THE EMERGENCE OF MONEY IN COMMODITY EXCHANGE, OR MONEY AS MONOPOLIST OF THE ABILITY TO BUY

COSTAS LAPAVITSAS

DEPARTMENT OF ECONOMICS
SCHOOL OF ORIENTAL AND AFRICAN STUDIES
THORNHAUGH STREET, RUSSELL SQUARE
LONDON WC1 0XG, UK
CL5@SOAS.AC.UK

ABSTRACT

Money's emergence in commodity exchange remains a unresolved issue within economic theory. Current general equilibrium models, drawing on Menger, offer an explanation that rests on the economic advantages of a universally accepted means of exchange that is established through 'social custom'. This is problematic because it does not fully explain money's unique ability to buy, and leaves out of account the social foundations of the customary practices required for money's emergence. An alternative explanation is given here, drawing on Marx's theory of value but involving a thorough reworking of it. Money is shown to be the monopolist of the ability to buy. 'Social custom' plays a vital role in its emergence, but has determinants that are consistent with the social underpinnings of markets.

1.Introduction: the problem of money for general equilibrium theory [*]

In the pure world of general equilibrium, replete with symmetric information, a full complement of contingent markets and absence of transactions costs, there is no room for money. All trading takes place in one period and trade is effectively barter. But capitalism is a profoundly monetary economy. [1] The characteristic feature of a monetary economy that is most difficult to account for in general equilibrium was put as follows by Clower (1967, 5, emphasis in original): '*Money buys goods and goods buy money; but goods do not buy goods*'. Alternatively, 'A commodity is regarded as money for our purposes if and only if it can be traded directly for all other commodities in the economy.' (ibid. 5). [2] Thus, in a monetary economy there is an irreducible asymmetry between money and other commodities: money is the only commodity that can buy all others.

Given Clower's conjecture, money can be introduced into general equilibrium models in several ways, all related to its function as means of exchange. [3] There have been 'cash-in-hand' models, suggested by Clower himself (ibid.) in which the sum total of gross purchases is assumed to be equal to the sum of money held at the beginning of the trading period. There have been models that rely on transactions costs and sequential trading, as suggested by Hahn (1971, 1973) in which money acts as an efficient means of transferring purchasing power from one period to the next. There have also been models in which money acts as means of exchange reducing the costs of multilateral direct trading among commodity owners, pioneered by Niehans (1969, 1978). [4]

Mathematically complex and elegant as these models can be, they are inherently limited as theoretical abstractions relevant to a capitalist economy. If a generally acceptable means of exchange (money) was assumed to be already in existence, it would not much of an achievement to show that exchange that used money was cheaper and smoother than exchange that did not. The real question is, how does a commodity

become a generally acceptable means of exchange through processes endogenous to market trading? It is intuitive that the answer is related to Clower's conjecture: if a good had unique buying power, that would be *prima facie* grounds to employ it as means of exchange. But then the question would simply appear in an even more profound form: what are the processes endogenous to market trading that lead to a commodity acquiring the unique property of being able to buy all others?

A willingness to confront the issue of endogenous emergence of money has characterised general equilibrium theorising of money in recent years. Theory has focused on money's function as means of exchange (the main contributions being Jones 1976, Iwai 1988, Oh 1989, Kiyotaki and Wright 1989 and 1991). These models share a number of key features. It is typically assumed that commodities are inherently differentiated either because of the costs of transacting in them, or because of their 'marketability'. Commodity owners meet at random and engage in bilateral trade on a *quid pro quo* basis. They choose trading strategies by taking into account the cost of transacting as well as the 'marketability' of commodities that might be acquired in each transaction. It can then be shown in search-theoretic terms that the holder of commodity A might acquire commodity B despite not wanting it *per se*, if the 'marketability' of B was generally considered (through 'social custom') to be high enough.

The underlying reason is that, if belief in the 'marketability' of B was strong enough, other commodity owners would be likely to accept it in exchange, making it easier and cheaper for the owner of A to acquire commodities genuinely wanted for consumption. Commodity B would be carried by agents as a means of acquiring other commodities thus becoming a means of exchange, or money. This is claimed to be a demonstration of the spontaneous emergence of money. It is admitted, however, that it does not prove Clower's conjecture: 'It is hard to imagine why two agents who meet and happen to have a double coincidence in real commodities ... should not be allowed to trade without using fiat currency.' (Kiyotaki and Wright, 1989, 945, n.14). In short, it has not been shown why 'goods do not buy goods.' Be that as it may, there is no conceptual novelty in the recent general equilibrium work, save for the technical formalities of

modelling. Indeed, as is shown below, it is completely dominated by Menger's (1871, 1892) analysis of money's emergence, particularly with regard to 'social custom'.

This article offers an alternative analysis of money's emergence that rests on a strong interpretation and reworking of Marx's theory of commodity value. Money is shown to emerge out of the process of commodity exchange, and to be the monopolist of the ability to buy. Unlike general equilibrium theory, money is not derived as general means of exchange but as the commodity that can buy all others. The derivation makes no use of the heavily disputed Marxist concept of value as crystallised abstract labour. Rather, it rests on analysis of the economic relations arising between commodity owners in the course of exchange. Fundamental to it is the notion that commodity owners are differentiated into 'relative' and 'equivalent' in any transaction, in ways specified fully below. Finally, 'social custom' is shown to play a pivotal role in money's emergence, but its content is explicitly associated with the social underpinnings of markets.

Section 2 recaps Menger's analysis of money's emergence contrasting it to contemporary general equilibrium theory. Particular attention is paid to Menger's fundamental concept of 'saleableness' or marketability', and its connection with knowledge and 'social custom'. Section 3 summarises the 'riddle of money' from a Marxist standpoint and lays out the theoretical foundations for solving it. Sections 4, 5 and 6, respectively, discuss the economic content of the 'accidental', 'expanded' and 'general' stages of commodity exchange. The difficult logical problem of passing from the 'expanded' to the 'general' stage is discussed at length, and it is shown that Marx's resolution is unsatisfactory. Section 7, consequently, turns to 'social custom' and shows that it is necessary for transition to the 'general' stage'. But, in line with Marxist political economy, 'social custom' is here explicitly associated with the social underpinnings of trading. Section 8 then turns to the 'money' stage of commodity exchange and shows the importance of 'social custom' for the complete monopolization of buying power by money. Section 9 concludes.

