarkable consistency of Marx's monetary work.
Marx's opposition to the Quantity Theory, it seems to me, had little to do with the velocity of money. The nebulous concept of 'income velocity' (i.e. money income somehow realised by the whole of the money stock and accorded an abstract rate of expenditure) was alien to Marx's analysis. There is no evidence at all that Marx used the concept of income velocity (a mere analytical device derived ex post facto by the simple division of income by money), much less that his analysis implied its constancy. For Marx, and typically for the classical economists, velocity referred to circulating money and was determined ex ante by the institutional, technical, geographical and other features of production and exchange (Marx, 1973 p. 187). Hoarding and dishoarding did not affect the velocity of circulating money but its quantity. The spirit and method of Marx's monetary analysis was, rather, to question the very concept of an 'exogenous' increase in the money supply. This is clear from the scorn he reserves for Mill's 'arbitrary and trite' assumptions in increasing, ceteris paribus, the quantity of money and postulating proportionate increases in prices: 'If then it is indeed "evident" that one has assumed what one has pretended to prove' (Marx, 1970, p. 181). Theoretical exercises based on the identity of exchange were seen as pointless by Marx.

The same point emerges even more clearly from Marx's critique of Ricardo's (1951) Quantity Theory. Marx (1970, pp. 171–2) agreed with Ricardo's initial premise that money is a commodity with its own value. This he saw as an advance on Hume's (1875, vol. I, pp. 312 and 321) view of money as mere symbol having 'chiefly a fictitious value'. However, Marx powerfully criticised Ricardo for abandoning his own premise as soon as he had to ascertain its implications for the determination of the quantity of money in circulation. Instead of doing this, Ricardo took flight into the complexities of the price-specie-flow mechanism and tried to relate presumed exogenous changes in the quantity of money to changes in domestic prices and the rate of exchange. For Marx, this was a theoretical retrogression toward Hume's position. Only if money was symbol and not a commodity with its own value could Ricardo argue that circulating money (including gold) would depreciate if its quantity (exogenously) grew beyond the bounds dictated by the 'needs of commerce'. Ricardo's assertion implied that 'if the gold in circulation is a token of value representing either a larger or a smaller value than it actually possesses. It can become an appreciated or depreciated token of itself' (Marx, 1970, p. 173). Since Ricardo effectively took money to be a symbol of value, he also had a resolution for the disequilibrium close to hand: domestically depreciating gold would be exported thereby reducing the quantity of money until the depreciation was annulled. The symbol of value would once again have an exchange rate with commodities consonant with the 'needs of commerce'.

Marx's specific criticisms of the price-specie-flow mechanism are not material to our purposes, but his methodological point is of critical importance. To Marx's mind, Ricardo should have proceeded to tackle the difficult theoretical problem of specifying how commodity money enters and leaves the sphere of circulation as the material reproduction of society takes place. Ricardo instead chose to deal with exogenous increases in the quantity of money, thus developing what Marx saw as a wrong theory in the price-specie-flow mechanism and implicitly abandoning the correct assumption that money has its own value.

The structure of Marx's monetary work in Capital reflects his own view about the correct procedure. The opening chapters of Capital I contain a detailed discussion of money's functions and forms in circulation, Marx's own complex version of the identity of exchange, and an analysis of hoarding as regulator of circulation. Marx established
these results for 'simple circulation', i.e. for market processes analysed in abstraction from the complexities and implications of capitalist production (De Brunhoff, 1976, part 1). Phenomena such as the exploitation of labour, the equalisation of the rate of profit, the formation of prices of production distinct from values, were assumed not to have a bearing on the general results concerning the functions, forms and quantity of circulating money. There is no analysis of monetary phenomena in the rest of Capital I—certainly no attempt to analyse the impact of an exogenous increase in the quantity of money.

Monetary analysis reappears when Marx turns to capitalist reproduction as a whole in Capital II, but it does so in a way which is easy to misread or to ignore. In Capital II, the 'simple circulation' results of Capital I were taken for granted, assumed to apply uniformly in capitalist circulation (Marx, 1976, pp. 261 and 400). Commodity and money capital, regardless of their manifold peculiarities, are, after all, commodities and money: 'However, none of the laws put forward with respect to the quantity of money circulating for the purpose of commodity circulation (Volume 1, Chapter 3) are in any way altered by the capitalist character of the production process' (Marx, 1978, p. 406). These 'laws', though, still did not specify the economic factors which initiate commodity flows and elicit the entry and exit of money from the sphere of circulation. Furthermore, they provided no theory of how the re-division of a country's monetary stock between circulating and hoarded money takes place. These are the questions which should have been dealt with by Ricardo.

