

INTRODUCTION

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Marx considered his theory of money to be one of his main accomplishments and a significant advance over Ricardo's theory and classical economics in general, which had simply taken money for granted, or explained the existence of money in *ad hoc* fashion, on the basis of the practical difficulties of barter, unrelated to any theory of value.

Now, however, we have to perform a task never even attempted by bourgeois economics. That is, we have to show the *origin of this 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 immediately disappear.
(Marx 1867, p. 139; emphasis added)

According to my interpretation of Marx's theory of money, Marx derived the necessity of money in a commodity (or market) economy from his fundamental assumption of the labor theory of value, in the crucial but often neglected Section 3 of Chapter 1 of Volume 1 of *Capital*.² Very briefly, Marx's argument in Section 3 is the following: Each commodity is in principle equal to all other commodities, because of the abstract labour that they all contain (as derived in Sections 1 and 2). In order for each commodity to be equal in practice with all other commodities, the quantity of abstract labour contained in commodities must be observable and comparable in some objective, socially recognizable form. However, the quantities of abstract labor contained in commodities are not directly observable as such. Therefore, these quantities of abstract

¹ This introduction represents my interpretation of Marx's theory of money. A number of the authors in this book disagree with my interpretation, as will be evident from their papers. I have benefited from suggestions for the introduction from almost all the authors, especially Riccardo Bellofiore, Geert Reuten, and Chris Arthur. The remaining errors are mine.

² Mark Blaug misses entirely the importance of Marx's derivation of the necessity of money. Blaug states: "The reader will miss little by skipping over the pedantic third section of chapter 1 on which the hands of Hegel lie all too heavily." (1985, p. 268)

labor must acquire an objective “form of appearance” which renders them observable and objectively comparable. This necessity of a common unified form of appearance of the quantities of abstract labor contained in commodities ultimately leads to the conclusion that this unified form of appearance must be money. The key characteristics of money - homogeneous quality and definite quantities - are derived from these same characteristics of abstract labour. The “simple” form of value is “insufficient” (p. 154) and the “expanded” form of value is “defective” (pp. 156-57), because these forms do not adequately express the quantities of abstract homogeneous labour contained in commodities.³

Marx summarized this conclusion at the beginning of Chapter 3:

Because all commodities, as values, are objectified human labour, and therefore in themselves commensurable, their values can be communally measured in one and the same specific commodity, and this commodity can be converted into the common measure of their values, that is into money. *Money as a measure of value is the necessary form of appearance of the measure of value which is immanent in commodities, namely labour-time.* (Marx 1867, p. 188; emphasis added)

For similar interpretations of Marx’s derivation of the necessity of money from his labor theory of value, see Hilferding 1910, Chapter 1; Rosdolsky 1977, Chapters 5-6; Banaji 1979; Weeks 1981, Chapter 6; Murray 1988, Chapter 14; and Itoh and Lapavistas 1999, Chapter 2 (although the latter also argues that the derivation can logically be separable from the notion of abstract labor as a theory of forms of value).⁴

Marx’s theory of money also provides important quantitative conclusions regarding the price of commodities and the quantity of money in circulation. In the first place, the *prices* of commodities, i.e. the exchange-ratios between commodities and

³ Jean Cartelier (1991) and his collaborator Carlo Benetti have argued that there is a logical flaw in Marx’s “inversion” of the expanded form of value to obtain the general form of value. For a detailed response to this critique, see Moseley (1998).

⁴ I would argue that Marx’s theory of money is also superior to neoclassical and Sraffian theories of money for the same reason – because Marx’s theory explains the necessity of money on the basis of its fundamental theory of value, and thus provides an integrated theory of value and money, and these other theories do not. But that is the subject for another occasion.

money, are determined by the relative quantities of socially necessary labour-time contained in the commodities and the money commodity. Algebraically:⁵

$$(1) \quad P_i = (1 / L_g) L_i$$

where P_i is the price of each commodity, L_i is the socially necessary labour-time contained in each commodity, and L_g is the labour-time contained in a unit of gold (i.e. the “value of money”). The L_i 's and L_g are taken as given in Marx's labour theory of value, and they jointly determine the P_i 's.

The inverse of L_g is the quantity of gold produced per hour, which determines the quantity of money new-value produced per hour of socially necessary labour-time in all other industries. This quantity of money new-value produced per hour has been called the “monetary expression of labor time” or the “MELT”:

$$(2) \quad \text{MELT} = 1 / L_g$$

Thus, equation (1) can be rewritten as:

$$(3) \quad P_i = (\text{MELT}) L_i$$

We can see that the price of each commodity is proportional to the socially necessary labour-time contained in it, with the MELT as the factor of proportionality.⁶

A second quantitative conclusion that follows from Marx's theory of money has to do with the relation between the *quantity of money* in circulation and the total *sum of prices* of commodities. According to Marx's theory, the prices of commodities are determined as in the equations above, as functions of the quantities of socially necessary labour-time contained in commodities and gold. It follows that the sum of prices also

⁵ The equations presented here are not explicitly in *Capital*, but I think they accurately express the logic of Marx's theory of value and price in Volume I.

