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Introduction

1.1 The theory of the monetary circuit

Over the last twenty years, mostly owing to research carried out by French and Italian scholars, a new formulation of monetary macroeconomics, the so-called 'Theory of the monetary circuit', also denominated 'The circulation approach' (Deleplace and Nell 1996), has been gaining ground. The basic theoretical tenets of the theory can be synthesised in three main propositions: rigorous distinction between banks and firms, endogenous determination of the money stock, and rejection of the marginal theory of distribution.[1]

The circulation approach in the early Swedish and German literatures

Under a strictly chronological criterion, the first description of a monetary circuit is found in Knut Wicksell's rightly celebrated monograph on *Interest and Prices*.[2]

[1] A general presentation of the circuit approach is contained in Lavoie 1987, Graziani 1989, Halevi and Taouil 1998. An implicit description of the circuit mechanism can be found in Bossone 2001. An excellent review and critical assessment of the post-Keynesian reading of the macroeconomic model is given by Arestis 1997, chapter 3. A detailed analysis of the concept of endogenous money and of the debate between accommodationists (supporters of endogenous money) and structuralists (accepting endogenous money only under severe qualifications) is contained in Fontana 2001.

[2] Wicksell 1936 [1898], chapter 9, section B. In Wicksell's wake, the Swedish school has analysed the monetary circulation along the same

Wicksell's analysis strongly influenced a number of authors belonging to the Austrian and German schools, both having a long tradition in the analysis of money and banking.[3] The very term 'circuit', introduced in contemporary literature by French authors, reproduces the German *Kreislauf*, a term used by German writers to describe the circulation of money and of real goods (Schumpeter 1934 [1911], chapter 1). Neisser devoted two works to the analysis of money circulation. The first one (Neisser 1928) gives ample space to the relationships between banks and firms. The second one (Neisser 1931) is specifically devoted to the analysis of circulation among firms and between firms and wage earners. N. Johannsen, the famous amateur economist recalled by Keynes in the *Treatise on Money* (1971 [1930], chapter 27), analyses in detail the monetary circuit in his book *The Circuit of Money* published in 1903 under the pseudonym of J.J.O. Lahn (an analysis of Johannsen's book is contained in Hagemann and Rühl 1987). The German contributions to the analysis of the circular flow between the 1930s and the 1960s are analysed in detail by Schmitt and Greppi (1996).

More recently, a revival of the circulation approach in Germany has been carried out by the so-called School of Monetary Keynesianism, headed by Hajo Riese in Berlin. The Berlin school describes the market mechanism as a monetary circuit, rejects the marginal theory of distribution and defines money as an institutional entity and not as a spontaneous product of the market (Lüken Klassen 1998; Riese 1998).

lines (Lundberg 1937). The 'Introduction' by L. Berti to the Italian edition of Myrdal 1939 is an excellent guide to the Swedish monetary theory considered in this perspective.

[3] Schumpeter 1934 [1911]; von Mises 1934 [1912]; Hahn 1920; Neisser 1928, 1931 and 1950 [1934]; Schneider 1962, chapter 2. A detailed analysis of Schumpeter's monetary thought is contained in Messori 1984. De Vecchi 1993 is a most important piece of research centred on works written by Schumpeter before he moved to the United States.

The circulation approach in France

In many aspects, the French school of the circuit had a precursor in an isolated French scholar, Jacques Le Bourva. To him is due one of the first and more lucid presentations of the monetary circuit as well as of the process of money creation and destruction, both viewed as endogenous phenomena (Le Bourva 1962; reprinted with a 'Comment' by Marc Lavoie 1992).

More recently, the revival and analytical development of circuit theory in France has been due to three main groups of authors. The so-called Dijon school is headed by Bernard Schmitt, an author who has given a precise formulation of the principles of the theory, defined a particular terminology and constantly applied both of them in his works. The research by Schmitt goes beyond mere theoretical analysis and is largely concerned with problems of both international payments and developing countries, which he examines from his very individual theoretical point of view (Schmitt 1972).

