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Admittedly, economics first aims at solving empirical problems – for instance, what are the causes of unemployment? – and, to this purpose, it elaborates on the principles of the working of the economy. Now, this book suggests a modern conception of economics, called ‘monetary analysis’. According to the latter, the fundamental principles of the working of the economy are inseparable from money, while this primacy of money entails a specific way of solving empirical problems.

This may seem quite unusual. To a large extent, economics currently pertains to ‘real analysis’, wherein, by contrast, *goods* (including services, which are seen as immaterial goods) are the basis upon which these fundamental principles are developed. The latter can be summarized by the following three propositions: i) the starting point is a predetermined set of goods (including labour, which is seen as an intermediary good like any raw material); ii) each agent (rationally) decides on an individual supply of/demand for each good existing within the predetermined set (given some objectives and constraints); and iii) thanks to price variations (and wage variations in the case of labour), the aggregate supply of any good equals its aggregate demand, to wit, *market equilibrium*.

To sum up, real analysis starts with a predetermined set of goods and ends with a related set of market equilibria. As a result, any empirical problem is solved by drawing conclusions from the second set. For instance, a well-known empirical problem is to understand the causes of unemployment. In real analysis, wage variations lead to labour market equilibrium (as labour is conceived as a mere good among many others). So, if unemployment exists despite the possibility of equilibrium on the labour market, then unemployment does not result from the
working of the economy, but from the voluntary choice of workers. Or, for unemployment to be the result of the working of the economy, wage variations must be prevented from fully adjusting labour supply to labour demand. Various answers have been suggested: ‘natural’ rate of unemployment, imperfect information, and so on.

As shown by this example, considering goods as the basis for economic analysis implies a specific way of solving empirical problems (by drawing conclusions from market equilibrium). Now, this specific way does not rely on money. Actually, the latter enters the picture as a mere good among others (be it ‘dematerialized’ or not), supplied by the central bank and demanded by firms/households for different motives (mainly in order to improve the technique of transactions). So, the money market equilibrium may a priori matter for solving empirical problems. Nevertheless, the effects of this market equilibrium – whatever they may be – are assumed to disappear over the medium run (and over the long run likewise). Money becomes ‘neutral’ and therefore is of secondary importance. In this framework, money is concerned only with a single empirical problem: to assess the short-run effects of money market equilibrium, and, in light of these effects, to assign optimal objectives and instruments to the central bank.

Thus, this book challenges real analysis at three levels: the fundamental principles of the working of the economy, the related way of solving empirical problems, as well as the related conception of money. To be sure, this does not imply that goods do not enter the picture any more, but that they do not enter the fundamental principles of the working of the economy. The ten contributions to this book thus deal with three tasks:

1. The first task is to inquire into an alternative definition of money, whereas such a definition does not include any reference to goods, supply, demand, market equilibrium, or neutrality.

2. This alternative definition of money must give rise to alternative fundamental principles, which in turn determine a specific way of solving any empirical problems (as opposed to the single empirical problem that real analysis associates to money).

3. The third task is to apply this alternative way to some empirical problems to be solved, with the aim to improve the understanding of the economy as compared with real analysis.
Performing these three tasks is by no means useless. Although the great majority of economists use real analysis, this does not imply that the latter is valid. Notably, as suggested in the Foreword of the book, we can wonder why, despite several centuries of rigorous development, real analysis remains unable to suggest a proper answer to a very important empirical problem: how to ensure growth and full-employment along with economic stability. Thus, as the book elaborates on an alternative to real analysis, it is welcome.