3.Menger's analysis of the origin of money

For Menger (1892, 239) the emergence of the money commodity should be explained in terms of spontaneous action by individual market participants. Thus, he proposes the concept of 'saleableness' of commodities (ibid., 243, original emphasis):

> '*The theory of money necessarily presupposes a theory of saleableness of goods. If we grasp this, we shall be able to understand how the almost unlimited saleableness of money is only a special case, - presenting only a difference of degree – of a generic phenomenon of economic life – namely, the difference in saleableness of commodities in general*'.

'Saleableness' is defined by Menger in accordance with the absolute subjectivism of the Austrian school (O'Driscoll 1986). For Menger (1871, 248, original emphasis): 'A commodity is an economic good *intended* for sale. But it is not intended for sale *unconditionally*.' The ease or 'facility' with which the holder can obtain the required 'economic' price for the commodity defines its 'saleableness' or 'marketability'. Market factors determine 'saleableness', including the volume and intensity of the demand for the commodity, the geographical spread of the market, and the duration of demand (Menger, 1871, 241-247, and 1892, 243-245). Consequently, commodities have variable 'saleableness' or 'marketability'. Commodity owners benefit when they accept more 'marketable' commodities, even though they have no desire to consume them, because these make it easier eventually to obtain the desired objects of consumption (Menger, 1892, 247-248, and 1871, 259).

For individual commodity owners to behave in this way, they must possess knowledge about the 'marketability' of commodities. Along lines that have now become familiar within the Austrian school, Menger (1871, 261, see also 1892, 249) claims that: 'This knowledge will never be attained by all members of a people at the same time. On the contrary, only a small number of economizing individuals will at first recognize the advantage accruing to them from the acceptance of other, more saleable, commodities ...' To forestall circularity, Menger also states that: 'This advantage is *independent of a general acknowledgement of any one commodity as money*.' (1871, 261.) Rather, the

advantage is initially apparent to only a few market agents, who have acquired the vital insight that more 'marketable' are preferable to less 'marketable' commodities. Once a small number of agents have come to possess this radical insight, others will also partake of it as all agents habitually engage in exchange. The process is self-reinforcing: the more likely it is that others would accept the commodity, the more strongly it would be demanded in exchange, and the more its 'saleableness' would increase (White, 1984, 703). Generalisation of this knowledge across the market through custom and habitual practice among agents leads to eventual emergence of money (Menger, 1892, 248-249).

Contemporary general equilibrium models advance the same argument, except that 'marketability' is posited simply as a generally held belief that others would want to acquire a particular commodity. This belief is strongest for money hence commodity owners will strive to acquire it. Put differently, it is assumed that there exists a general expectation that money will act as money, which validates itself as soon as money acts as money. For Kiyotaki and Wright (1989, 928) existence of this belief is an unexplained 'social custom':

> '[a] critical factor in determining if an object can serve as a medium of exchange is whether or not agents believe that it will. In other words, the use of money necessarily involves strategic elements and certain aspects of 'social custom'.' [5]

But without a precise definition of 'marketability' and of the process through which it is established and acquired, 'social custom' means absolutely nothing at all. Thus, Menger's argument contains everything that contemporary models have to offer, and still more. But that does not mean that Menger's own argument is foolproof. By focusing exclusively on the function of means of exchange, Menger does not explain money's unique ability to buy, and offers no grounds on which to substantiate Clower's conjecture. Moreover, his discussion of 'social custom' and knowledge, vital as it is, involves no social processes outside the market and no analysis of the social underpinnings of markets. Ultimately, 'social custom' results from a shaft of light from

above, a revelation about 'marketability' that has struck some gifted individuals in the market.

3.'Anonymous' exchange and the 'riddle of money'

Marx (1867, 139) was the first major economist to realise the theoretical problem posed by the existence of money and tackle it directly:

'Now, however, we have to perform a task never even attempted by bourgeois economics. That is, we have to show the origin of the money-form, we have to trace the development of the expression of value contained in the value-relation of commodities from its simplest, almost imperceptible outline to the dazzling money-form. When this has been done, the mystery of money will disappear.'

Marx's analysis of the 'money-form' is part of his discussion of the exchange value of commodities. Exchange value is, on the one hand, a quantitative proportion between two commodities, a relative price. But, on the other, it is also a set of economic relations between two commodity owners. When exchange becomes general and involves large numbers of commodity owners, their economic relations unfold and give rise to money. In this process can be found a solution for the 'riddle of money', i.e. the emergence of the 'dazzling money-form'. Money can be shown to emerge as monopolist of buying ability, rather than as simple means of exchange. But demonstrating this point requires a thorough reworking of Marx's own analysis of exchange value, not least of 'social custom' and its connection with the social underpinnings of markets.

Following Marx (1939) we first differentiate between commodities and products in general. [6] The products of human labour are not immediately commodities but become so only under appropriate social relations of production, distribution and exchange. There have been several historical societies for which the bulk of products never became commodities. Equally, it is an easily observed historical fact that commodity trading has occurred under a great variety of social relations. In consequence, our initial assumption

is simply that the social relations underpinning markets are such that commodity owners can be alien and separate from each other when they come to trade. The market rests on social relations that enable it to be 'anonymous'. Commodity owners are primarily motivated by private gain and approach each other free of extra-market ties of kinship, religion, or hierarchical authority. Money as monopolist of buying ability results from economic relations among mutually alien market participants, whilst also becoming the social nexus that binds them together.

However, it is also shown below that money's emergence is impossible without certain 'social customs' and common perceptions held by market participants. This poses considerable conceptual and analytical difficulties because it implies 'eponymous' relations among commodity owners, involving collegiality, familiarity, trust, and moral obligation. This line of argument implies that the 'social custom' and perceptions that are necessary for money's emergence must also be compatible with an exceptional degree of estrangement among commodity owners. It is unusual to come across such a peculiar combination of social elements in the history of human society. Capitalist social relations, i.e. private profit-making through employment of wage labour, could allow for the extraordinary combination of, on the one hand, essential 'foreignness' among market traders, and on the other, 'social custom' prevailing among them. But the historical emergence of money long predates the establishment of a capitalist economy. Consequently, it is suggested below that money emerges historically where separate communities and societies come into contact with each other. At those points of economic interaction it is possible for traders to be mutually foreign and independent but still develop customary links with each other.

The basic analytical framework is as follows. Commodity owners are assumed to possess one (different) commodity each and to meet in pairs. Their interactions are random but only in the sense that any two among them could in principle meet. Commodity owners purposely seek others to engage in exchange, but it is assumed for simplicity that there are no search costs. They are also assumed to be unrelated and probably unknown to each other, lacking social or other ties (of rank, kinship, religion,

custom, or through the production process). The social background against which they interact is compatible with their essential foreignness, and their motivation by economic gain. Their interactions have an overwhelming economic (more strictly, commercial) content, which is fundamental for emergence of money.