⁶ These prices determined in Volume I are simple abstract prices, that do not yet take into account the equalization of profit rates across industries. However, Marx argued that the sum of prices does not change as a result of the equalization of profit rates, so that the further conclusions discussed in the paragraphs below regarding the sum of prices are not affected by this equalization. This argument is of course very controversial and is discussed in this volume by Itoh and Moseley.

depends on the sum of the quantities of socially necessary labour-time contained in all the commodities together (the L_i 's in the above equations), and that the sum of prices is independent of the quantity of money in circulation (i.e. there is no M in the price equations above). Marx argued further that the quantity of money in circulation (M^*) is determined by the sum of prices ($P = \sum P_i$), along with the velocity of money:

$$(4) \quad M^* = P / V$$

Marx argued that the quantity of money in circulation would adjust to the sum of prices (i.e. to the “needs of circulation”) by hoarding and dishoarding and/or by a change in the velocity of money.⁷

These quantitative conclusions are the basis of Marx's critique of the quantity theory of money of Hume and Ricardo, etc. (Marx 1867, pp. 219-221 and Marx 1859, pp. 157-87). Marx argued that the fundamental mistake of the quantity theory is that it considers money *only as means of circulation*, and ignores the other functions of money, especially the most fundamental function of the *measure of value*, and also the function of the store of value. We have seen above that, when money functions as the measure of value in order to determine prices, the magnitudes of prices depend on the relative quantities of labour-time contained in commodities and money, and do not depend on the quantity of money in circulation. Therefore, an autonomous change in the quantity of money does not result in a change of prices (assuming no change in the labour-times contained in commodities), but instead is offset by hoarding and dishoarding (as hoards, money functions as store of value) and/or by a change in the velocity of money. By ignoring the function of money as measure of value, the quantity theory misunderstands the fundamental relation between money and prices.

Thus we can see that Marx's theory provides an *endogenous* theory of money in these three senses: (1) the necessity of money is derived from the necessity to objectively

⁷ This simple equation could be further developed by taking into account credit sales and debt payments. Also most of the total money necessary in circulation might be supplied by credit money. But the main point would remain the same: the total money required for circulation is determined by the sum of prices, not the other way around. (See Lapavistas 2000 for a discussion of both of these points.)

represent the abstract labour contained in commodities; (2) the exchange-value of money is derived from the labour-time required to produce the money commodity and other commodities (as a specific case of the labor theory of value); and (3) the quantity of money in circulation is derived from the sum of prices.

Marx's theory of the relation between the quantity of money in circulation and the sum of prices summarized above assumes that money in circulation is either gold coins or tokens or paper money that are convertible into gold at legally defined rates. The case of *inconvertible paper money* is somewhat different. In this case, according to Marx, the MELT depends not only on L_g , but also on the ratio of the quantity of paper money forced into circulation (M_p) and the quantity of gold money that would be required if paper money were convertible (M^* , as determined by equation 4 above). Algebraically, in this case:

$$(5) \quad \text{MELT}_p = (1 / L_g) (M_p / M^*)$$

For example, if twice as much paper money were forced into circulation than is required for circulation on the basis of gold prices (i.e. $M_p / M^* = 2$), then the MELT would double and hence the prices of all commodities would also double. Marx argued that in this case, the paper money does not represent quantities of labor-time directly, but only indirectly through gold. In the above example, twice as much money would represent the same quantity of gold money required for circulation, and this quantity of gold money would in turn continue to represent the same quantity of socially necessary labour-time contained in commodities. (see Marx 1858, pp. 119-22; and Marx 1867, pp. 221-26)

Therefore, in the case of inconvertible paper money, Marx's theory is similar to the quantity theory of money, in the sense that the quantity of money is an exogenous variable and determines (in part) prices. However, Marx's theory is still significantly different from – and superior to – the quantity theory in the following respects: (1) according to Marx's theory, the quantity of money does not determine prices directly, but rather indirectly through the MELT; (2) Marx's theory also explains the necessity of money; (3) Marx's theory explains not only the general price level (by the MELT), but also individual prices, as determined by the MELT and quantities of socially necessary

labour-time; and, most importantly, (4) Marx's theory of money also provides the basis for a theory of surplus-value, and the quantity theory does not.

In recent decades, a new criticism has been made of Marx's theory of money - that it requires that money be a *produced commodity* (e.g. gold), and in contemporary capitalism, money is no longer based on gold in any way (since the 1930s for domestic money, and since the early 1970s for international money). Therefore, even if Marx's theory of money might be acceptable for commodity money, critics argue that it does not apply to the current monetary regime of non-commodity money (e.g. Lavoie 1986).

