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ON MONEY AS AN INSTITUTION

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On Money As an Institution

A review essay on Luca Fantacci (2005) *La moneta: Storia di un'istituzione mancata* (Money: History of a Missing Institution) (Venezia: Biblioteca Marsilio).

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Abstract: In this paper I am going to explore some of the major theoretical concepts and ideas in Luca Fantacci's work devoted to the history of money. As a historical check on Fantacci's theory I will present various moments in Russian monetary history interpreted in the light of the ideas of the *La moneta: storia di un'istituzione mancata*. I will compare Fantacci's theory of division between the unit of account and the medium of exchange with those of Walther Eucken and the Austrian School as well as of some other contemporary authors. A new institutional reading of the evolution of money "money as an institutional compound" is proposed.

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Key words: institution, money, monetary history

¹The first version of this paper was written in 2006 during my stay at ICER, Turin, and was published in Bulgarian in *Sociological problems*, Academy of Sciences, 20008, as: *Za parite kato institucia, Sociologicheski Problemi*, 2008, No 1-2, pp. 250-280. Subsequently after this publication and comments from different sources the paper was improved to a large degree.

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Luca Fantacci is an economist and a historian who works at the Università Commerciale Bocconi in Milan. His recent publications include a book in Italian (Fantacci, 2005), two articles in English (Fantacci, 2005a, 2008) and an article in French (Fantacci, 2006). Taken together, these four publications present his views on money, which rest on a rereading of monetary history and a novel interpretation of the historical concepts of money.

What are Luca Fantacci's major and leading concepts which deserve discussion? Why should we pay attention to the works of a relatively unknown scholar?

First of all, the book *La moneta: Storia di un'istituzione mancata* is an essay on the history of money and monetary thought, from ancient Greece to the present. It does not intend to provide a complete coverage or classification of monetary forms throughout the centuries, but rather to highlight the most significant turning points in the articulation of monetary functions (unit of account, medium of exchange and store of value). The three sections of the book are dedicated to a reinterpretation of the major phases in monetary history: ideal money, commodity money, and fiduciary money.

Fantacci doesn't regard money in its mechanical and often simplified sense (as in the neo-classical model), but as a "human" institution (p. 23) with a historical evolution - as a historically sensitive institution, using Hodgson's terminology - whose diversity and vivacity pose a number of theoretical challenges. Naturally, the institutional view of money is not new, having had its adherents for a long time (as we shall see below). Fantacci develops his concepts on the institutional character of monetary evolution in reply to the quandary posed years ago by the Italian historian Carlo Cipolla (1963, 1975) as to the reason for the millennial historical trend towards monetary depreciation. In reply to his own question, Cipolla proposed a universal "law" resting on diverse reasons; for his part, Fantacci considers that a better reason for long-term devaluation may be found in the institutional evolution of money² and, most importantly, in its duality.

Secondly, Fantacci subjects Western monetary history to a careful reading and finds that the basic functions of money which modern economists learn from textbooks (unit of account, medium of exchange, and means of preserving value) had a much more complex linkage in the past; we cannot comprehend them today and are unable to reconstruct them (p. 53) without recourse to an alternative theoretical model. This specific view on the history of money (separation between means of measurement and means of exchange, ideal and real money) has a long and fruitful tradition in the Italian economic and historical scholarship (Einaudi, 1936, 1940, Luzzatto, 1958, in particular pp.156-173, Cipolla, 1974, 1975). According to Fantacci, if we divide Western European history roughly into two long periods, the antique or pre-modern (until the 15th or 18th centuries AD) and the modern (from the 15th or 18th Centuries to date), and set certain stipulations on the conditionality of this division and on the purity or distinctions of these periods (also Fantacci, 2008), we note some principal differences in monetary systems. The division of money into ideal and real is characteristic of the first period, in line with the division between its functions as a means of measurement (unit of account) and a means of exchange (intermediary medium). Throughout this period, money was devoid of its third function of storing value, hence the proscription on "monetary

² As early as 1909 the Russian economist M. Tugan-Baranovsky formulated Cippola's "law" (while analysing the 16th Century price revolution), claiming similarly to Fantacci that the explanation can be institutional and sociological (Tugan-Baranovsky, 1909, pp. 379-393).

growth” (interest). For the sake of brevity, I shall call this monetary system Type 1: divided or differentiated.

On the other hand, in the modern period ideal and real money are indistinguishable, their reckoning and exchange functions merge (they are performed by a single object, whether a piece of metal or a piece of paper), while the store of value function assumes a leading role in the modern understanding of money. I shall call this monetary system Type 2: syncretic (merged, monolithic).