The relevant part of Marx's work for our purposes is section 3 of chapter 1 of Capital, headed '*The value-form, or exchange-value*'. The resolution of the 'riddle of money' proceeds in four interrelated stages, the four 'forms of value'. For completeness it should also be mentioned here that in Capital and elsewhere (for instance, 1859, 42-46, 1939, 142-145) Marx develops a further and very different argument, namely that money emerges as the resolution for the contradictions between the use-value and the value (abstract labour) of a commodity. As value, the commodity is general, that is, homogeneous, divisible, simple; as use value, it is particular, that is, heterogeneous, indivisible, complex. The apparent contradictions between these two aspects of the commodity lead to continuous breakdown of barter, until money emerges representing value for all commodities. The contradictions are then 'pacified' because commodities are use values as themselves and values as something other, i.e. money.

This is an elegant example of Marx's dialectic, but the underlying economic argument is the same as that in Smith (1776, ch. V, vol. I) and Mill (1848, ch. VIII). Both identified the problems created for direct exchange by commodity heterogeneity, imperfect divisibility, lack of durability, etc. and both claimed that money was a solution. Neoclassical theorists, starting with Jevons (1875), were perfectly aware of the problem of the 'double coincidence of wants'. But they also realized that this problem could not provide a solution for the endogenous emergence of money. For, if money did exist, exchange would not continually break down, but how does the continuous breaking down of exchange lead to money's emergence? This is a trap that Menger (1892) avoided, whatever the shortcomings of his solution. That is not something that can be said about Marx's claim that money emerges as resolution for the contradictions between use value and value. For, if money did exist, the contradictions would be pacified, but how do the contradictions lead to money's emergence?

The solution for the 'riddle of money' found in the 'value-form' section of the first chapter of Capital, however, does not suffer from this weakness. Money's emergence is the outcome of a process, a 'becoming' that unfolds from the first stage onwards. The general method of proof is to demonstrate that each stage contains inherent economic processes that lead to the next, until the last stage, at which money emerges. Marx (1867, 139) claimed that the most difficult aspect of the demonstration is to analyse the first stage identifying the implicit reasons for money's eventual emergence. However, as is shown below, there are also major difficulties in proving the logical passage between stages. 'Social custom' plays a vital role in this connection, something that is not immediately evident in Marx's work.

4. 'The Simple, Isolated, or Accidental form of Value' – stage one

The accidental interaction between two commodity owners is captured by Marx (1867, 139) by the simple equality,

$$x \text{ of commodity A} = y \text{ of commodity B}$$

It is trivial that this is a symmetrical relationship. Nevertheless, Marx is at pains to identify a lack of symmetry between A and B: [7]

> 'Here two different kinds of commodities (in our example the linen and the coat) evidently play two different parts. The linen [A] expresses its value in the coat; the coat [B] serves as the material in which that value is expressed. The first commodity plays an active role, the second a passive one.' (ibid. p.139.)

Commodity A is called the 'active' or the 'relative', and commodity B the 'passive' or the 'equivalent'. Evidently, any relationship of equality could be reversed, but Marx claims that this does imply symmetry between the commodities:

'[i]n this case I must reverse the equation in order to express the value of the coat relatively; and if I do that, the linen becomes the equivalent instead of the coat. The same commodity cannot, therefore, simultaneously appear in both forms in the same expression of value. These forms rather exclude each other as polar opposites.' (ibid., 140)

In short, it seems that, for Marx, 'x of A = y of B' captures a different economic relationship from 'y of B = x of A'. But the content of this putative difference is neither immediately clear nor is it intuitive. Moreover, the undoubted formal equivalence between the two equalities is a constant source of confusion in Marx's own analysis, giving it an air of triviality or error. The interpretation suggested here is that the difference between the expressions refers to the economic relations that arise between the two owners. In 'x of A = y of B', the owner of A (the 'relative') approaches the owner of B (the 'equivalent') and makes a request of exchange by offering A for B. In 'y of B = x of A' the reverse holds true. Thus, whenever two commodity owners meet, one takes the initiative in making trade happen, and the other responds passively. Consequently, the economic relations between A and B are not the same when their 'relative-equivalent' positions have been reversed.

More specifically, it is suggested that, for trade to happen, the owner of A could address the owner of B advancing a request of exchange. In that case, the owner of A actively makes an offer to sell. By this token, B responds by acceding to or rejecting the offer of sale, i.e. by passively deciding to buy (or not). In short, sale corresponds to the actions of the 'relative' or 'active', while purchase to those of the 'equivalent' or 'passive' commodity owner (Itoh 1976). Thus, 'x of A = y of B' differs from 'y of B = x of A' because in the former A is sold and B buys, while in the latter B is sold and A buys. The clearest way to represent this asymmetry is to abandon Marx's confusing use of equalities and employ an arrow. The accidental interaction between two commodity owners is thus captured by:

$$x \text{ of } A \rightarrow y \text{ of } B \quad [8]$$

11

In this light, the economic content of sale differs from that of purchase. To sell is actively to propose exchange at a time and place of one's choosing, i.e. to reveal one's intention to exchange in a specific way. To purchase, on the other hand, is passively to consent to an offer of a sale, i.e. to accept the initiative of the seller. At this stage of the demonstration of money's emergence, commodity owners bring their goods to market with the undifferentiated intention of engaging in trade, thus they might assume either the active or the passive role without prejudice. It is shown below that, in the presence of money, commodity owners bring their goods to market with the active intention of selling them. Money-holders, on the other hand, enter the market with the aim of passively accepting offers of sale.