Marx began to tackle these issues and I shall summarise his results below. However, it is easy to overlook this aspect of his work. The reason is, I think, that monetary phenomena were treated by Marx as a secondary aspect of the process of capitalist reproduction. Pride of place in his analysis was given to commodity flows necessary for the material reproduction of society. Flows of money and stocks of hoards were posited as by-products of the flows of capital and of the economic decisions initiating the latter. The monetary function of the hoards, for instance, is not at all the reason for their formation. Hoards were shown to emerge for reasons specific to the process of real accumulation, the redivision of a country's monetary stock being an inevitable side-effect. The argument (against the Quantity Theory) that monetary phenomena are subsidiary to the circulation of commodities, (e.g. Marx, 1970, p. 103) was consistently applied throughout Marx's work.

This has a bearing on Green's critique of Marx. Contrary to what Green argues, for Marx the monetary analysis of simple commodity exchange reaches a dead end when the identity of exchange, \( MV=PT \) is posited. All that can be said about monetary phenomena from the study of simple commodities and money, has been said. Theoretical exercises based on exogenous changes in \( M \) are meaningless and potentially misleading. Nowhere in his work does Marx undertake such a pointless labour. Even less does he try to demonstrate that the velocity of money takes the strain of an exogenous increase in \( M \). Instead, and perfectly consistently with the logic of the economic categories, Marx undertakes the examination of capital circulation and begins to derive monetary processes from the fundamentals of such circulation. The entire model of capitalist reproduction constructed by Marx is also an abstract representation of monetary circulation elicited by the circulation of commodities (more accurately, of commodity capital). It is a painstaking demonstration of how \( M \) enters and leaves the sphere of circulation under conditions of capitalist exchange.

The influence of the Banking School on Marx's work can be seen in this respect too, although Tooke and the others did not achieve a similarly accurate theoretical
formulation of the issues involved. Tooke’s monumental *History of Prices* was not, on the whole, concerned with exploring the effect on prices of exogenous changes in the money supply. In his mature anti-Quantity Theory work, Tooke explained actual changes in the money supply, which could have been construed as exogenous and thus as the initiators of price fluctuations, in terms of prior price changes. His normal practice was to establish the reasons for the latter through the examination of the conditions of demand and supply obtaining in the major markets, mainly the markets for agricultural produce. With the enormous empirical knowledge which so impressed his contemporaries, and with an equally enormous facility for mundane, repetitive work he investigated in this manner the changes in the English money supply during two-thirds of a century.¹

*Money flows and hoards in the reproduction of capital*

Marx’s reproduction models in *Capital II* represent a closed system of capitalist reproduction (i.e. only the capitalist and the working class are assumed to exist and there is no mode of production outside the capitalist one). The modern concept of equilibrium is not applicable to the schemata of reproduction and there is no level of output toward which the system tends. The schemata are, rather, theoretical examinations of the feasibility of capitalist reproduction as a closed system. Our aim in going over this well-trodden ground is very narrow: to summarise Marx’s monetary results and to show that they develop the analysis of simple commodity exchange. These issues are relatively neglected in the modern literature.² We shall be concerned with the movement of the total social capital rather than individual capitals. To further the discussion we will employ the concept of the circuit of capital (best thought of as a circular flow diagram) (Fine, 1975, p. 47):

\[ M - C = (lp + mp) \cdots P \cdots C' - M' = (M + \delta M) \]

*M* is the total money capital advanced by the bourgeois class in order to purchase the social output of means of production, *mp*, and to employ labour-power, *lp*, (together comprising commodity capital *C*). Exploitation at the point of production, *P*, results in the generation of surplus value (contained in commodity capital *C*), the money form of which is aggregate profit *δM*. Surplus value could be unproductively consumed by the bourgeois class, thus leading to the simple reproduction of capital, or it could be partly re-invested leading to expanded reproduction and the generation of more profit in the next turnover. The return to the money form at the end of *C' - M'* takes place as capitalists purchase the requisite means of production, and as both capitalists and workers purchase their means of consumption out of the output of the last turnover. The division of the total social capital into competing individual capitals is not significant in this connection. The appropriate distinctions are those which Marx himself employed in