Moreover, the book elaborates well and truly on such an alternative. Accordingly, the proponents of monetary analysis are not the sole economists who disagree with real analysis. Nevertheless, the usual answer consists in adding auxiliary assumptions. For instance, psychological factors are introduced, so that decisions about supply and demand are not fully rational. Or, as put forth by the so-called New-Keynesians, market imperfections are introduced, so that market equilibrium is not achieved by price variations only, but also by quantity adjustments. As a result, the core assumptions (i.e. the fundamental principles) remain unchallenged: goods, supply, demand, and market equilibrium still enter this core. So, instead of rejecting real analysis, these developments just make further developments inside it. By contrast, if the aim is to elaborate alternative fundamental principles on the basis of money (which thus cannot be defined as a mere good among others), then monetary analysis can really claim to be an alternative to real analysis, as already argued by Joseph A. Schumpeter in his *History of Economic Analysis*.

To a large extent, the book succeeds in performing the above three tasks. Apart from a few questionable points (for instance, the terms 'money supply' or 'demand for money' are sometimes used, as if money was a good; or, in Chapter 4, the algebraic explanation of macroeconomic profits needs some clarifications), the ten contributions deserve attention. Possibly, the reader may sometimes want further explanations about certain statements or concepts. Actually, this book can be seen as an introduction to monetary analysis, while the numerous references throughout the book allow the reader to learn more if necessary.

Also, the ten contributions do not provide a unified view about monetary analysis. As a matter of fact, the book mainly focuses on two 'research traditions', namely the *theory of money emissions* and the *theory of the monetary circuit* (we could also add the Post-Keynesian approach; see Chapter 2). Now, the alternative definition of money (first task) is the very first difference between

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these two research traditions, thus leading to differences in the fundamental principles of the working of the economy, leading thereby to differences about the way of solving empirical problems. To sum up (and to provide the reader with a point of departure):

1. According to the theory of money emissions, money is defined as the double entries in banks’ bookkeeping system (in terms of a unit of account, say, euro) that execute transactions between agents. Each time a transaction is executed, an agent’s account is debited, while another’s account is simultaneously credited for the same amount. For instance, a purchase is executed by debiting the purchaser’s account of, say, €x, while the seller’s account is credited for €x simultaneously. Any of these double entries amounts to a transfer of a bank deposit in the banking system as a whole. Yet, deposits are not money, but the ‘purchasing power’ necessary for double entries (that is, money) to be carried out. Chapter 1 introduces this first definition of money, by means of a critical assessment of Keynes’s thought, and Chapter 3 elaborates on this (see also Chapter 10).

2. According to the theory of the monetary circuit, by contrast, money is defined as the deposits within banks’ bookkeeping system but no longer as the double entries themselves. In this regard, money is a liability (as deposits appear on the liability side) that banks issue on themselves and that agents transfer between them for their transactions to be executed. A set of rules is thus required in order to make agents using these liabilities during their transactions instead of asking for their settlement. Chapter 6 introduces this second definition of money, by means of a critical assessment of Luxemburg’s thought. Chapters 2, 3 and 4 also address such a definition.

The differences between these two definitions of money may seem subtle to readers. The first definition makes a distinction between money (as something ‘purely numerical’, that is, double entries) and deposits (as the purchasing power by means of which double entries are carried out), whereas the second definition identifies money with deposits. In this case, the transfers of deposits between agents amount to transfers of money. In the other case, there are no transfers of money as such, but an ‘emission’ of money, namely the simultaneous debit and credit of two different accounts. If we refer to the first definition, money is a flow of money units (say, euro), in the sense that a given bank records double entries; more precisely, money is a circular flow in the sense that a given bank simultaneously debits and credits two different accounts with the same number
of money units. By contrast, if we refer to the second definition, money flows within the economic system rather than being a (circular) flow. Indeed, if deposits flow between agents (as the result of their transactions), and if money and deposits are one and the same thing, then flows of deposits amount to flows of money.