In considering this criticism, it is important to distinguish between the different functions of money (which is not always done), and especially between the functions of the measure of value and the means of circulation. It is clear that money as means of circulation does not have to be a commodity in Marx's theory, as Marx himself emphasized (Marx 1867, pp. 221-27 and Marx 1859, pp 107-22). The real question is whether money must be a commodity in Marx's theory in its fundamental function as measure of value.

In order to provide a more complete and up-to-date appraisal of Marx's theory of money, I organized a small working conference in August 2003, at Mount Holyoke College (Massachusetts, USA), and invited the members of the International Symposium of Marxian Theory (which I organized in 1991, and which has met annually since then) and also some of the leading specialists around the world on Marx's theory of money to participate in this conference (please see the list of participants).

As will be apparent from the papers, this group of authors is far from a monolithic group. There are significant disagreements among the authors about Marx's theory of money, both about the nature of the theory and about the validity of the theory. Some authors think that the standard interpretation of Marx's theory of money presented above is a misinterpretation. But they all agree that money is extremely important in Marx's theory, and that Marx's theory is the most promising basis (in some cases in combination with other theories), on which to develop a theory of money that will explain the

important monetary phenomena in contemporary capitalism, and is certainly a more promising basis than either neoclassical theory or Sraffian theory.

In my letter of invitation to the conference participants, I requested that their papers address one or more of the following important questions related to Marx's theory of money.:

- (1) Does money have to be commodity money in Marx's theory?
- (2) Is there any sense in which money is a commodity today?
- (3) If money is not a commodity, how is the value of money or its inverse the "monetary expression of labour time" determined?
- (4) Are there logical problems in Marx's derivation of money in Section 3 of Chapter 1 as the necessary form of appearance of abstract labor?
- (5) Is Marx's critique of the quantity theory of money valid?
- (6) Are there logical problems related to money in Marx's theory of prices of production in Part 2 of Volume 3?
- (7) What are the main tasks for the further development of Marx's theory of money?
- (8) What are additional critiques of and alternatives to Marx's theory of money?

The papers collected in this volume were first presented at this conference and have been revised subsequently to take into account the discussions at the conference.

The first group of papers deals with Marx's basic theory of money, as presented in Part One of Volume I of *Capital*. **Claus Germer** ("The commodity nature of money in Marx's theory") argues that money must be a commodity in Marx's theory in its function as measure of value (but not in its function of means of circulation). In the first part of this chapter, Germer presents substantial textual evidence from Marx's writings to support his claim that Marx always assumed that money is a commodity (e.g. gold), even in advanced capitalism. He argues that Marx never once mentioned the possibility that money as measure of value could be a non-commodity (standing on its own, without commodity backing). In the second part of the chapter, Germer discusses the theoretical bases for Marx's assumption of commodity money. Germer argues that, in the first place, the measure of value must itself possess value, and therefore must be a product of labour. In the second place, the social regulation of labour in a commodity economy requires that

money be a commodity, because commodity-producing labour is not consciously and directly regulated. In a commodity economy, individual labour can be converted into social labour only through exchange with a commodity which contains an equal amount of social labour. Paper money cannot convert individual labour into social labour, because paper money does not itself contain social labour.

Duncan Foley (“Marx’s theory of money in historical perspective”) considers two problems related to Marx’s theory of money: first, the definition and measurement of the quantity of social labour time represented by a unit of money (or its inverse, the “monetary expression of labour-time”); second, the application of Marx’s commodity-money theory to contemporary monetary institutions based on state-credit money. According to Foley, the orthodox interpretation of Marx’s theory of money presented above is a misinterpretation. In Marx’s theory, social labour time and the price expression of exchange value *emerge simultaneously*, so that no *ex ante* measure of social labour time is possible and thus social labour time cannot determine prices (which is similar to the “value-form” interpretations of Marx’s theory presented in recent years, e.g. Reuten and Williams 1989; for a critique of the value-form interpretation, see Moseley 1997). In empirical work, Foley argues that rough estimates of social labour time can be derived by weighting to account for the characteristics of workers, or by relative wages, or by the assumption of uniform proportions of concrete labour across sectors. These estimates can then be used to derive a rough estimate of the “monetary expression of labour time” (MELT), as the aggregate ratio of money value added to total living labour time, which in turn can be used to derive rough estimates of necessary labour time and surplus labour time, the all-important determinants of profitability. Foley acknowledges that this empirical estimate of the MELT does not provide a theoretical explanation of what determines the MELT, which he says is “left hanging theoretically”. (Itoh makes the same point in his chapter in this volume.) In the second part of the paper, Foley analyzes state-credit monies through Marx’s concept of fictitious capital, leading to a critique of the neoclassical view of the value of money as a bubble. Foley paper concludes with a discussion of the dilemmas involved in the application of Marx’s theory of money to current world monetary institutions, and argues that Marxian theory should

no longer assume commodity money, but should be developed and extended to include contemporary paper money.