The suggested interpretation of 'active' and 'passive' commodity owners has nothing to do with searching for exchange partners. To be 'active' is not to search for a counterparty, and to be 'passive' is not to wait until an offer has been received. All commodity owners in principle search for suitable partners, but they do not thereby automatically assume the position of the 'active' party in trading. Rather, when two commodity owners actually meet, they have to establish a relationship between them, since they are (by assumption) unrelated and probably unknown to each other. One of the two has actively to take the initiative and make trade happen. This amounts to making an offer to sell, thereby placing the other in the 'passive' position. Thus, the terms 'active' and 'passive' refer purely to the economic relationship between commodity owners after they have met, that is, after searching is already complete. In short, to make an offer of sale is to make the opening gambit between two mutually unrelated and unknown commodity owners. [9]

The economics of the 'active-passive' relationship is pivotal for eventual emergence of money. The meeting of A and B was by assumption an 'accidental' or 'isolated' occurrence between unrelated individuals. Before coming to market, neither knew whether it was at all possible directly to engage in exchange. They also did not know what quantity of other commodities could be obtained in exchange. In Marxist

terms, the exchange value of their commodities was a matter of personal expectation and nothing more. When A and B engage in trade as the 'active' and 'passive' parties respectively, exchange value becomes far less hypothetical, but in very different ways for each. On the one hand, the owner of A declares unilaterally that its per unit exchange value is equal to y/x of B. On the other, the owner of B is informed that B could be directly exchanged with A. If the transaction actually took place, both pieces of information would be established as valid.

The most important result here is that, when an 'accidental or simple' exchange actually occurs, the 'equivalent' becomes directly exchangeable with the 'relative'. This is a property acquired by B that, at first sight, appears similar to Menger's 'marketability' or 'saleableness', namely the ease of selling commodities. But the commodity that is sold is A, while B buys. The direct exchangeability of B is precisely its ability to buy, which is neither an inherent nor a permanent feature of the commodity. It derives purely from the offer of sale made by A's owner, and it exists only in relation to A.

In this light, the emergence of money is a process through which one commodity acquires direct exchangeability with all others. One commodity becomes the 'equivalent' of all others because all others are automatically offered for sale relative to this single commodity. Money's emergence comprises four stages, starting with the 'accidental'. The method of proof, as already mentioned, is to identify economic processes present in each stage that lead to the next. Elements of 'social custom' are also necessary for the final emergence of money.

The relevant economic process is clear for the 'accidental' stage. Both the exchange value of A (i.e. y/x of B) and the direct exchangeability acquired by B are valid for 'x of A = y of B' alone. Therefore, they are both fleeting and partial properties, and have to be established afresh in the next transaction. But the way this might happen is neither certain nor predictable in 'accidental' exchange. First, the owner of A might not enter the market again (either at all or within a reasonable length of time) thus making it invalid to represent A's exchange value as y/x of B. Second, if A's owner did re-enter the

market, 'accidental' exchange might take place with commodity C. This would result in A's exchange value being represented in terms of C, as well as establishing direct exchangeability for C relative to A – leaving B out of the reckoning. Third, in the next transaction, A's owner might be the 'passive' party.

Nevertheless, the random aspect of the 'accidental' stage also provides a way out. In principle, A's owner could make an offer of sale to any and all other commodity owners. Provided that visits to the market could be repeated, this possibility becomes real and affects the position of A as a 'relative'. Namely, the full representation of A as a 'relative' requires an exhaustive list of 'equivalent' commodities. This introduces the second stage in the emergence of money.

5. 'The Total or Expanded Form of Value' – stage two

The 'expanded' stage comprises offers of sale made by A toward all the other commodity owners: [10]

$$x \text{ of } A \rightarrow y \text{ of } B$$
$$v \text{ of } A \rightarrow u \text{ of } C$$
$$z \text{ of } A \rightarrow w \text{ of } D$$
$$...$$

The asymmetry between 'relative' and 'equivalent' has been put on a different footing, since there is only A on the left-hand side and all others are on the right-hand side. This has implications for the 'relative'. A's per unit exchange value is represented simultaneously and across the market as a boundless set of quantitative ratios: $\{y/x, u/v, w/z, \ldots\}$. Hence A's exchange value is less of a partial property, since it is represented by all other commodities and not just one. It is also more permanent (less fleeting) since it again refers to all other commodities. Thus, at the 'expanded' stage, the exchange value of each commodity becomes an objective datum that all market participants take into account. There are also implications for the 'equivalent'. The ability to buy is spread

across the market, and is acquired by all commodities other than A. Correspondingly, it is both less partial and less fleeting compared to its presence at the 'accidental' stage. The ability to buy becomes a common property of commodities, one which commodity owners recognise as market reality.

Another way of putting the point is that at the 'expanded' stage both exchange value and ability to buy have become social norms. Exchange value is now an aspect of A that is recognised by market participants and incorporated into their trading practices. Market practice, furthermore, makes the property of direct exchangeability (buying ability) valid for all commodities - other than A. Nevertheless, both of these norms are purely market-based and lack deeper social origins. [11] Even worse, their foundations are slender because both originate in repeated and market-wide offers of sale made by a single commodity owner. In this light, money's emergence is the process through which both exchange value and the ability to buy acquire sounder social foundations, though still purely at the level of the market.

Specifying the economic processes that lead to passage from the 'expanded' to the 'general' stage is far from easy. There are logical and analytical difficulties with Marx's own discussion of the issue, considered below. For Marx (1867, 156) the 'relative' side is 'defective' because it is an endless series of different quantities of the same commodity, or in our terms, a boundless set of quantitative ratios. The economic forces at work here are clear to some extent. On the 'relative' side, the owner of A now offers x for y of B, next v for u of C, then z for w of D, and so on. Thus, for market participants, the terms on which A is offered for sale are irregular and extremely heterogeneous. In short, they lack generality. The norm of A's exchange value does not have a general character despite having market-wide breadth.

Analogously, for Marx (ibid.), the 'defect' of the 'equivalent' side is that it comprises an endless series of various quantities of different commodities. The economic processes implied are again clear, to an extent. All elements of the boundless set of other commodities receive direct exchangeability from A's offers of sale. But their direct

exchangeability is limited and encompasses A alone, since it derives from A alone. Thus, for instance, both B and C can immediately buy A. But to exchange with each other they have to go through the whole rigmarole of offer and acceptance/rejection, without any presumption at the outset as to which will be 'active' and which 'passive'. For the market as a whole, the norm of the ability to buy is thinly spread and has no generality at all.

The economics of the passage to the 'general' stage, however, is far from clear. Marx (ibid., 157) offers the following formal argument on this issue:

> 'In fact, when a person exchanges his linen for many other commodities, and thus expresses its value in a series of other commodities, it necessarily follows that the other owners of commodities exchange them for the linen, and therefore express the values of their various commodities in one and the same third commodity, the linen. If, then, we reverse the series 20 yards of linen = 1 coat, or = 10 lb. of tea, etc., i.e. if we give expression to the converse relation already implied in the series, we get [the general form of value]'

Thus, Marx makes the transition to the 'general' stage appear as the simple matter of rewriting a series of equalities in reverse order. It is shown below that this is formally unsatisfactory and has limited logical coherence. Moreover, it has nothing to say about the economic processes and decisions that lead to emergence of the 'general' stage. When these are considered, it becomes clear that passage to the 'general' stage cannot be a matter of pure economic argument alone. 'Social custom' and explicit consideration of the broad underpinnings of markets have to come into play.