A second set of scholars gathers around Alain Parguez, for many years the editor of the series 'Monnaie et Production', published under his editorship by ISMEA of Paris between 1984 and 1996. The series contains contributions by scholars from various countries. So long as it was published, it was the only really international connection established between French followers of the circulation approach and their counterparts in Anglo-Saxon countries. The group headed by Parguez is strictly connected to French-Canadian authors, among whom the best known are Marc Lavoie and Mario Seccareccia from the University of Ottawa (in fact, one of the first reviews of circuit theory and of the contributions of the main authors belonging to it is due to Lavoie (1987)). The Parguez group is not as particular as Bernard Schmitt in adhering to the conceptual and terminological subtleties on

which he often insists, and is largely concerned with present-day problems of economic policy in advanced countries. Among the French and French-Canadian representatives of the circuit theory, Parguez and Lavoie are the two who move closest to the post-Keynesian approach (Parguez 1975 and 1984; Lavoie is himself the author of a handbook titled *Foundations of Post-Keynesian Economic Analysis*, Lavoie 1993).

A third group, active mostly in the 1980s, was formed in Bordeaux around François Poulon. Starting from the basic ideas of circuit theory, Poulon has endeavoured to construct a complete macroeconomic model. Poulon is the only French follower of the theory to have written a complete handbook of macroeconomics (Poulon 1982).

The circulation approach in Italy

Among the Italian precursors, a special mention is due to Professor Paolo Sylos Labini who, in contrast to the dominant Italian doctrine, has always maintained that the money stock is endogenously determined thanks to the creation of money by the banks in response to the demand for credit from firms (Sylos Labini 1948). In more recent years, the doctrine of the monetary circuit has aroused wide interest among Italian scholars. A detailed analysis of circuit theory is given by Graziani 1989; a typical circuit analysis is performed by Messori 1985.

The circulation approach in Anglo-Saxon countries

Approaches very similar in content to the circuit approach are to be found in the so-called Anglo-Saxon high theory of the 1930s. An analysis of money circulation identical in substance to the circulation approach is to be found in Keynes's works, in particular in the *Treatise on Money* (1930) as well as in the 1937–39 essays which followed the publication of the

General Theory (this point is illustrated in detail in Graziani 1991). A similar approach was followed by Joan Robinson in an often neglected chapter of *The Accumulation of Capital* (Robinson 1956: 25, 'The meaning of money'), as well as by other contemporary Anglo-Saxon authors (Dillard 1980; Godley and Cripps 1981; Godley 1990; Wray 1993; and, along the same lines, Eboli 1991).

1.2 Theoretical vicissitudes

Any elementary presentation of monetary theory makes clear that money, besides being a *numéraire* used for measuring prices, performs two main functions: (a) money is an *intermediary of exchange*, since, in present-day economies, payment is nearly always made in money, barter having practically disappeared; (b) *money is a form of wealth*, since anybody can hold the whole or part of his or her own wealth in the form of liquid balances, while waiting to establish what seems to be the most profitable placement.

Money as an intermediary of exchange is the older and more intuitive notion of money. In fact, in the imagination of the person in the street, money is no more than a means of enabling agents to buy commodities. If money, instead of being spent in the market, is kept as an idle balance, this is commonly understood as being a merely temporary destination, connected to the uncertainty of the moment and accepted only by agents waiting to make use of it in its natural function: being exchanged for real goods.

The conception of money as an intermediary of exchange is the first to appear in the history of economic thought. Adam Smith explains how the adoption of money is a consequence of the division of labour and a spontaneous reaction of the market to the practical problems that direct barter would create. After telling the long story of primitive money, Smith concludes: 'It is in this manner that money has become in all civilised nations the universal instrument of commerce,

by the intervention of which goods of all kinds are bought and sold, or exchanged for one another' (Smith 1993 [1776], book I, chapter 4: 34). Similarly, in Stuart Mill's words, money is 'the medium through which the incomes of the different members of the community are distributed to them, and the measure by which they estimate their possessions' (Mill 1909 [1848], book III, chapter 7, §3: 487).