Patrick Murray (“Money as displaced social form: Why value cannot be independent of price”) argues that Marx’s theory of money is a window into what is most distinctive about his theory of value and his critique of political economy. In Marx’s theory, value results not from just any sort of labour, but rather from a specific social type: privately undertaken labour that produces commodities for sale. Murray argues that Ricardo was oblivious to the topic of specific social form, but Marx’s theory of value emphasizes the social form of labour specific to capitalism. Because Ricardo, and economics in general, neglect the specific social form of labour, they cannot understand either value or money. Murray argues further that Marx’s derivation of money in Section 3 of Chapter 1, as the necessary form of appearance of social labour in capitalism, is similar to Hegel’s essence logic: essence must appear. Murray also argues that, since private labour can be socially validated only through the sale of its products, value and money are *inseparable* (although not identical), so that they are not related as independent and dependent variables, in the usual sense of these terms. Consequently, Marx’s theory does not present a price theory of the conventional sort, but instead develops a new kind price theory, with emphasis on social form. Finally, Murray argues that demand also plays an important role in Marx’s theory of value and money. Demand makes value possible, because labour does not produce value unless there is demand for the product.

Anitra Nelson (“Marx and credit theories of money”) discusses different theories of non-commodity money (credit theories of money, theories of the nominal standard of money, and labour-money schemes) that Marx was familiar with, and examines Marx’s objections to these theories. Marx’s main objection was that these theories failed to consider the fundamental function of money as measure of value. In his critique, Marx argued that the measure of value must possess value and therefore must be a commodity (as Germer argued in the first chapter). Nelson argues that there was a broader philosophical and political context for Marx’s objections to these theories. She argues that these theories of non-commodity money were very weak and incomplete, so it is not surprising that Marx rejected them. However, Nelson argues that current Marxian

theories of credit money (e.g. Foley, Bellofiore) can avoid Marx's objections to credit money and can be made consistent with Marx's labour theory of value.

The next three papers present extensions and/or reconstructions of Marx's theory of money. **Costas Lapavitsas** ("The universal equivalent as monopolist of the ability to buy") argues that Marx's theory of money presented in Section 3 of Chapter 1, as the necessary form of appearance of abstract labor (which he generally accepts), has an important gap - it does not explain the process through which money emerges in commodity exchange. Lapavitsas aims in this chapter to fill this important gap in Marxian monetary theory. His argument is based on a reinterpretation of Marx's forms of value in Section 3 of Chapter 1 to apply to relations between commodity-owners, rather than relations among the commodities themselves. Marx's theoretical couplet of the relative and equivalent forms of value is reinterpreted as the "offer to sell" and the "ability to buy", and the development of this relationship shows that money emerges because all commodity-owners offer their commodities for sale against it. Once a commodity attracts several "offers to sell", an asymmetry is created - a stronger "ability to buy" on the part of that commodity - which sets in motion a self-reinforcing process which eventually leads to all commodity owners "offering to sell" their commodities against one single commodity, which thus acquires a "monopoly of the ability to buy". Social customs regarding commercial transactions and the representation of wealth also play a role in money's emergence. This argument is based on the forms of value, not on the substance of value (abstract labour), and therefore applies to pre-capitalist commodity exchange, as well as to capitalist commodity exchange. Lapavitsas also argues that money does not have to be a commodity in Marx's theory (although he argues that money is necessarily a commodity when it first emerges). If paper money possesses a "monopoly on the ability to buy", then it is also money, similar to gold. Lapavitsas's extension of Marx's theory is elaborated more fully in a recent book (Lapavitsas 2003).

Geert Reuten ("Money as constituent of value") focuses on Marx's theory of money in Chapter 3 of Volume 1 in relation to the theory of value in Chapter 1. Reuten's argument implies that the orthodox interpretation of Marx's theory of money presented above is a misinterpretation, and presents himself an alternative "value-form" interpretation of Marx's theory. For Marx, he argues, the *ideal immanent (or introversive)*

substance of the value of commodities is ‘abstract labour’. Marx posits ‘time’ of abstract labour as the ‘immanent measure’ of value; however, this is a notion at a high level of abstraction. It does not provide a measure in the usual sense of measuring. (We could measure time of heterogeneous concrete labour, but this is *not* what Marx is getting at.) The notion of value thus posited is what Reuten calls the simple-abstract notion of value (of Chapter 1). This simple notion is complemented by the *ideal extroversive form of the value* of commodities: money (Chapter 3). It is only henceforth that ‘value’ has been fully constituted. Consequently ‘abstract labour’ disappears from Marx's vocabulary. Money establishes the actual commensuration – the homogeneity – of commodities; in combination with a particular standard (such as a pound or a dollar) it provides the only one actual ideal measure of value (Marx indeed stresses that the measure is ‘ideal’). The introversive substance and the extroversive form of value are *inseparable* – value cannot be concretely measured without money. Reuten's interpretation relies on a dialectical interpretation of Marx's frequent use in Chapter 3 of the German text of the term *Veräußerung* (and other terms with the same root of *außer*) and which he translates by *extroversive* as opposed to the *introversive* or *immanent* of Chapter 1. In the English text of Chapter 3 the continuity of the term disappears due to a variety of substitutes.