6. 'The General Form of Value' - stage three'

The 'general' stage can be summed up as the following series of requests of exchange:

$$y \text{ of } B \rightarrow x \text{ of } A$$

$$u \text{ of } C \rightarrow v \text{ of } A$$

$$w \text{ of } D \rightarrow z \text{ of } A$$

$$...$$

This involves a profound transformation of both 'relative' and 'equivalent'. On the 'relative' side', the per unit exchange value of commodities is represented as quantities of A. This is a simple representation of exchange value that is held in common by all commodities other than A. Exchange value is now a market norm that applies to all commodities (bar one) placed in a set and with a common reference point. Hence, it is a general norm. Market participants can expect commodities to be offered for sale on terms that are regular and homogeneous, since they are couched in quantities of A. On the 'equivalent' side, A now possesses direct exchangeability with all other commodities, it can buy all others, it is the 'universal equivalent' (Marx, ibid. 159). The ability of A to buy derives from the offers to sell made by all other commodity owners, therefore it is not limited with respect to any other. It is unique and universal, turning A into money.

Consequently, it is imperative to demonstrate the logical necessity and the economic content of transition to the 'general' form. Marx's suggestion to rewrite the 'expanded' form in reverse order is hardly adequate, as can be seen in the following two ways. First, any set of n commodities can produce n(n-1)/2 pairwise exchange relations. If 'relative' and 'equivalent' were systematically distinguished from each other (i.e., 'x of A = y of B' was considered different from 'y of B = x of A') they would rise to n(n-1). Marx simply isolates (n-1) of those on the grounds that they all have the same commodity on the right-hand side. He then declares the single commodity to be the 'universal equivalent.' But then it follows immediately that there are n 'universal equivalents', since each one of {B, C, …} could also be isolated on the right hand side. Marx (ibid., 162) appears to forestall this objection by stating that: 'The universal equivalent form is a form of value in general. It can therefore be assumed by any commodity.' Yet, this is not logically sufficient. Simple reversal of the 'expanded' form does not show that *any* commodity could be the 'universal equivalent', but that *all* commodities are the 'universal equivalent'. But if all are the 'universal equivalent', none is.

Second, the 'general' form is supposed to contain a pronounced asymmetry between commodities, since only A possesses direct exchangeability with the others. Consider a simple diagrammatic representation of all possible bilateral exchanges within a set of four commodities, A, B, C, D:
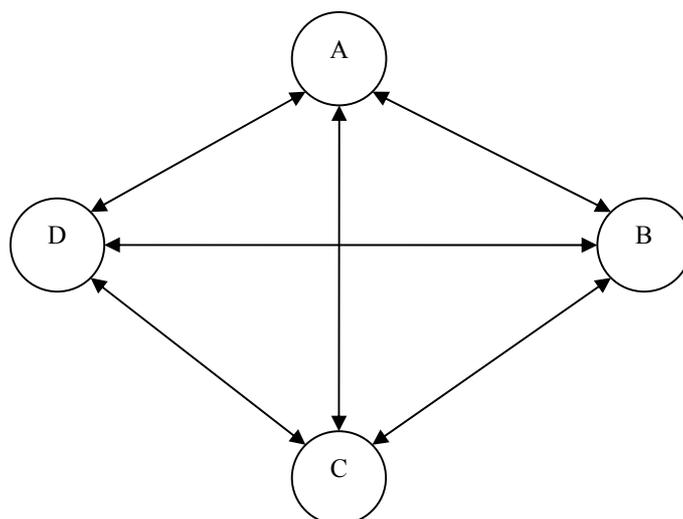
An arrow pointing toward a commodity indicates an offer of sale, and turns it into an 'equivalent.' If B, C and D were arbitrarily separated as a group of 'relatives' commodities, A would appear to stand out as the 'universal equivalent'. But for the group as a whole, the skein of bilateral relations exhibits no inherent difference between A and the others. All commodity owners make offers to all others, and all receive offers from all others: no commodity stands out and there is no universal asymmetry. None of the permutations {[B, C, D], A}, {[A, C, D], B}, {[A, B, D], C} and {[A, B, C], D} stands out. There is no universal and absolute asymmetry but rather a symmetric distribution of four instances of partial asymmetry. This does not single out any commodity at all.

The problem of passage to the 'general form' cannot be settled by simple reversal of the equalities of the 'expanded' form. Formally, for any set of commodities, such a

step would result in all becoming 'universal equivalents.' This indicates a deeper analytical problem. If market relations involve only sale and purchase, and if all commodities are equally capable of both, then all numerically equal sets of commodities are indistinguishable from each other. Plain buying and selling cannot make a particular set stand out thus isolating a 'universal equivalent.'

Menger was aware of the problem of establishing a relationship of universal asymmetry among commodities. Consequently, he argued at the outset that commodities are differentiated among themselves in terms of 'marketability'. Even so, he still had to make the assumption that a select few among commodity owners have a flash of insight about 'marketability', which eventually leads to money, given the 'social customs' associated with trading. Contemporary general equilibrium follows a similar path, without specifying the content of 'social custom'. In reworking Marx's analysis we differentiated between 'active' and 'passive' commodities in all bilateral transactions. But this is still not enough for emergence of a single 'passive' commodity for the entire set. It is shown below that, for an universal asymmetry among commodities to emerge, the role of 'social custom' is vital. This means primarily customary market practices (other than buying and selling) that take root among essentially foreign commodity owners.

7. 'Social custom' and the 'universal equivalent'

Despite his deficient formal argument of transition to the 'general' stage, Marx still offers decisive insight. Consider the following claim made in chapter 2 of Capital (182-3):

> The universal equivalent form comes and goes with the momentary social contacts that call it into existence. It is transiently attached to this or that commodity in alternation. But with the development of exchange it fixes itself firmly and exclusively onto particular kinds of commodity, i.e. it crystallizes out into the money-form. The particular kind of commodity to which it sticks is at

first a matter of accident. Nevertheless there are two circumstances which are by and large decisive. The money-form comes to be attached either to the most important articles of exchange from outside, which are in fact the primitive and spontaneous form of manifestation of the exchange-value of local products, or to the object of utility which forms the chief element of indigenous alienable wealth, for example cattle.'