1 Subsequent literature has pointed out that the absence of index number analysis and the lack of modern econometric techniques seriously weaken the validity of Tooke’s work as far as the relationship between the aggregate price level and the money supply is concerned. It is beyond the purpose of this article to examine this further but two points should be made. First, on the basis of Tooke’s figures, Aron (1991) has estimated price and money indices and established econometric relations consistent with the claims of the Banking School. Second, it is the case, perhaps, that the vast improvement in technical sophistication has not actually increased our insight into these questions. Econometric demonstrations of causality are not necessarily superior to Tooke’s concrete historical and institutional treatment of empirical questions.

2 The most notable exception is De Brunhoff (1976). De Brunhoff intensively analysed the financial requirements for equilibrium in Marx’s reproduction schema and assigned to hoards a key role in the process. However, she did not discuss the import of this for monetary circulation. In other words, the relevance of the reproduction schema to the discussion of the Quantity Theory of money and the process of hoarding as a redivision of the money stock at the macro level were not analysed.
his analysis, namely (i) the distinction between the bourgeois class and the working class, and (ii) the distinction between Department I, the production of the means of production, and Department II, the production of the means of consumption.

The monetary side of Marx’s analysis of capitalist reproduction was characterised by preoccupation with two issues. The first was to specify the economic decisions which set money in motion—decisions which ‘precipitate’ money into circulation, but also remove it from the sphere of circulation. The second was to elaborate the creation and the role of money hoards as the fundamental exchanges take place in the model. At all times, these objectives took second place to the main task of theoretically demonstrating the feasibility of the reproduction of the total capital. The monetary analysis presupposed the results of simple circulation, particularly the determination of the quantity of circulating money as well as the constant redivision of the monetary stock of a country.

MoneY FLOws. With regard to the issue of money flows, Marx identified four types of economic decisions which initiate the movement of money in the sphere of circulation; (i) the purchase of constant capital from Department I by all capitalists, (ii) the hiring of workers by all capitalists, (iii) the subsequent purchase of consumption goods by workers from Department II, and (iv) the purchase of consumption goods from Department II by capitalists engaged in unproductive consumption.

There is substantial complexity in those exchanges and Marx’s equilibrium results do not concern us here. What is important for our purposes is that, in all the above instances, money’s initial entry into circulation is triggered by capitalists who have to undertake reproduction steps. This is consistent with Marx’s claim that all the money which enters circulation has its ultimate source in the bourgeois class (Marx, 1978, pp. 407–9). The size of the monetary advances in the model—hence the magnitude of the flows of circulating money—is already determined by the value-forming processes connected with production. The advance of variable capital for the hiring of workers, for instance, has its size already determined by the given values of labour-power and of the money unit.

From the study of the exchanges Marx drew the following result regarding the nature of money’s movement in capitalist circulation:

- The general conclusion that follows, as far as concerns the money that the industrial capitalists cast into circulation to mediate their own commodity circulation, is that whether this is advanced on account of the constant value portion of their commodities, or on account of the surplus-value existing in those commodities in so far as it is spent as revenue, the same amount flows back to the respective capitalists as they themselves advanced for monetary circulation. (Marx, 1978, p 477)

The fundamental characteristic of the circulation of money in capitalist exchange, in so far as it can be surmised from the exchanges of capital reproduction, is its broadly cyclical form. One of the fundamental sets of exchanges analysed by Marx (1978, pp. 477–8) will suffice to clarify the typical movement. Department I capitalists advance their variable capital to hire workers. These workers proceed to purchase means of consumption from Department II capitalists. The latter now have the money to purchase means of production from Department I and in so doing they return this money to the initiators of the process. The advance of variable capital by Department I capitalists anticipates the purchase of means of production by Department II capitalists. This basic pattern is constantly repeated in the exchanges which complete the reproduction of the social capital. By moving cyclically, money connects different sections of the total social capital,
and enables those sections continually to realise their own output as well as to facilitate the realisation of the output of others.

The cyclical aspect of the circulation of money in the reproduction of capital should not be confused with the reflux, and so the cyclical movement, of credit money. It is a much more fundamental movement, and it reflects the underlying movement of the total social capital. The point simply is that the various sections of the bourgeois class constantly alternate between advancing and receiving money as capital is reproduced. This constant alternation of roles imparts to the circulation of money its underlying cyclical aspect.