Chris Arthur (“Value and money”) presents a “value-form” theory of money, which is inspired by Marx's emphasis on the importance of value as a social form, but is not necessarily Marx's theory, per se. The “value-form” approach to money holds that money is not a “veil” of the “real” material content of economic relations; rather money is essential to value relations. Arthur defines value in the first instance as the “power of exchange”, and he argues that only money makes value actual. Then the concept of measure of value is investigated, because it is this function of money that most Marxist theorists argue must be a commodity. Arthur argues to the contrary that paper money serves the actual functions of money, in including that of measure of value. Arthur then discusses the magnitude of value, and argues that only after commodities have been commensurated by money is there any meaning to a law of value rooted in labour time and appearing as price. The money-form as such structures such determinations as socially necessary labour time, deciding to what degree actual labour times are socially validated. The concept of price of production is then briefly discussed. Once it is

understood that value is necessarily measured in money, then prices of production may be interpreted as more “finished forms” of value than “direct prices”. In general, Arthur argues that the categories of socially necessary labour time, value, and price emerge from the systematic interactions of a complex whole, rather than being presupposed to its development.

Riccardo Bellofiore (“The monetary aspects of the capitalist process in Marx: A re-reading from the point of view of the theory of the monetary circuit”) proposes a reconstruction of Marx's monetary labour theory of value and surplus value where the cycle of money capital is re-read as a monetary sequence started by initial finance to production and innovation. The reference here is to the Italian version of the theory of the monetary circuit developed in the late 70s by Augusto Graziani, which has been extended to Marx by Marcello Messori and the same Bellofiore, who were heavily influenced by Claudio Napoleoni. This approach follows the monetary heterodoxy of Wicksell, Keynes in the *Treatise on Money*, and Schumpeter. Bellofiore begins briefly reviewing the basics of this perspective where capitalist money is first of all bank finance *ex nihilo*, and then looks at Marx's theory of money as a commodity, arguing that it is both a theoretical necessity in *Capital* as it is and untenable. He argues that only finance to production as the *ex ante* validation of living labour as latent abstract labour may reinstate Marx's labour theory of value as a theory of exploitation. He then shows in which sense the macro-monetary interpretation of the monetary circuit and Marx's assumption in Volume I about the real wage of the working class as given fixes class distribution in a way akin to some PostKeynesian the composition of production irrespective of consumer sovereignty. Next he argues that Marx's theory of dynamic competition is incomplete without Schumpeter's role of banks as financing innovation. Finally, Bellofiore examines Vol III analysis of banking and credit, and argues that there, though Marx is still prisoner of the primacy of money as commodity and of banks as financial intermediaries, he has hints of money as pure credit money not backed by a commodity."

The next two papers deal with Marx's critique of the quantity theory of money. **Martha Campbell** (“Marx's explanation of money's functions: overturning the quantity theory”) examines Marx's discussion of the functions of money in Chapter 3 of

Volume I, and emphasizes Marx's critique of the quantity theory of money in this chapter. Campbell argues that Marx's fundamental critique of the quantity theory is that this theory considers money *only* as *means of circulation*, and ignores the more basic function of *measure of value*. According to Marx's theory, money functions as the measure of value because commodities require some objective form of appearance of their values. To provide such an objective form of appearance, the values of all other commodities are expressed in terms of quantities of the money commodity; i.e. in terms of their *prices*. Therefore, commodities enter circulation with prices and money enters circulation with a value. The quantity theory, on the other hand, ignores the function of measure of value, because it has no theory of value, and assumes that commodities enter circulation *without* prices and money enters circulation without a value, which leads to the erroneous conclusions that the value of money and the sum of prices are determined by the quantity of the money commodity in circulation. The quantity theory, on the other hand, assumes that money is token money, a form of money which is extinct and irrelevant to capitalism. Campbell also argues that in the final section of Chapter 3, Marx argues that capitalist money originates from money's function as means of payment, and that the laws associated with that function are the beginnings of a theory of credit money.