This suggests that some commodities are more likely than others to become 'universal equivalents', namely those that foreigners bring to a community, or those that a community can most easily trade with others. This view accords with another claim made by Marx, found in several places (1867, 182, and 1939, 223, and 1894, 447-448) that trade historically arose at the point where separate communities came into contact each other, rather than within communities. The historical agents of trade were the 'pure trading peoples of antiquity' (Phoenicians and Carthaginians) who connected societies that did not rely on commodity exchange to ensure their reproduction.

Leaving aside the historical (and anthropological) accuracy of this claim, [12] it is evident that for Marx the social underpinnings of markets, even their physical and geographical configuration, are paramount factors leading to money's emergence. Commodity exchange was analysed above on the assumption that it is 'anonymous', that is, commodity owners are guided by economic benefits and remain unaffected by kinship, rank, religion and authority. Capitalist trade fits these requirements, but existence of money long predates the emergence of the capitalist mode of production. In historical terms, these requirements are also met by trade occurring between separate communities, where the social ties between traders are at their weakest. On such occasions, essential 'foreignness' could prevail among market participants and they could relate to each other purely as commodity owners. In contrast, economic interaction within non-capitalist communities cannot be extricated from the thick web of non-economic relations of power, prestige and kinship that pervade social life. Exchange is unlikely to be 'anonymous' within non-capitalist communities.

Marx's comment about the 'pure trading peoples of antiquity' reveals much about his thinking on money's origin and it is important to clarify it further. Note what Herodotus (1954, 307) had to say on Carthaginian trading with natives of 'Libya' (Africa) beyond the Pillars of Hercules:

'On reaching this country, they unload their goods, arrange them tidily along the beach, and then, returning to their boats, raise a smoke. Seeing the smoke, the natives come down to the beach, place on the ground a certain quantity of gold in exchange for the goods, and go off again to a distance. The Carthaginians then come ashore and take a look at the gold; and if they think that it represents a fair price for their wares, they collect it and go away; if, on the other hand, it seems too little, they go back aboard and wait, and the natives come and add to the gold until they are satisfied. There is perfect honesty on both sides; the Carthaginians never touch the gold until it equals in value what they have offered for sale, and the natives never touch the goods until the gold has been taken away.'

All essential components of trading between alien peoples are recorded by the great historian: the ever-present threat of violence (dealt with by avoiding face-to-face meetings) the offer of commodities for sale as the opening gambit between the trading parties, the representation of the exchange value of the 'relative' as a quantity of another, the direct exchangeability of the 'equivalent' (gold) and the market-related custom of honesty (probably induced by repeated trading visits).

In this light, 'social custom' is vitally important in creating the universal asymmetry among commodities necessary for money to emerge. Customary links among communities are likely to result in traditional chains of transactions, which involve some commodities more heavily than others. The traditional character of much pre-capitalist trade is well attested historically (Braudel 1982). Traditional transactions chains typically reflect the material and social environment within which trade takes place. In areas where cattle herding is favoured by geography and climate, cattle are more likely to be available for trade with outsiders; where captives are abundant from habits of raiding and war,

slaves will be readily sought in exchange by other communities; if salt can be easily produced, salt will be widely available for trade. The customary and traditional aspects of transactions chains result from repetition of trade over a long period of time. Timing, location, transport, ritual, and so on, are stamped by habitual practice.

It is plausible that transition to the 'general' stage occurs within chains of customary transactions repeated along established patterns. Such chains already separate a small number of commodities from the rest. They are also likely to contain one or more commodities that habitually attract several requests for exchange. For this to happen, there is neither a need for commodities to have special properties ('marketability'), nor for market participants to have any sudden insights about commodities. Pure chance, a sufficient length of time and frequent repetition of transactions are enough. Should a commodity find itself in the position of attracting several requests of exchange, through a combination of chance and custom, the asymmetry among commodities would be exacerbated through the following self-reinforcing process.

A commonly requested commodity acquires direct exchangeability with those that advance the requests. Its property of being able to buy those constitutes a new use value for it. Marx (1867, 184) calls it a 'formal use-value', that is, a use value which derives purely from the commodity's market functioning and is unrelated to its physical make-up. Consequently, the commodity is likely to attract further requests of exchange generated by its ability to buy alone. There is now an economic mechanism contributing to emergence of the 'general' stage. Since its new use value derives purely from other commodities being offered for sale against it, the more this happens, the stronger its ability to buy becomes, and the more it attracts further requests of exchange. The path has been laid for transition to the 'general' stage.

Thus, two factors are necessary for the 'expanded' to give way to the 'general' stage. The first is 'social custom' found in traditional transactions chains, increasing the probability that some commodities attract several requests of exchange at once. The second is the self-reinforcement of the ability to buy on economic grounds, as market

participants take advantage of the 'formal' use value of the isolated commodities. When the issue is posed in these terms, the problem of transition to the 'money' stage also becomes clearer. At any point in time, there are likely to be several separate traditional chains of transactions. There could also be more than one 'universal equivalents' within each chain. The implication is that commodity exchange gives rise to several 'monies', spontaneously and continually.

By construction, these 'monies' are in a mutually exclusive and competitive relationship with each other. They draw their ability to buy from requests addressed to them by a given set of commodities, but each is unable to buy the other 'monies'. Each is also unable to buy several of the commodities that belong to the set of another 'money'.
[13] The result is compartmentalisation and lack of unity of the market. From the perspective of the 'relatives', moreover, the presence of several 'monies' implies that exchange value lacks a single representation across the market - it is still not a general market norm. Passage to the 'money' stage resolves these issues, but to demonstrate how it occurs it is necessary to seek further recourse to 'social custom'.

8. 'The Money Form' – stage four

The 'money' stage can be summed up as the following series of requests of exchange:

$$1 \text{ of } A \rightarrow u/v \text{ of } C$$
$$1 \text{ of } B \rightarrow (xu)/(vy) \text{ of } C$$
$$1 \text{ of } D \rightarrow (zu)/(vw) \text{ of } C$$
$$...$$

The difference with the 'general' stage is that one commodity, C, stands on the right-hand side permanently. On the 'relative' side, the exchange value of commodities is permanently represented by quantities of C alone. Hence exchange value is a stable social norm that is also market-wide and general, but still only based on the market. On the

'equivalent' side, the ability to buy is stably monopolised by a single commodity. By construction, all other commodities are permanently offered for sale, and do not receive requests of exchange from each other.