Fantacci finds historical proof for his theoretical model (in Caesar’s Rome, the Middle Ages and elsewhere³) and also presents empirical and technical proofs of his theoretical connections, be it in price behaviour or in diverse monetary reforms such as the Piedmont monetary stabilisations from the 16th to the 18th centuries and the Savoy monetary reforms between the 15th and the 16th centuries⁴.

Thirdly, according to Fantacci the function of measurement precedes that of exchange both historically and logically (“no exchange is possible without a measure,” p. 37); while measures accompanied humanity from its very emergence, intermediacy in exchange arose relatively later, as the natural economy collapsed. This claim is opposed to the traditional interpretation which accords primacy to money as intermediary, followed logically by money as measure of value.

Fourth, as mentioned in the spirit of the Italian tradition, Fantacci distinguishes the measurement function implicit in ideal money from the exchange function implicit in real money. Ideal or imaginary money (*moneta immaginaria*)⁵ has no definite physical shape, being a measure of value; real money has a specific physical shape through which it transfers value. Thus, ideal money is not associated with a specific material vehicle and has no substantial expression (such as a certain metal, be it gold, silver, or copper); its origin is extra-economic, being sacral or else legal. The moment money is minted into a coin it ceases being ideal and becomes real⁶.

Fifth, within the framework of real money (the means of exchange), Fantacci stresses the diverse functions and types of petty money (*moneta piccola, moneta bassa*, small coin, small change) and grand money (*moneta grossa, moneta alta*, large coin). While petty money is as a rule base (its legal value is greater than the value of metal in it, hence its frequently being dubbed “token coinage”) and serves internal turnover within a set sovereign community or country, grand money is generally valuable in itself and serves exchange between sovereign communities. Fantacci also calls the former “internal money” while the latter means of inter-communal and international exchange is “external money.”

Internal and external money demarcate two types of monetary areas with differing dependencies. Fundamental differences between internal (petty) and external (grand) money are

³ On the periods mentioned: Osokin (2003, [1888]), Kulisher (2004, [1909/1931]), Burns (1927), Salvioli (1929), Romero (1967), Miskimin (1975), Rostovtzeff (2002) and Barbero (2006). Though this is a digression, Charlemagne introduced a common European unit of account (ideal money), while the medium of exchange (real money) remained distinct within each part of his empire (Fantacci, 2005, p. 54); the difference with today’s euro – both a common unit of account and a common medium of exchange – is evident.

⁴ Fantacci has made fruitful analytical steps towards what had been put forward by Mark Bloch in 1933: “The economic history of mediaeval money – or rather its human history – has yet to be written... This economic history can not achieve its aim, unless it is also a social history – what I mean is that history has to remember that the human environment is composed of various groups, whose disparate ways of life are reflected by the contrasts in their money habits” (1933, p. 32).

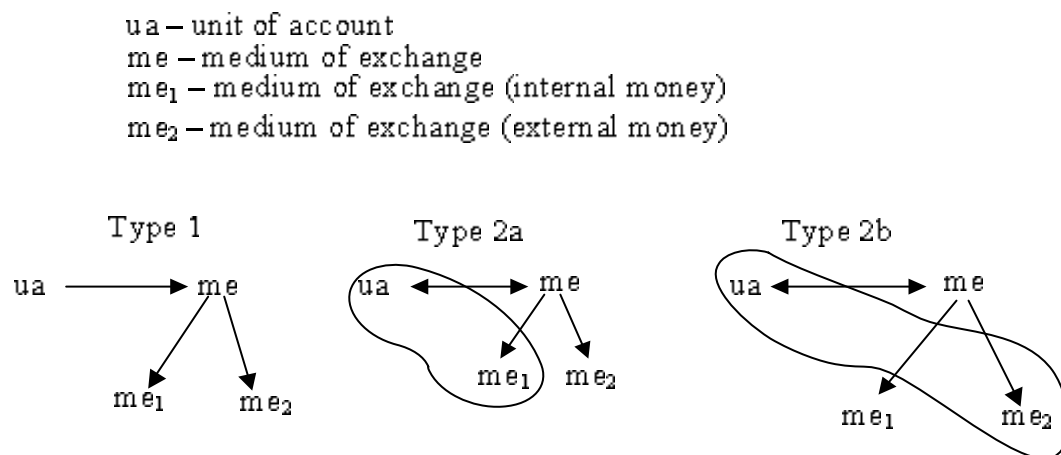
⁵ Cipolla (1975) has also called it *moneta fantasma*.