Pichit Likitkijsoomboon ("Marx's anti-quantity theory of money: A critical evaluation") argues that Marx's critique of the quantity theory of money is misconceived. He argues that Marx's critique is based on the works of Tooke and Fullarton, which contain serious logical flaws, including: a false distinction between money in circulation and hoards, a perfectly elastic velocity of money, perfectly inelastic investment spending with respect to the rate of interest, the assumption of the real bills doctrine, and, most importantly, a disconnect between international gold flows and the domestic money supply. Furthermore, he argues that Marx's account of the monetary mechanism does not satisfactorily explain the functioning of hoards and how the quantity of money adjusts to the sum of prices. Likitkijsoomboon then briefly outlines Ricardo's theory of the quantity of money and the monetary mechanism, and as developed further by Senior, which he argues is significantly different than Hume. Ricardo and Senior assumed, like Marx and unlike Hume, that in the long-run the exchange-value of gold-money depends on its labour-value, and the quantity of money depends on prices. However, Ricardo and Senior

argued that the adjustment of money to prices is by means of a change of current gold production (rather than by a change of hoards or a change in velocity, as in Tooke and Marx), and since gold production is such a small part of the total existing stock of money, such an adjustment to long-run equilibrium happens very slowly. Therefore, the short-run is more important than the long-run, and in the short-run the direction of causation between money and prices is reversed - prices depend on money, rather than the other way around. Likitkijsoomboon concludes that Marx's critique of the quantity theory of money should be rejected, and his labour theory of value and the value-form should be combined with Ricardo's quantity theory of money and the monetary mechanism.

The next two papers have to do with the relation between Marx's theory of money and the transformation of values into prices of production in Volume III of *Capital*.

Makoto Itoh ("The new interpretation and the value of money") considers the "new interpretation" of the transformation problem, presented in recent years by Foley and Dumenil and others, and focuses on the value of money in the new interpretation.

According to the new interpretation, the value of money is defined as the aggregate ratio of the total living labour to the total net price (as discussed in Foley's chapter), and the value of money *does not change* in the transformation of values into prices of production. Itoh argues that, although this definition provides interesting empirical insights, it is inconsistent with Marx's theory, because it implies that the real wage changes in the transformation, and hence the labour time obtained in the real wage and the rate of surplus-value also change. He argues further that another important weakness of the new interpretation is that it does not provide a theory of how the value of money is *determined*; it only provides an empirical estimate. Itoh then briefly summarizes his own interpretation of the transformation of values into prices of production, which is based on his general interpretation of the dual concept of value in Marx's theory (substance of value and form of value). Itoh also criticizes Moseley's interpretation of the value of money and the transformation problem (presented in the following chapter), which, like the new interpretation, argues that the value of money does not change in the transformation. Itoh argues that Moseley does not explain sufficiently why the value of money is not affected by the equalization of profit rates across industries, including the gold industry. Itoh then analyzes the determination of the fluctuations of the value of

money within business cycles. The final section considers the determination of the value of money in the current monetary regime of non-commodity money, and emphasizes the increased possibility of inflation as well as deflation and the monetary instability of this period.

Fred Moseley (“Money has no price: Marx’s theory of money and the transformation problem”) argues that the prevailing interpretation of Marx’s theory of money and the transformation of values into prices of production (as represented by Bortkiewicz and Sweezy), treats the money commodity (e.g. gold) essentially the same as all other commodities. It is assumed that the money-commodity has a value-price (price proportional to labor-time) and also has a price of production, which could be different from its value-price, just like all other commodities. Furthermore, it is assumed that, if the composition of capital in the gold industry is less than the social average, then surplus-value will be transferred from the gold industry to other industries in order to equalize the rate of profit. As a result, the total price of production of commodities will be greater than the total value-price of commodities, contrary to Marx’s claim. Moseley argues that this standard interpretation of the transformation problem is wrong on all three of these important points. He argues that the money commodity has neither a value-price nor a price of production, so that a transformation of the former into the latter is not possible. Further, he argues that there can be no transfer of surplus-value from the gold industry to other industries, because surplus-value in the gold industry is the *actual quantity of surplus gold produced*, which cannot change into a different quantity through the transformation of values into prices of production. There is equalization of the profit rate in the gold industry over time, but this equalization does not take place through the transfer of surplus-value from the gold industry to other industries in a single period, but rather by opening and closing marginal mines over subsequent periods, which changes the amount of surplus-value produced in the gold industry. It follows from this interpretation that the total price of production of commodities is *always identically equal* to the total value-price of commodities (and that total profit is always equal to total surplus-value), as Marx argued.

The final two papers are about Marx’s theory of world money. **Suzanne de Brunhoff** (“Marx’s contribution to the search for a theory of money”) argues that,

according to Marx's theory, money is a necessity for the exchange of commodities produced by private independent producers. When commodities enter into circulation, their values appear in the shape of money prices, and money takes of the form of the standard of prices. In a capitalist world divided into nations, each nation has its own currency with its own standard of price. When gold was world money, currencies had a common value reference. However, national differences, economic competition, and unequal access to gold reserves were still widespread under the gold standard. Since gold has been demonitized, the U.S. dollar now functions as the international money standard. This is possible only if the U.S. norms of production and management of labor are the dominant ones in the current period of capital accumulation, and if the US norms spread around the world through the dollar standard. But de Brunhoff argues that a homogeneous American world empire cannot exist. The dollar standard requires international agreements and conventions, which do not eliminate competition and tensions between different currencies. She concludes Marx's theory helps us to understand the role of money and currency standards and the new contradictions of contemporary global capitalism.