The 'money' stage provides incorporates Clower's conjecture, which does not have to be imposed from the outside. Commodity owners come to market with the express purpose of offering them for sale against money, that is, they bring commodities to market with a definite per unit money price. However, unlike Clower, the money commodity is never offered for sale but always receives requests from other commodities. Commodities do not 'buy' money; only money buys, i.e. it monopolises direct exchangeability. In sharp contrast to general equilibrium analysis, moreover, money is not established as a general means of exchange, but as the commodity that can buy all others. If it functions as means of exchange, it is because it has a monopolistic power to buy.

This also deals with the major conundrum posed by Clower's conjecture, i.e. why should commodities not buy commodities directly, if their owners have a 'double coincidence' of wants and happen to meet? Why should they still use money? This is a conceptual problem arising purely because neoclassical economics focuses on money as means of exchange. In the formulation above, owners bring commodities to market already priced in terms of money, i.e. with the intention of selling them for money. There is no reversal to barter, even if they actually exchange commodities without the mediation of money. Money has already accounted for the exchange value of the commodities involved, allowing commodity owners to arrive at a relationship of equivalents. Indeed, with money present, it is not even necessary to exchange equivalents immediately. Since money accounts for value generally and stably, it is possible to exchange commodities by creating credit and debit obligations, a process that has nothing to do with barter. In short, the defining aspect of money's emergence is not that commodity owners universally employ it as means of exchange. Rather, it is that commodity owners universally seek money in exchange, i.e. they bring their goods to market already with a money price.

'Social custom' and the physical characteristics of commodities are vital to passage to the 'money' form. Several partial 'monies' emerge at the 'general' stage competing against each other, and drawing their comparative strength purely from the requests of exchange received. The requests also depend on the physical properties of these 'monies', and the extent to which these are compatible with the 'formal' use value of buying others. To use an oft-repeated example, ice cream could certainly be the 'universal equivalent', but its ability to buy would physically last far less than that of salt. Historically, the physical properties of the precious metals (homogeneity, durability, divisibility, and so on) have been instrumental in allowing them to monopolise direct exchangeability.

The 'social customs' attached to the other uses of the precious metals (as commodities rather than as money) are also likely to influence their use as money (Marx, 1867, 162). Commodity owners are habituated to precious metals as representatives of the value of commodities, since they are customarily used as jewellery, religious implements and expensive decoration. Once a single commodity (historically gold) starts to be used widely as money, the 'social custom' and habits associated with its use eventually allow it to beat other monies in competition, until its use becomes a social norm in itself.

9.Conclusion

Mainstream economic theory has not been successful at explaining the 'riddle of money' in commodity exchange. Contemporary general equilibrium analysis does not go beyond Menger's notion of 'marketability', while being decidedly inferior to Menger in discussing the role of 'social custom' in money's emergence. But Menger's analysis of 'marketability' is hampered by methodological subjectivism, which prevents him from establishing the social aspects both of money and of the customs that underpin it.

The solution for the 'riddle' suggested above, based on a reworking and strong interpretation of Marx's analysis of exchange value, is free of these problems. Money was shown to emerge through analysis of the 'form' of value, relying on the interplay between the 'relative' (or 'active') and the 'equivalent' (or 'passive') sides of exchange value. The 'relative' is the side that initiates the relationship between two mutually alien commodity owners by making an offer of sale. Correspondingly, the 'equivalent' is the side that might (or might not) accept the offer. The offer of sale gives to the 'equivalent' the ability directly to exchange with the good whose owner has made the offer. Money's emergence is a process involving four stages, through which the ability to buy becomes concentrated in one commodity among the many. The 'universal equivalent' possesses the highest degree of direct exchangeability with all others, and at the exclusion of all others. Money is the only commodity that can buy all others.

This solution highlights the social character of money's emergence. Money results from the collective action of other commodity owners and from 'social custom' associated with commodity exchange. Both Menger and contemporary general equilibrium models recognise the importance of 'social custom' in establishing and generalising the use of money throughout the market. But the constituent elements of such 'social custom' remain beyond the analytical compass of neoclassicism. In contrast, the solution offered here stresses the importance of the social background against which commodity exchange takes place. For money to emerge there must be autonomy and estrangement among exchange participants, but also traditional practices associated with markets. Money is generated spontaneously whenever unrelated and mutually unknown commodity owners interact with each other, but only because of their unplanned collective action framed by 'social custom'. The social relations created in this context require that one commodity should be able to buy all others. Money provides a concrete social nexus among mutually alien commodity owners because it has a monopolistic ability to buy that rests on the customs of trading.

NOTES

---

[1] Hahn (1982) is acutely aware of the problem, see also (1965).

[2] Clower's conjecture was advanced in critique of Patinkin (1965) for whom money buys goods but goods do not buy money. Clower found Patinkin's formulation 'nonsensical'. It is true that Patinkin did not stress the inability of commodities to buy other commodities, but that does not make his formulation 'nonsensical'. If it were shown that money monopolised the ability to buy and all commodities were simply offered for sale against money, it would also follow that commodities did not buy commodities.

[3] Ostroy and Starr (1990) give an excellent, if now dated, survey.

[4] Overlapping generations models should also be mentioned, which incorporate money along lines proposed by Samuelson (1958). They focus exclusively on money as store of value, rather than means of exchange (Wallace 1980) therefore Clower's conjecture seems unrelated to them. However, quite apart from these models' disregard of money as means of exchange, they also leave unexplained money's ability to act as store of value (means of hoarding). Yet, the function of store of value cannot be separated from what money is, i.e. from its monopoly of the ability to buy. The need to confront Clower's conjecture directly is not obviated by simply ignoring means of exchange. A fuller discussion of the interconnections between money's functions can be found in Lapavitsas (2000).

[5] In Iwai (1988) the same argument appears as the generally held belief that money will lower search costs. Validation of the belief occurs when money is actually used as means of exchange. This argument is sometimes given the weighty title of 'bootstrap' theory.

[6] For more on this point see Fine and Lapavitsas (2000).

[7] Emphasis on the asymmetrical relationship between commodity owners in the 'accidental' form of value is a hallmark of the Japanese Marxist Uno tradition (Itoh, 1976, Sekine, 1999, see also Sekine, 1997).

[8] Sekine (1999) has also used an arrow in this connection. I must thank Stergios Skaperdas for independently arguing in favour of using an arrow, thus persuading me to use Sekine's formulation.

[9] The two could also easily end up at war, their commodities becoming booty instead of objects of trade. There is no presumption here that exchange is a 'natural' state of affairs between human beings.