⁶ The relationships between unit of account and medium of exchange are a subject of active debate between anthropologists and economists (Dalton, 1965, Codere, 1968, Melitz, 1970, recently Aglietta and Orléan, 2002, also the analyses of John Henry, Michael Hudson in the collection of articles of Wray (ed) (2004).) Peacock (2006) has made an interesting review of three recent books on the history of money in Ancient Greece, which in one way or another argues against the traditional quantitative interpretations of the origins of money.

defined by different degrees and mechanisms of generating confidence. Diverse forms of religious or national sovereignty exist within communities (cities, countries, empires), while market mechanisms lead relations between communities, with money accepted at its material value (quantitatively by weighing and qualitatively by testing).

After introducing these different aspects of money, Fantacci tackles the different types of monetary policy (changing the face value or metal content) applicable to each type of money⁷. Moreover, he points out that redistributive links predominate in internal (petty) money, while exchange prevails with external (grand) money.

Figure 1 Types of monetary systems



Sixth, within the second or ‘syncretic’ period Type 2 (which we may assume began with the adoption of the gold standard made by England in 1731 and by France in 1804), the merger of ideal and real money - *i. e.* of the measurement and exchange functions - underwent two major stages based on different material support: metal until the Great War and paper money to date. Convertibility became a basic principle, not just between one type and one means of exchange (internal to external), but also and foremost between medium of exchange and unit of account. Within this period, value preservation and debt repayment became the major functions of money. The gold standard also underwent two main stages, the former featuring reconciliations through balance of trade and fixed external exchange rate rates (16th to 18th centuries), and the latter featuring variable exchange rates (18th to 19th centuries). Describing the latest stage, Fantacci lays particular stress on a Keynesian plan for international clearing which would reproduce the monetary principles of the pre-modern era (division between the exchange and measurement functions and removal of the store of value function) at international level.

Seventh, since Fantacci considers money not only as material history but also as a way of thinking, he presents parallel histories of Western European money and of theories of money:

“Money is a way of thinking. The ability to comprehend money in its historical evolution is related to our ability to reinstate conceptual horizons and discourses which have encompassed, defined and described money again and again. Hence, it is impossible to distinguish monetary history from the history of thought (p. 75)”.

⁷ Coins have three values: internal set by the mint, nominal external value set by the state, and market external value determined by the market (Fantacci, 2005a, pp. 46-47).

There is no doubt that occasionally reality and practice overtake thought and monetary theory, while sometimes the opposite happens (Fantacci offers multiple examples of this)⁸. I would point out that a classical political economy essentially informs the second period, closely linked to the theory of metallic money (be it bimetal or monometallic), followed by a utilitarian theory. In both cases, the issue concerns different variants and manifestations of rationalism and positivism born in the modern epoch. Here is how Fantacci sums up the results of his studies:

Ideal money is a measure of value. Metal money is a means of exchange. Fiduciary (paper) money is an instrument of anticipative or delayed receipt of value. In the *ancien regime*, money was a measure above all. In the metallic regime, money was a means before all else. Today money is a store before all else. (p. 262)

Finally, from a purely normative point of view Fantacci claims that contemporary money is not the most efficient institution possible and that a return to the pre-modern dualistic model and to money's circulatory essence could be taken into consideration (*i. e.*, ways to deprive money of value could be sought). Fantacci shares Keynes' claim that this division or duality is the essence of the monetary institution. It seems that the truly distinctive feature of differentiated systems, as opposed to syncretic systems, is not simply the existence of a plurality of monetary forms and functions, but the existence of a relation between them, which is not fixed, nor simply variable, but rather managed in view of specific policy goals. In this sense, the author considers money as a lost opportunity, an institution whose evolution deviated from the optimal route. The author suggests a specific model where Group 1 includes two types of monetary policy, dependent on the connections "money – means of measurement" (enhancement and abatement), or "money – metal" (reinforcement and debasement). The shift towards Group 2 leads to the decrease of the number of instruments of monetary policy⁹. Degrees of freedom and an efficient institution were thus lost. Fantacci sees today's monetary institution developing quantitatively at the expense of quality: something expressed in the book's title.¹⁰

A mere listing of these postulates shows that they offer opportunities for various interpretations and new analyses. I shall begin with some issues connected more closely with Fantacci's concepts, then present the concepts of other economists arguing similar theses, and conclude with a theoretical proposal on money as an institution.

Prior to this, I wish to present some aspects of Russian monetary history. Having coalesced as a combination of European, Arab and Asian traditions and institutions, the Russian monetary system offers opportunities for discovering a number of shared as well as distinct features in support of the Italian author's theses.

2

Russian monetary history contains two basic peculiarities¹¹. First, it tracked Western European monetary development with a certain time lag; second, it exhibited a significantly greater inclination to retaining the differentiated Type 1. The latter is shown by the difficulties of importing

⁸ Mitchell (1944).