If money is a mere intermediary of exchange, and if, as is postulated in general economic equilibrium theory, each agent keeps a strictly balanced budget (equality between the respective values of goods and services bought and sold), the final outcome is that all that an agent buys is paid for by means of real goods or services supplied (this is why supporters of this view insist on the fact that money, if properly understood, while being an intermediary of exchange, is no means of payment in itself). The whole market mechanism appears to be in the nature of a general barter, made easier by the intermediation of money, possibly obscured by the 'veil of money', but not altered in its substance.[4]

Carl Menger, a stauch supporter of the definition of money as an intermediary of exchange, used to consider money as being the spontaneous product of market choices. According to his historical reconstruction of the origin of money, among all goods traded in the market, one of them emerged because of its being scarce, durable and easy to carry.[5] Gradually all

[4] Patinkin and Steiger 1989 critically examine the character of the veil assigned to money. Paradoxically, some circuit theorists, like Schmitt and Cencini, come very close to the neoclassical approach in defining money as a mere technical instrument allowing goods to be exchanged on the market. In this view, payments made by an individual are actually completed only when the budget is perfectly balanced so that the purchase of each single commodity has been paid for by means of other commodities. 'Money is a pure instrument of circulation. It is no wealth, nor is it endowed with purchasing power. It is a mere numerical instrument having the function of measuring and making exchange possible' (Cencini and Schmitt 1992: 115).

[5] Menger 1892. Menger's teaching was followed by Hicks, who adds that, as soon as a specific precious metal became a recognised intermediary of exchange, the state was ready to come in and take over the coinage of money (Hicks 1989: 63ff.).

agents came to demand that particular good exclusively as payment for any other goods supplied, with the consequence that that good finally became the general intermediary of all exchanges. In Menger's view, paper money is (and should be) no more than a representative of metal money, this being the only real and sound money.

While being adequate at the intuitive level, the concept of money as a mere intermediary of exchange was abandoned because of two serious analytical problems associated with it, the first being the *correct definition of the utility of money*, the second being the *possibility of considering money itself as an observable magnitude*. Both aspects deserve detailed examination.

The controversy concerning the correct definition of the utility of money, which took place at the end of the nineteenth and the beginning of the twentieth century, was one consequence of the dominance of the theory of value based on utility. At the time, according to the dominant theory, the value of any good was determined by its marginal utility. Money, being used not for direct consumption but as an instrument for acquiring other goods, was not considered to be the source of any direct utility. The utility of money was therefore defined as an indirect utility, determined by the utility of the bundle of commodities that could be purchased by means of a given money stock. This point, already put forward by von Wieser and Böhm-Bawerk, was formulated with special vigour by Maffeo Pantaleoni in his famous *Pure Economics*. When introducing his analysis of money, Pantaleoni writes: '[Money] may be absolutely destitute of all direct utility . . . The more the particular thing we use as money is destitute of direct utility, the more essentially it is money . . . Money is only endowed with an indirect utility, consisting in its power of obtaining for us, solely by means of exchange, some direct commodity' (Pantaleoni 1898: 221). The same principle was finally codified by Ludwig von Mises in his famous 1912 *Theory of Money*: 'In the case of money subjective use-value

and subjective exchange-value coincide . . . The subjective value of money always depends on the subjective value of the other economic goods that can be obtained in exchange for it' (von Mises 1934 [1912]: 97, 98).

However, as Helfferich convincingly remarked, the volume of goods that a unit of money can buy depends on the level of money prices and therefore on the exchange value of money. Thus, in order to measure the utility of money and its value, one should already know its value. We are clearly arguing in a circle (Helfferich 1919; a detailed discussion of the same problem is contained in Schumpeter 1954, part IV, chapter 8: 1086–91).