[10] This formal presentation of the 'expanded' stage is different from Marx's and not only because of the use of arrows. Marx (1867, ch. 1) writes 'x of A = y of B = u of C = w of D = …' This is a very confusing expression that makes it hard to grasp the economic content of the 'expanded' stage, especially the indeterminate character of the 'relative'. Marx also uses confusing expressions for the 'general' and 'money' stages.

[11] For commodity value to become a social norm with foundations deeper that the market, conditions of production also have to be appropriate. Specifically, capitalist conditions must prevail, such that money profits are systematically generated in production and accrue in commodity markets, while workers obtain money income in the labour market. Commodity value then becomes a deeply based social norm, summed up as 'abstract labour' (Fine and Lapavitsas, 2000.) Under such conditions, money has its own value as abstract labour, which does not impinge upon its monopolistic ability to buy, but creates complications regarding the prices at which commodities are bought (see Lapavitsas 2000).

[12] For discussion of these issues see Itoh and Lapavitsas (1999, ch. 2, 10).

[13] There is similarity here with Polanyi's (1957) 'particular' and 'general' money, but it is more apparent rather than real. For Polanyi and his school, 'particular' money has a limited purchasing range because it belongs to a non-capitalist society, whereas the money of capitalism is 'general' and has limitless ability to buy. However, the 'universal equivalent' analysed here could very well exist in non-capitalist societies. The partial 'monies' that arise as a result of custom are only intermediate steps in the monopolisation of buying ability and nothing else.

REFERENCES

Braudel F. 1982. <u>The Wheels of Commerce, vol. II of Civilisation and Capitalism, 15th-18th Century</u>, London: Collins.

Clower R. (1967). 'A Reconsideration of the Microfoundations of Monetary Theory', <u>Western Economic Journal</u>, 6(4) pp.1-8.

Fine B. and Lapavitsas C. (2000). 'Markets and Money in Social Science: What Role for Economics?', <u>Economy and Society</u>, vol. 29, no. 3, pp.357-382.

Hahn F. (1965). 'On Some Problems of Proving the Existence of an Equilibrium in a Monetary Economy', in Hahn F. and Brechling F., (eds) <u>The Theory of Interest Rates</u>, pp. 126-135, London: Macmillan.

- (1971). 'Equilibrium with Transactions Costs', <u>Econometrica</u>, 39, pp.417-439.

- (1973). 'On Transactions Costs, Inessential Sequence Economies and Money', <u>Review of Economic Studies</u>, 40, pp.449-461.

- (1982). <u>Money and Inflation</u>, Oxford: Blackwell.

Herodotus. (1954). <u>The Histories</u>, translated by A. de Selincourt, Harmondsworth: Penguin.

Itoh M. (1976). 'A Study of Marx's Theory of Value', <u>Science and Society</u>, vol. 40, no. 3, reprinted in <u>Value and Crisis</u>, 1980, London: Pluto Press.

Itoh M. and Lapavitsas C. 1999. <u>Political Economy of Money and Finance</u>, London: Macmillan.

Iwai K. (1988). 'The Evolution of Money - A Search Theoretic Foundation of Monetary Economics', CARESS Working Paper 88-03, University of Pennsylvania.

Jevons W.S. (1875). <u>Money and the Mechanism of Exchange</u>, London: Appleton.

Jones R. (1976). 'The Origin and Development of Media of Exchange', <u>Journal of Political Economy</u>, 84, pp.757-776.

Kiyotaki N. and Wright R. (1989). 'On Money as a Medium of Exchange'. <u>Journal of Political Economy</u>, 97, pp.927-954.

- (1991). 'A Contribution to the Pure Theory of Money', <u>Journal of Economic Theory</u>, 53, pp.215-235.

Lapavitsas C. (2000). 'Money and the Analysis of Capitalism: The Significance of Commodity Money', <u>Review of Radical Political Economics</u>, vol. 32, no. 4, pp. 631-656.

Marx K. (1859, 1970). <u>Contribution to the Critique of Political Economy</u>, Moscow: Progress Publishers.

- (1867, 1976). <u>Capital</u>, vol. I, London: Penguin/NLR.

- (1894, 1981). <u>Capital</u>, vol. III, London: Penguin/NLR.

- (1939, 1973). <u>Grundrisse</u>, London: Penguin/NLR.

Menger K. (1871, 1981). <u>Principles of Economics</u>, New York & London: New York University Press.

- (1892). 'On the Origin of Money', <u>Economic Journal</u>, 2, pp. 239-255.

Mill J.S. (1848, 1965). '<u>Principles of Political Economy</u>', Toronto: University of Toronto Press.

Niehans J. (1969). 'Money in a Static Theory of Optimal Payment Arrangements', <u>Journal of Money, Credit and Banking</u>, 1, pp.706-726.

- (1978). '<u>The Theory of Money</u>', Baltimore: Johns Hopkins University Press.

O'Driscoll, G.P. (1986). 'Money: Menger's Evolutionary Theory', <u>History of Political Economy</u>, vol. 18, no. 4, pp. 601-616.

Oh S. (1989). 'A Theory of a Generally Acceptable Medium of Exchange and Barter', <u>Journal of Monetary Economics</u>, 23, pp.101-119.

Ostroy J. and Starr R. (1990). 'The Transactions Role of Money', in Friedman B. and Hahn F., (eds) <u>Handbook of Monetary Economics</u>, Amsterdam: Elsevier Science Publishers.

Patinkin D. (1965). <u>Money, interest and prices</u>, New York: Harper and Row.

Polanyi K., Arensberg C. and Pearson H. (eds). (1957). <u>Trade and Markets in Early Empires</u>, Glencoe, Ill.: Free Press.

Samuelson P. (1958). 'An Exact Consumption-Loan Model with or without the Social Contrivance of Money', <u>Journal of Political Economy</u>, 66, pp. 467-482.

Sekine T. (1997). <u>An Outline of the Dialectic of Capital</u>, London: Macmillan.

- (1999). 'Marxian Theory of Value: An Unoist Approach', <u>Chiiki Bunseki</u>, Aichi Gakuin, vol. 37, no. 2, pp.99-136.

Smith A. (1776, 1904). 'The Wealth of Nations, Cannan E., (ed) London: Methuen.

Wallace N. (1980). 'The Overlapping Generations Model of Fiat Money', in Kareken J. and Wallace N., (eds) Models of Monetary Policy, Minneapolis: Federal Reserve Bank of Minneapolis.

White L. (1984). 'Competitive Payments Systems and the Unit of Account', American Economic Review, vol. 74, no. 4, pp. 699-712.