⁹ Fantacci (2008).

¹⁰ As opposed to Fantacci (and Luzzatto, 1958), Cipolla argues that the unification of the measurement function with the exchange function is positive and goes as far as to suggest that the division of these functions is a sign of weakness (Cipolla, 1974).

¹¹ See Kulisher (2004, [1925]), Uht (1994), Kolomic (2001), CBRF (2004), Ilin (2006) and Golland (2006).

Western monetary institutions and particularly of merging the measurement and exchange functions, as well as by the mechanisms for generating confidence in money. As a whole, transition from the differentiated to the syncretic model was gradual and slow, with much wavering and resistance. While it may be argued that the overall thrust of Peter the Great's reforms (1672-1725) resulted in a Type 2 monetary system, cyclic fluctuations brought reversions to Type 1. Even reforms by the likes of Speransky, Kankrin and later Vitte failed to attain complete parity between the reckoning and exchange functions. Curiously, history repeated itself also in the early Bolshevik years with the launch of the gold *chervonets* which were used as a measure and rarely circulated in exchange (this function was fulfilled by *sovznaks*). During the late 1990s' financial crisis in post-Soviet Russia, the rift between measurement and exchange functions reappeared, with the US dollar or the so-called *uchetnyye yedinitsey* ["accounting units"] acting as measures.

Going back in time, in the 16th century the silver rouble, equal to 100 silver kopecks, played the role of ideal money (measure), while exchange was effected primarily by copper kopecks called *den'gi* ["money"]¹². Prior to this, there had been two units for measuring value until 1536 when they were merged: the Moscow rouble and the Novgorod silver rouble (Kluhevsky, 2003, [1870/1900], p. 88). The metal content of the silver reckoning rouble changed in 1612, with the period between 1630 and 1680 witnessing an attempt to make the silver rouble become real money by minting it and putting it into circulation. These were the first steps towards a Type 2 monetary system. As regards external money, this role was played by the so-called *yefimka* (a Russian corruption of *joachimsthaller*¹³) which was equal in value to the *thaller* and whose issue was a treasury monopoly. Under the Tsar Aleksey Mikhaylovich (1629-1679), an attempt was made to introduce a copper coin (known to Russians from the Tartar invasion) with a nominal value equal to its silver equivalents alongside which it was intended to circulate. The object was to establish confidence in copper money which would then become a base internal coin or "token coin."

Peter the Great's monetary reforms delivered a new and decisive thrust towards transition to a syncretic model. In the *status quo ante*, the means of measurement were represented by the silver rouble (100 kopecks), the *pol'tinnik* (50 kopecks), the *polupol'tinnik* (25 kopecks), the *gryvnya* (10 kopecks), and the *altyn'* (3 kopecks). This was ideal money and was not minted. As regards real money (means of exchange), this comprised the wire silver kopeck (1 kopeck), the *den'ga* (0.5 kopecks) and the *polushka* (0.25 kopecks). The sole nexus one can find between means of measurement and means of exchange was the wire silver kopeck. As mentioned above, external money was the *yefimka* (since 1649). Means of exchange depreciated rapidly and counterfeit copper coinage appeared. Meanwhile, we will recall that the large silver coin called the *thaller* appeared in Western Europe in the 16th century.

Peter the Great drew his ideas on monetary reform from Western Europe, especially after his stay in England, where he had held thorough conversations with Isaac Newton who, as head of the Royal Mint, had fathered the British monetary reform.

Between 1700 and 1704, Russia saw the basic face values of new post-reform money appear: foremost among them a run of date-stamped silver coins (50, 25, 10, 5 and 3 kopecks) which circulated alongside copper *den'gi* and *polushki*. A silver rouble equal in metal content to the *thaller* was minted in 1704. The European decimal system was also adopted, with the rouble, the *grivenik* and the kopeck (and the latter's halves, *viz.* the *pol'tyna*, the *pyatak*, and the *polushka*) becoming means of measurement. The *altyn'* was withdrawn. These measures represented a

¹² In 1603 the Moscow, Novgorod and Pskov mints were consolidated.

¹³ Flandrin (2003).

decisive step towards a transition to a Type 2 monetary system: ideal and real money, and hence the means of measurement and of exchange, were united in the silver rouble. At the same time, Peter minted the gold chervonets for external use, basing them entirely on the Venetian ducat (ducats were melted down and reminted as chervontsy). The value of this coin was also expressed in silver roubles and kopecks.