In fact von Mises himself was fully conscious of the problem and, in a somewhat devious way, tried to find a solution to it. Von Mises tried to introduce a distinction, which subsequently entered into common usage, between individual experiments and market experiments (Patinkin 1965, Mathematical Appendix, n. 1). Individuals, when entering the market, ignore the ruling prices. This does not prevent them from preparing a strategy of action (their demand or supply schedule) or from determining the quantities that they are prepared to buy or sell as functions of all possible prices. What consumers decide upon when entering the market is not the quantity that they will actually buy (a quantity that will only be determined once the prevailing price is known), but their demand function, in which prices appear as parameters. In any possible price constellation, money will have a different purchasing power and therefore a different utility. The individual is ready to face any possible set of prices and therefore any possible value of money. Individuals ignore the actual level of prices; but, by considering prices as parameters, they are ready to consider their own money balance as being endowed with a marginal utility which will itself depend on the actually prevailing set of prices. On the basis of plans previously drawn, individuals will start negotiations, thus contributing to the determination of equilibrium

prices. Once the set of prices that makes demand and supply equal in each market has been reached, negotiations come to an end, equilibrium prices are known to all participants and the marginal utility of money is also determined. It is a well-known principle of demand theory that the reciprocal interdependence of prices and quantities exchanged does not make the problem indeterminate. In the same way, the interdependence between prices and value of money does not lead to a circular argument.

Unfortunately, von Mises's presentation (1934 [1912]: 97–107) was made obscure by his attempt (this one surely wrong) to demonstrate that a single individual is able to know the utility of money *even before* the market has reached an equilibrium position. In order to show that an individual is able to plan his market strategy before knowing the equilibrium level of prices, von Mises imagines that the individual, when entering the market, assumes present prices to be equal to those prevailing in the previous period. The same prices should determine the value of money, and therefore its utility. Any period thus relates to the previous one, back to an initial time in history when commodity money was used not as money but as a material good having a direct utility. The value of money thus comes to depend on the value of gold as a commodity. Von Mises's initial intuition was correct. But the development of his reasoning was unfortunate and he was himself accused of arguing in a circle (Patinkin 1965, appendix D).

From this moment onwards, the theory of money took a different route. Instead of reformulating von Mises's reasoning in a more correct way, it seemed simpler to modify the theoretical approach at its very root. Thus the idea was introduced that the utility of money is not an indirect one (derived from the utility of goods that money can buy), but the direct utility that an agent draws from having a money holding. By this definition, money is considered to yield utility not when spent but when kept idle. An individual who demands money in order to spend it is considered as demanding

goods, not money; a true demand for money is only expressed by individuals wanting money in order to keep it as a liquid balance.

Clear traces of a similar idea can be found in Marshall (1975 [1870]: 166–7) and Wicksell (1936 [1898], chapter 6, section A). The first to give a rigorous analytical formulation of this approach was the almost forgotten economist Karl Schlesinger. In an essay published in 1914 on the *Theory of a Money and Credit Economy* (Schlesinger 1914), he suggested that the need that money satisfies, rather than being a need for real goods that money can buy, is the need of having a liquid balance as protection against uncertainty. In Schlesinger's own words: 'Let us suppose that chance deficits cannot be covered by credits. They can then be covered only by selling the firm . . . or else by cash reserves held against such contingencies . . . The individual loss in not earning an interest on these cash reserves can be regarded as a risk premium' (Schlesinger 1914: 96–7). Schlesinger's book went unnoticed and remained totally ignored for many years.

Indications along similar lines are given by Irving Fisher, who writes: '. . . in a world of chance and sudden changes, quick saleability, or liquidity, is a great advantage . . . The most saleable of all property is, of course, money: and as Karl [*sic*] Menger pointed out, it is precisely this saleability which makes it money. The *convenience* of surely being able, without any previous preparation, to dispose of it for any exchange, in other words its *liquidity*, is itself a sufficient return upon the capital which a man seems to keep idle in money form' (Fisher 1930: 215–16; similar statements are in Fisher 1963 [1911]: 8ff.). Finally J. R. Hicks's famous article of 1933 made it clear that money yields utility in the form of protection against uncertainty, and that consequently the utility of money comes not from spending but rather from *not* spending it. The demand for money is therefore present only in conditions of uncertainty and is a demand for a stock of