Tony Smith ("Towards a Marxian theory of world money") presents a Marxian critique of a proposal by Paul Davidson, a leading Post Keynesian economist, to create a new form of world money, which is designed to attain full employment and balanced industrial development throughout the global economy. Smith argues that, according to Marxian theory, these goals cannot be attained, as long as the social relation of capitalism remain in place. Since Davidson does not call capitalism into question, his proposal is ultimately incoherent. In the course of this critique, Smith discusses the essential features of a Marxian concept of world money, which include: the accumulation of money as the main goal of capitalism, the social antagonism of the capital - wage labor relation, inter-capitalist and inter-state competition, the dominant role of the currency of the hegemonic state, and uneven development among capitalist nations.

What are the main conclusions that emerge from these papers? What are the answers suggested to the main questions of the conference listed above? What are the main disagreements that remain? What are the main remaining open questions?

The most important conclusion is that most of the authors agree, with varying degrees of certainty and for different reasons, that *money does not have to be a commodity in Marx's theory*, even in the fundamental function of measure of value (even though Marx himself may have thought that money as measure of value does have to be a commodity). Pure paper money (not backed by gold) can also function as measure of value. (Similar conclusions have also been reached by Matthews 1996 and Williams 2000.) Germer is the strongest proponent of the opposing view that money as measure of value has to be a commodity in Marx's theory (Bellofiore also holds this view), because the measure of value must possess value, and because the regulation of social labour requires that individual labour be converted into social labour by equating its product with another product of labour.

I myself would argue that Germer's argument that "the measure of value must possess value" is a historical contingency, not a theoretical necessity. In order to function as the measure of value, a particular thing must be accepted by commodity-owners as the universal equivalent. Until the 1930s, in the absence of any state-mandated alternative, commodity owners required that the universal equivalent (and hence the measure of value) had to be a commodity, or at least convertible into a commodity at legally defined rates. However, in the Great Depression, it became impossible to maintain the convertibility of paper money into commodity money. Governments legalized the inevitable, and commodity-owners had no choice but to accept paper money by itself as the universal equivalent, and hence as the measure of value.

With respect to Germer's second argument, I agree that the regulation of social labour requires that private, individual labour must be converted into social labour by being represented in some observable, socially acceptable form. However, I don't think that this socially acceptable form of appearance of social labour has to be a commodity. Once pure paper money (not backed by a commodity) has been declared by governments as the universal equivalent, then this pure paper money can also function as the form in which social labour is expressed, i.e. can also function as the measure of value. Indeed, in this case, paper money *must* function as the measure of value, even though it contains no labour, because there is no other possible measure of value, no other possible way to represent social labour in an objective form.

However, this conclusion raises the important further question: if social labour is represented by paper money, then what determines the quantity of social labour that is represented by a given quantity of paper money (since it is no longer determined by the labour time contained in gold)? In other words, what determines value of money or the “monetary expression of labour-time” (MELT), when money is no longer a commodity? Unfortunately, none of the authors in this book who accept that money as a measure of value does not have to be a commodity has presented an explanation of how the value of money or the MELT is determined in the case of pure non-commodity money. Foley argues that the MELT can be empirically measured ex-post by the aggregate ratio of money value-added to living labour, but he acknowledges that this empirical estimate of the MELT does not provide a theoretical explanation of what determines the MELT, which he says is “left hanging theoretically”. This empirical estimate of the MELT (=value added / living labour) cannot be used to determine the MELT, because then the MELT would depend on value added, and could not be used to determine value added (or the price of commodities as in equation 1 above), because that would be circular reasoning. Nelson argues that the value of money is determined by the “purchasing power” of money, i.e. by the inverse of the price level. However, like Foley’s empirical estimate, this interpretation of the value of money cannot be integrated into Marx’s labour theory of value, in which price depends in part on the value of money, because that would also involve circular reasoning.

I myself suggest that a promising starting point for developing an explanation of the determination of the MELT in the case of pure non-commodity money is Marx’s discussion of the determination of the MELT in the case of inconvertible paper money, discussed above. I present one such possible explanation in Moseley 2004. I argue that the determination of the MELT in this case is essentially the same as in the case of inconvertible paper money discussed by Marx, which leads to the surprising conclusion that *it does not make any difference* to the determination of the magnitude of the MELT *whether or not* money is assumed to be still based on gold in some way. Bellofiore 2004 presents a critique of my suggestion.