To finance his campaigns and reforms, Peter was forced to cut the weight of his coins and reduce their quality, to “change the tariff” (without changing the content of means of measurement¹⁴). As a whole, Peter’s monetary reform entailed inflation and the devaluation of exchange coinage (copper coins were devalued six to eight-fold), while wholesale counterfeiting has been well documented by chroniclers.

By the first quarter of the 18th century, monetary circulation was structured thus: 88.5 % silver coinage, 9.2 % copper coinage, and 2.3 % gold coinage (Uht, 1994, p. 35). Peter’s monetary system had all in all endured. In general, one may state that by the close of Peter’s rule the system’s basic means of measurement was an imitation silver thaller, its external means of exchange was an imitation gold ducat, while its domestic means of exchange were coins of corrupted silver or of copper. Hence, one may conclude that Peter’s reforms - having commenced with the wire silver kopeck - practically completed the transition to a Type 2 with unified measurement and exchange functions.

After Peter the Great, the major stages in the monetary evolution were the following: Catherine the Great (1729-1796) introduced paper money (*assignatsiy*) to supplant depreciating copper coinage in 1768. These bills initially had silver cover, yet this was to erode gradually and, especially after the Napoleonic Wars, they depreciated (on 9 April 1812 assignatsiy were designated as statutory means of settlement in private transactions – legal tender). After the wars Speransky attempted a monetary reform, being followed by Kankrin. While finance minister in 1843, the latter conducted a devaluation intended to bring the legal value of assignatsiy into line with their market value. He exchanged assignatsiy for state credit tickets (one rouble credit ticket equalled 3.5 roubles of assignatsiy). This led to a 3.5-fold price drop and a number of economic difficulties.

After the Russian-Turkish War of 1877-1878 the credit rouble depreciated again. Amid a favourable trading environment and after lengthy preparations, particularly by finance ministers Bunge and Vyshnegradsky, Sergey Vitte stabilised the rouble on the basis of the gold rouble in 1897 (gold had been selected after long deliberation). The gold rouble was ideal money and was not minted (Ilin, 2006, p. 196). Minted money included the *imperial* (15 roubles) and the *poluimperial* (7.5 roubles), and subsequently a five rouble gold coin; demand for these coins was low and distribution was limited.

The gold rouble became a unit of account according to the 1899 *Monyetniy Ustav* Act, while private transactions statutorily employed silver coinage (1 rouble, 50 kopecks and 25 kopecks) for settlements of up to 25 gold roubles and copper coinage for settlements of up to three gold roubles’ worth. Issues of credit roubles were limited by the requirement for no less than a 50 % gold cover on sums of up to 600 million roubles, and for complete cover for higher sums¹⁵.

¹⁴ Between 1698 and 1711 the monetary income from these measures reached 29.3 % of the money supply.

¹⁵ No new medium of exchange appeared under Vitte; what did change was the monetary unit, with the value of the paper rouble being set at two thirds of that of the new gold rouble. Such devaluation is effected by changing the value of the unit of account, this being better “for it does not impact the prices of goods but merely makes the metal monetary unit equal to the market value of paper money in which prices are expressed.” (Tugan-Baranovsky, 1909, p. 412).

There is considerable evidence that gold coinage was not met enthusiastically by the public; people were either uninterested or found such coinage unsuited to their needs. A number of economists feel that the Vitte reform was forced and wrong-headed, the Russian populace having no need for such coinage (the needs of foreign capital were a different matter, it preferring stable money). Economists aware of the contemporary Russian realities felt that the forced introduction of the gold rouble led to losses for the state and contradicted the habits of a public used to paper money. According to Pr Nikolsky :

We Russians, who deal daily with paper money, can testify that the thought processes ascribed to us by the aforementioned economists do not cross our minds. While purchasing the greatest variety of objects with paper money day in and day out, we never see in our mind's eye the value of whatever amount of coin (cited by Demostenov, 1937, p. 126).

If we recall that the Asian monetary tradition involved paper money from ancient times (China is a notable instance¹⁶), we can conclude that Type 1 monetary systems were characteristic of Asian monetary institutions. The unwilling and reluctant adaptation of the Russian public and merchant classes to the Western European monetary tradition (Type 2) bears witness to this.

In conclusion, the table below illustrates the results of the Russian historian Klyuchevsky's studies, who in 1882 attempted to trace the purchasing power of the rouble from the 15th to the 17th centuries.

Table 1:
Depreciation of the Russian rouble

Years	Rouble values expressed in 1882 roubles (1882 price basis = 1)
1500	Over 100
1501-1550	63 to 73
1551-1600	60 to 74
1601-1612	12
1613-1636	14
1651-1700	17
1701-1715	9
1730-1740	10
1741-1750	9
1882	1

Source: Kluchevsky (2003, [1870/1900]), p. 132

3

Now let us regard the various functional divisions proposed by Fantacci. Since everything is made more comprehensible by comparison, I shall enumerate others who have also stressed the duality of money.