Still, despite these differences (among others), the theory of money emission and the theory of the monetary circuit share a common ground. Notably, both research traditions consider that transactions are executed by transferring deposits between agents. Both also notice that some 'initial' deposits must exist before any transaction. Otherwise, no deposit can be transferred, so that no transaction can be executed. And both consider bank credit as the condition for initial deposits to exist: whenever a bank grants a credit without prior savings, it truly creates deposits on the liability side of its bookkeeping system, while the credit is recorded (for the same amount) on the asset side and will have to be reimbursed by the agent asking for and obtaining bank credit. Finally, both research traditions consider that banks foremost create deposits when they grant credits to entrepreneurs, as the latter need bank credit in order to pay wages (and more generally production costs) before the proceeds resulting from the sale of newly-produced output; consequently, as soon as a bank grants a credit to an entrepreneur, some wage-earners obtain the property right on some deposit. Let us remark that, if money flows within the economic system (second definition), then money starts to flow after it has been created by banks via credit granting, and then goes back to banks when credits are reimbursed. Here is defined the monetary circuit. Let us also remark that monetary circuit has a positive duration in time, as credit also has such a positive duration in time; by contrast, money as a circular flow is instantaneous, as it takes 'an instant' (p. 40) to record double entries.

On these grounds, the alternative fundamental principles of the working of the economy can be described as the following sequence of stages (second task): i) the starting point is the decisions of entrepreneurs about production, in accordance with expected sales (following Keynes's principle of 'effective demand'; see Chapter 1); ii) the costs associated to the realization of production (first of all wages) have to be (partially, or even entirely) financed by bank advances, but banks grant credits only to entrepreneurs whose creditworthiness is supposed to be sufficient (given some criteria, mainly banks' subjective expectations); iii) the subsequent deposits are transferred between agents for transactions to be
executed (first of all for the payment of production costs); and iv) entrepreneurs should be able to sell their production, so that they recover deposits and thus are able to reimburse their debts to banks (including interest charges). Definitely, these fundamental principles contrast with those of real analysis. The primacy of money leads to focus on entrepreneurs, their decisions about production, and their debt relations with banks for production costs to be paid. To sum up, the economy is thereby a ‘monetary economy of production’.

As a result, any empirical problem is solved by drawing conclusions from the above sequence of stages, but no longer from market equilibrium (as in real analysis). The chapters in this book illustrate some of these solutions (third task). To this purpose, they also introduce additional principles that pertain to the chosen research tradition; this clearly affects the way of solving empirical problems. Chapters 1 and 3 address the causes of unemployment and inflation (in a circular-flow perspective); the dynamics of income distribution is studied in Chapters 5 (in a circular-flow perspective) and 7 (in a monetary-circuit perspective, along with Veblen’s analytical insights about ‘leisure class’ and capital turnover); Chapter 9 is concerned with the US credit crunch of late 2007 (in a monetary-circuit perspective); Chapter 10 focuses on the recent developments in the activities of banks, which are less oriented toward financing production and more oriented toward securitization and portfolio management (in a circular-flow perspective). Sometimes, an empirical problem may be solved on the sole basis of the common ground between the two research traditions. Notably, Chapter 8 addresses the role of central banks with respect to economic and financial stability.

Moreover, the book is not only concerned with empirical problems. It is also concerned with conceptual problems, namely with the logical consistency of monetary analysis. Indeed, although the latter may provide solutions to some empirical problems, these solutions are questionable if they do not derive from logically-consistent analyses: contradictions, circularities, or conceptual vagueness must be avoided. Now, monetary analysis often encounters the following contradiction: entrepreneurs aim at making profit, but the maximum amount of money entrepreneurs can get is limited to production costs, as the result of the financing of these costs by bank credit. By providing answers to this contradiction (mainly in Chapter 4, but also in Chapters 1, 3, 5, 6, 7 and 9), the book testifies the relevance of monetary analysis. On the contrary, real analysis has definitely failed to address its main contradiction: in accordance with the
idea of ‘market forces’, any market equilibrium is assumed to be the result of a prior disequilibrium, but the latter is inconceivable within real analysis, except with questionable ad hoc assumptions. This contradiction is even more uncomfortable as it affects market equilibrium, thereby affecting the very way of solving empirical problems in real analysis [1]. This should even more lead modern economists to use monetary analysis instead.

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Endnotes


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