An important disagreement among the papers in this volume is that Foley’s and Reuten’s papers present a different interpretation of Marx’s theory of money from the

standard interpretation presented at the beginning of this introduction, especially with respect to the quantitative determination of price (represented by equation 1). These papers present “value-form” interpretations of Marx’s theory, according to which abstract labour does not exist as a quantity distinct from prices, and therefore abstract labour cannot determine prices. Foley argues that, in Marx’s theory, abstract labour and prices “emerge jointly” in the sphere of circulation when the product is sold, with causation between abstract labour and prices running in both directions. Reuten argues that Marx originally posited in Chapter 1 that abstract labour exists as “intuitive” quantities of labour time, but in Chapter 3 this simple notion is made more complex and determinant, as complemented with the systemic and determinate existence of money as the “extroversive” form of value. I myself think that the textual evidence to support these “value-form” interpretations of Marx’s theory of value and prices is very weak and unpersuasive. There may be logical problems with Marx’s theory of price, as represented by equation (1) above (I myself do not think that there are serious logical problems, especially compared to other theories), but I think that the textual evidence to support the standard interpretation is very strong, and much stronger than the evidence for these “value-form” interpretations. Further research should obviously continue to debate these important issues.

There is also a disagreement between Campbell and Likitkijsoomboon over Marx’s critique of the quantity theory of money. Campbell accepts Marx’s critique, and emphasizes that the quantity theory fails to take into account the fundamental function of the measure of value. Likitkijsoomboon argues that Marx’s critique contains logical flaws and should be abandoned, and Marx’s labour theory of value should be combined with Ricardo’s quantity theory of money. It is hoped that this debate will continue, and that Likitkijsoomboon will elaborate more fully how Marx’s labour theory of value and Ricardo’s quantity theory of money can be integrated in a logically consistent way. In particular, Likitkijsoomboon needs to explain how this synthesis explains the value of money and function of money as measure of value.

There is also a disagreement between Itoh and Moseley over whether or not, in a regime of commodity money (e.g. gold), the transformation of values into prices of production affects the exchange-value of money. Moseley argues that this transformation

does *not* affect the total price of commodities, and hence does not affect the exchange-value of money. Itoh argues the opposite conclusions. Both authors and others should continue to debate this important question. However, in a regime of pure paper money, this question is less important, because the total price of commodities, and hence the exchange-value of money, do not depend in any way on the gold industry.

Finally, the papers by De Brunhoff, Smith, and Bellofiore seem to suggest that world money might be one function which sometimes might still require that money has to be a commodity.⁸ Paper money is inevitably national money. Therefore, there is a fundamental conflict in contemporary capitalism, in which *one nation's money* functions as *world money* (as the US dollar currently does). It might even turn out, in some future crisis, that this conflict is not always resolvable, and nations might have to revert to some form of commodity money to function as world money and settle international payments (perhaps with the leading currency or currencies being convertible again into gold, as the dollar was in the Bretton Woods monetary system). At the very least, the necessity of world money will continue to be a source of conflict in the decades ahead.

In terms of future research, I would suggest that the most urgent task is to develop further a theory of pure credit money (without commodity backing), based on Marx's theory, in a way that is consistent with Marx's labour theory of value and surplus labor theory of surplus-value. Promising beginnings of this important task have been made by several of the authors in this book and by others (e.g. Lipietz 1982, Gannsmann 1998). But much work remains to be done. Most importantly, there needs to be an explanation of the determination of the value of money or the MELT in the case of non-commodity money. This key component of Marx's theory of value and surplus-value should not be "left hanging theoretically". Relatedly, what is the relation between the quantity of money and the sum of prices in the case of pure credit money: does the quantity of money determine prices or do prices determined the quantity of money? Further, what are the different forms of credit money, and what determines the quantity of each of these different forms? These are some of the important questions that should be explored in

the further development of a Marxian theory of credit money. Campbell suggests in her paper that Marx's analysis of the function of means of payment provides the beginnings of a Marxian theory of credit money. Post-Keynesian theories of money emphasize credit money as the dominant form of money in capitalism, and therefore these theories should be studied and explored for possible intersections.

It is hoped that the papers in this volume will stimulate further research along these lines and will contribute to the further development of Marxian theories of money for the 21st century.

I would like to express appreciation to Mount Holyoke College for its generous financial support of the conference. I would also like to thank Dawn Larder and Alena Zhaliuzniak for their excellent organizational and logistical work for the conference. Finally, I also would like to thank all the conference participants for our many lively and productive discussions, both in person and by email. In spite of our disagreements (or is it *because* of our disagreements), I have learned a lot from these wonderful Marxian scholars about Marx's theory of money and other theories of money.

⁸ Bellofiore also argues that the theory of the monetary circuit comes to a similar conclusion about the possible necessity of commodity money in the function of world money.

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