What comes to mind is the proximity of the typology of monetary economy expressed by Walter Eucken in *Die Grundlagen der Nationalökonomie*. Employing a methodology which

¹⁶ Eagleton and Williams (2007).

combines elements of the historical school and a deductive approach, Eucken formulates two types or “pure forms” of monetary economy:

Many national economists say that money is a means of exchange and a measure of value. This definition cannot take us too far ... History shows that in different cultures and over many centuries, the division between these two functions was customary, that their division and merger were balanced historically, or even that division predominated [...]. Two pure basic forms of the monetary economy must be distinguished. In the first basic form money is also used as an accounting unit, while in the second basic form money and accounting units are two distinct concepts ... The economic process develops in entirely different ways as regards planning and the actual progress of events within each of the two basic forms ... (Eucken, 2001 [1969], pp. 203-205)

Eucken considered that an *independent* monetary theory must be constructed for each pure form of monetary economy. Using his abstraction approach and observing the wealth structure of different economic entities, Eucken formulated three types of “pure monetary systems” which relate *solely* to means of exchange (termed “money”). The German economist defined three pure monetary systems depending on how money appeared and disappeared, *viz.* where commodities became money; where money arose through expenditure of labour; and finally, where money arose through credit. The task of monetary theory was formulated anew as the need to show:

... what influence the presence and utilisation of individual monetary systems exerts on the economic process of an exchange economy and how the difference between the two basic forms of monetary economy affects the economic process ... how money governs the economic process within an exchange economy. This is the task of monetary theory ... (Eucken, 2001 [1969], pp. 219-220)¹⁷.

The main difference in approach between Fantacci and Eucken is that while the former links money above all to its measuring function, the latter sees it essentially as a means of exchange. Focusing on the differences, while Fantacci sets the means of measurement as logically and historically preceding the means of exchange, the ordoliberal (here we can also mention Wilhelm Röpke and Constantino Bresciani-Turroni), Austrian monetary theorists (Carl Menger, Ludwig von Mises, Murray Rothbard, Friedrich von Hayek, contemporary Austrians like Hans-Hermann Hoppe, as well as Joseph Salerno and Pascal Salin), do the opposite. They see the means of exchange function leading both logically and historically to money also becoming a means of measurement (the means of exchange is the basic and sole function of money). For his part, and following the logic of assigning priority to the means of measurement, Fantacci rebuffs the function of storing value and repaying debt. The means of exchange function prevails among the ordoliberals, thus “genetically” establishing the store of value function as basic along with the purchasing power (indeed, exactly how long a time must elapse before one can state that a means of exchange has turned into a store of value?).

Dwelling briefly on the Austrian School¹⁸, for which money is foremost a means of exchange and of transferring value through time and space, ever since Carl Menger’s renowned article of 1892 the origin of money has been regarded by adherents of that school as a self-generating, endogenous market institution which was monopolised and became public significantly

¹⁷ Eucken claims that it was precisely the division that allowed European trade to flourish in the late Middle Ages.

¹⁸ Ellis (1934) has done a review of the German-speaking school of monetary theory. He is also one of the leading specialists on currency control and clearing where the means of measurement become the leading function and are separated from the means of exchange function.

later¹⁹. By monopolising money supply - intentionally or not - the state unbalanced the amount of money needed by the economy, causing deformations in relative prices and calculating chaos. This chaos obscures all reference needed for business decisions. The sole institutional solution is to privatise the money supply and leave it to market forces. This would introduce self-regulatory mechanisms such as adverse clearing among issuing banks, restoring money supply to its necessary level²⁰. Most Austrian adherents are uninterested in the unit of account (it is not a function of money), while they generally agree on the public and inclusive character of the unit of account. Some of them see merit in arriving at a single means of measurement, due to its external effects and to its similarities with language as a mean of communication. Few propound competition between units of account, one such being Hayek's 1977-1978 model.

The Austrians regard the very merger of the unit of account and mean of exchange functions which is basic to Type 2 critically. Why? I shall put forward my explanation. Once production of the merged means of measurement and means of exchange (money) becomes a state monopoly, money (its quantity and movements) influences the unit of account destroying essential communicative channels.