The old problem of the 'realisation' of the surplus, which has in the past exercised Marxist economists (Luxemburg, 1951; Luxemburg and Bukharin, 1972) also exemplifies Marx's general approach to the issue of monetary circulation. This point was, incidentally, missed by Bukharin (Luxemburg and Bukharin, ch. 2) in his critique of Luxemburg's resolution of the 'realisation' problem through a third Department producing the monetary metal, gold. The question asked by Marx—which 'neither Tooke nor anyone else has yet answered' (Marx, 1978, p. 405)—is, where does the extra money come from in order to realise the profit of the capitalist class? The answer has to be given with the velocity of money assumed constant because velocity is determined by conditions exogenous to the model of capital reproduction. Equally, the answer must be given without reference to credit—i.e. the capitalists borrow the extra money—since the reproduction of the capitalist mode of production is not necessarily predicated upon the existence of a developed credit system.

As De Brunhoff (1976, p. 61) notes, the problem does not exist as a separate financial or monetary problem. At both stages $M - C$ and $C' - M'$ the general results of simple circulation still apply, and so the quantity of money will be commensurate with commodity prices, money velocity and so on. The origin of the money 'realising' surplus value will be the same as that of all other money. At most, 'realisation' is a variant of the more general problem dealt with throughout Capital II, namely, what are the economic decisions which activate the entry of 'extra' money in the sphere of circulation? Marx naturally resolves the problem in its general form and argues that capitalists themselves have to provide more money funds at stage $C' - M'$ than they took out of circulation at stage $M - C$. A flow of money sufficient for the purchase of total surplus value will have to come out of hoards or from returning money capital, its movement triggered by the purchase of capitalist consumption goods and/or investment goods. Even in dealing with this 'non-question', Marx provides the answer in distinctly anti-Quantity Theory terms of a macroeconomic activity (consumption of surplus-value) which triggers the entry of money into circulation and a size of monetary flow determined by profit, in turn determined in production.

**Money hoards** The second monetary issue elaborated in the schemata of reproduction was the role of money hoards. Marx's approach throughout Capital II was to demonstrate the emergence of such hoards as an inevitable by-product of the process of reproduction. Money hoards emerge when surplus-value is stored until it reaches a size sufficient for re-investment (Marx, 1978, pp. 158–9 and 162–4), from the sale of the final product over a long period of time (ibid. p. 566), from the amortisation of the value of constant capital (ibid., pp. 572–4), from the output of the gold producers which is immediately money (ibid., pp. 410–412), as reserve funds which capitalists possess when they commence the circuit of capital (ibid., pp. 164–5). These hoards enable the various
sections of the bourgeois class to supplement the re-advance of returning money capital, to start fresh circuits, to turn buyer and payer without having sold first. Money hoarding is both inevitable and necessary in capitalist reproduction.

It was also clear to Marx that the hoarding and dishoarding actions, undertaken independently by various sections of the bourgeois class, must come to an equilibrium for reproduction to be possible. He stressed that unilateral purchases by one section of the bourgeois class (dishoarding) were a necessary counterpart to unilateral sales (hoarding) by another section.\(^1\) A permanent tension and a need for balance exists between hoarding and dishoarding. As De Brunhoff (1976, p. 69) notes, this 'balance of hoarding' should be distinguished from the saving and investment balance necessary for material reproduction.

This is most clearly seen when Marx examined the replacement of fixed capital and the expansion of reproduction through the re-investment of surplus-value (Marx, 1978, pp. 524–5). Consider the replacement of fixed capital: at some stage in the process of reproduction a section of the bourgeois class throws a previously accumulated, additional lump sum of money into circulation, seeking to replenish its fixed capital. If, for ease of exposition, we assume simple reproduction, the extra money represents a money demand above the normal output of Department I. It follows that reproduction will certainly be disrupted unless the money capital hoarded by the sections of the bourgeois class which are amortising their depreciating fixed capital actually balances out the sudden injection. The same point can also be made regarding the exchanges of expanded reproduction. In general, some capitalists will not be expanding reproduction, therefore they will be hoarding realised surplus-value. The dishoarding sections, on the other hand, must be able to throw enough fresh money into circulation to purchase the additional producer goods which already contain surplus-value and which will allow the expansion of reproduction (Marx, 1978, pp. 572–7). Such unilateral decisions to hoard and dishoard by different sections of the bourgeois class will not immediately and automatically balance each other out. The monetary implications are profound, as Marx constantly reminds the reader:

In the first volume (Chapter 3, 3, a) it was shown that although part of the money present in a society always lies fallow in the form of a hoard, while another part functions as means of circulation or as an immediate reserve fund of directly circulating money, the proportion in which the total quantity of money is divided between hoard and means of circulation constantly alters. In our present case, money that has to be accumulated on a large scale as a hoard in the hands of a big capitalist is thrown in circulation all at once on the purchase of fixed capital. It is then divided up again in the society between means of circulation and hoard. By way of the amortization fund in which the value of the fixed capital flows back to its starting point in proportion to the wear and tear, a part of the money in circulation again forms a hoard—for a longer or shorter period of time—in the hands of the same capitalist whose hoards was transformed into the means of circulation and separated from him in the acquisition of fixed capital. (1978, p. 261)

As the capitalist class continually re-adjusts its money hoards, and for reasons entirely unrelated to the monetary functions of hoards, society’s monetary stock is redivided between circulating and hoarded money.

In the study of the reproduction schemata, Marx gradually elaborated the hoarding processes and the generation of money flows, instrumental to the determination of the quantity of money in circulation. The monetary analysis in Capital II is, therefore,

\(^1\) See Fine, 1980, p. 20, for a diagram which makes this point easier to follow.
the necessary supplement of *Capital I* and of the *Contributions*. Marx, as Armon pointed out, was indeed influenced by the Banking School’s view of the monetary role of hoards, but he also attempted to establish the structural sources of hoards independently of the simplicities of commodity exchange or the verities of the identity of exchange. Neither Tooke nor Fullarton had comparable theoretical insights to offer. Marx, therefore, gave necessary depth to the anti-Quantity Theory tradition. Wicksell (1905, Vol. II, p. 150) seems not to have appreciated this aspect of Marx’s work when he attacked his treatment of money velocity as ‘absurd’. Far from Marx’s monetary thought being inconsistent, it actually exhibits a remarkable consistency throughout his economic work.

It is not pretended here that Marx’s analysis was complete, especially as regards the significance of trade and banking credit for the hoarding process, the role of banks in transforming stagnant money into loanable capital, the implications of the emergence of bank-generated credit money for the form of capitalist hoards, and, above all, the role of the state in the process. However, it seems to me that Marx’s work provides useful guidelines for the examination of those questions insofar as it treats the processes which bring money into circulation, and the processes which create money hoards, as endogenous to the accumulation of capital and determined outside the sphere of exchange. There are no concessions here to exogenous shocks representing changes in money demand. The movement of money is cyclical: it obeys the logic of the circulation of commodity capital and is elicited by the latter.

4. Conclusion

The aim of this article is to argue that, while Marx as a monetary economist was significantly influenced by the anti-Quantity Theory tradition, his own work provided necessary foundations for the arguments of that tradition. In this respect his monetary writings remain significant sources of learning for monetary economists. I have attempted to demonstrate the main argument in two different but closely related ways. First, it was shown that Marx was indeed influenced by the views of the Banking School on the multiplicity of money’s functions, particularly the significance of the hoarding function. Yet, and I believe this to be characteristic of Marx’s general approach to economic theory, Marx proceeded to incorporate these functions into a monetary theory which cohered closely with the theory of value. The Banking School recognised neither a clear order nor the existence of logical and real connections among the functions of money. As a result, their analysis of the connection between money and prices did not have the coherence and consistency of that of Marx.

Second, and perhaps more important, Marx agreed with the Banking School on its anti-Quantity Theory stance, but went beyond it in providing theoretical foundations for the view that determination runs from prices to money and not vice versa. This was not done by analysing the impact of an exogenous increase in the money supply, a nonsensical way of proceeding. Instead, Marx deduced the key features of capitalist monetary circulation whilst undertaking the analysis of the reproduction of capital. The entry of money into the sphere of exchange was shown to be endogenous to the theoretical schema and elicited by commodity circulation. The redivision of the total monetary stock between hoarded and circulating money was built into the model, and the path of the flows of money in the reproduction of capital was shown to be cyclical.
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