The Austrians insist on a means of measurement which is stable over extended periods, or else - if it is mutable - on change being symmetrical for all economic agents, impacting price levels while retaining the structure of micro-prices. Thus, changes in price levels are removed from changes in relative prices and do not bring major changes in income distribution. While Type 1 features an additional rate of exchange, an additional price (that of buying into means of measure), Type 2 lacks this rate or price. Type 2 has no ideal money, it having been merged materially with the means of exchange, and thus quantitative and qualitative manipulations of the latter create insecurity from the standpoint of the state. In Type 2, the state does not change prices (exchange rate of the medium of exchange expressed in ideal money) but rather manipulates the medium of exchange by changing its supply or amending the metal content of coinage. The dominant monetary theory in Type 2 is the quantitative theory, according to which prices depend on the supply of money (whether coinage or bills) and the state is tasked with controlling this supply either discretionally or following set rules. In Type 1, rate changes between measure and mean of exchange did not entail changes in the value of the unit of measure which affected relative prices²¹.

Within the Austrian school there are diverse theoretical models and specific monetary reform proposals which rest precisely on the difference between measure and means of exchange. Some free money models tackle the subject of dividing its reckoning and exchange functions, with certain theoreticians considering this as possible and desirable (Yeager, 2001) while others consider it impossible and illogical (White, 1984) and prefer to stop privatisation of the means of exchange.

Among the diversity of institutional configurations, Hayek's proposal stands out (Hayek, 1985). He suggests competition between means of exchange which may be convertible into commodity baskets. Hayek proposes competition between units of account and selection between monetary measures as well. Here, the state is even deprived of the ability to define the means of reckoning, an ability assumed by a number of adherents of competing money such as Black, Fama, Yeager. Competition would extend to price levels and become *total*. Hayek thought that after a

¹⁹ Eucken distinguishes two types of origins: *global*, of the monetary economy (depending on whether unit of account and means of exchange are merged or not) and *specific*, of the monetary system itself, or of the medium of exchange (Menger's article relates only to this one).

²⁰ Selgin and White (1994).

²¹ This is closer to Friedman's helicopter according to which all economic subjects suddenly receive more money.

certain period of competition between standards, exchange rates between “the best” of them would very likely be fixed, facilitating measuring. The idea of commodity basket cover was not a contribution made by Hayek. First, covering means of exchange with goods was considered as a natural (‘genetically determined’) way of overcoming fluctuations in the value of money. Second, a number of economists have criticised the practice of tying money down to a single commodity. We have known a number of proposals for cover by *more than one commodity*²², such as: bimetal mixed coin composed of gold and silver (Walras, Edgeworth, Marshall); gold and silver combinations which fluctuate according to trading (Newcomb); a tabular standard for indexing prices to set tables (Jevons); dollar stabilisation through a mean weighted index of basic commodity prices (Fisher); and contemporary proposals such as basket of term contracts (Dowd)²³.

4

Let us now direct our attention to those authors whose research *supports* Fantacci’s views.

As mentioned, Luca Fantacci is critical of the merger between measure and means of exchange (Type 2) for reasons other than those cited by the Austrian School. He considers that in losing the exchange rate (the price of real money expressed in ideal money), the state has deprived itself of an important discretionary tool; from a purely historical point of view, tariff changes and the use of token coinage have offered opportunities of solving a number of purely internal problems, such as deficits of small change. Deriving his arguments from Type 2, Fantacci rejects the store of value function, seeing spending and uninterrupted circulation as the purposes of the means of exchange. All monetary hoarding is harmful since retaining money is harmful and unsustainable for the economy. It is not by chance that Fantacci shares Keynes’ views²⁴. Though the Austrians consider interest as the price of savings rather than of money, they do not deny the preservation and transmission of value as a basic function of money (they see it as stemming from its means of exchange).

A number of social scholars have shown the leading role of the measure function of money in different ways, all in the spirit of Fantacci. Foremost among them are François Simiand, Marc Bloch, Georg Simmel, Léon Walras, Ernest Solvay, Georg Knapp, and today’s French economists Michel Aglietta, André Orléan, Jerome Blanc, *et al.*²⁵ They feel that reckoning preceded exchange; the latter is characteristic only of economic exchange, while the former is a fundamental artefact of social exchange. Units of measure have inclusive origins, drawing legitimacy from the diverse forms of sovereignty developed by society. The sacral origin in question has been stressed by many anthropologists as reported by Marcel Mauss, with the French subsequently developing an entire branch of monetary theory which regards money as having arisen from the exchange of gifts (many papers have been published in the *MAUSS*²⁶ journal).

²² Fisher (1920), Laughlin (1931) and Friedman (1951).

²³ See Rist’s critique of Ricardo and the quantitative theorists who failed to mention the convertibility principle (Rist, 1938).

²⁴ Fantacci cites Keynes when he says that genuine monetary history began with Solon’s 6th century BC reforms, which amended the ratio between means of reckoning and of exchange, showing that monetary institutions are linked to sovereignty and politics. In his “Theory of Money” Keynes has expressed the dual character of the monetary system, differentiating between ‘money of account’ and ‘money’ and unambiguously stressing the latter’s leading role.

²⁵ Zelizer (1994).

²⁶ MAUSS (Mouvement anti-utilitariste dans les sciences sociales). See also the collection of papers by Aglietta, and Orléan (éd.) (1999), Cartellier, J. (1996), Orléan (1991, 1992). Lakomski-Laguerre (2002) presents Schumpeter’s monetary theory.

In this sense, the latest book by Aglietta and Orléan (2002) offers a *new* reply to the question as to the nature of money, discovering its roots in overcoming innate human violence (as in earlier publications, they actively employ René Girard's theory of mimetic violence²⁷). Such fundamental detail is beside the point here; what matters is that the two authors place the measurement function centre stage, seeing it not only as basic, but also as offering the possibility of altering the logic of basic economic causality. Thus, the sequence is not "value ? price ? money", but rather "money ? price ? value" (the authors criticise Marx's *Capital* from what they claim to be a truly Marxian position). Money is the fundamental condition for the genesis of utility or of value. The French authors see the emergence of measures as extra-economic. As regards exchange (considered as secondary), it emerged spontaneously and haphazardly (here, the authors' views have shifted notably over the past two decades to the typically Austrian model of spontaneously emergent means of exchange of which they had been trenchantly critical in the past²⁸). The holistic and abstract nature of measures *renews* the theoretical grounds on which the authors plead for active state management of monetary processes. Aglietta and Orléan analyse monetary practice historically (in antiquity, Middle Ages and modernity), tracing the "trajectories of money" to show the historical significance of reckoning, as well as the dichotomy between ideal and real money. Jerome Blanc's studies, devoted to parallel currencies and money substitutes, are in the same spirit. He, too, names the *fonction de compte* (accounting function) as "the genuinely fundamental monetary function" (Blanc, 2000, p. 25). Blanc considers - as does Fantacci - that exchange (*modes de paiement*) plays a subject role, while storing value (*réserve de valeur*) is not specifically a monetary function. Blanc regards money as a system which diffuses and transfers its generic functions to diverse monetary instruments²⁹.

Similarly, the works of Randall Wray and Stephanie Bell follow the Chartalist monetary theory and more generally the spirit of the post-Keynesian endogenous monetary model³⁰. Wray (1998, 2000, 2004a, 2004b) shows the emergence of money from the power of the state and from its fiscal function (especially taxation). Here, money and its function of measurement are a logical sequence of the dynamics of debt and credit in society. Bell (2001) identifies the credit and accounting character of money, as well as the hierarchy of the different monetary forms³¹. Ingram (1996, 2004), proposes a theory of money as a social relation, where he similarly links the origin of money to the public sector. He also outlines his interpretation of the evolution of money, backed up by numerous historical examples (this is possibly the closest to Fantacci's dual model).

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²⁷ Aglietta and Orléan (1984).

²⁸ *La violence de la monnaie*. Nowadays the two writers speak about mimetic monetary competition: something not entirely different from competition between monetary issuers.

²⁹ See the Russian economist Genkin (2002). On the history of small money I shall mention Velde (1998).

³⁰ See Goodhart (1998, 2000). In Wray (ed.), 2004, the pioneering monetary ideas of Innes are presented. Innes is not a unique case of neglect of the monetary economist; the case of Alexander Del Mar is even more eloquent. His theory of money (practically the same as Innes's) and his unsurpassed historical research on monetary systems (Del Mar, 1906, 1896) are rarely explored.

³¹ Economic sociologists have reached consensus regarding the fiscal origin of money (Weber, Sombart, Polanyi, Schumpeter, Ellias, Kula etc.). The Polish economist Witold Kula looked at the links between money and taxes during different phases of feudal and capitalist economy (Kula, 1970, 1962). Recently the "fiscal theory of price level" has become popular (the price level becomes solely a function of the taxes, after money has eliminated from the price level equation). This theory, inspired by the writings of Wicksele, gives a leading role to the means of measurement in opposition to the "search models", which are a continuation of Menger's views of the origin of money as a means of exchange.

In his book, Fantacci presents a picture of money's institutional character through the prism of what is mostly a historical study. Meanwhile, though recent years have witnessed a rapid advance of institutional economics (Hodgson, 2001, 2006), attempts to integrate knowledge thus accumulated are generally absent in Fantacci's work. Without blaming him (his objectives were different), I conjecture how this gap may be filled. The approach presented below offers the possibility of interpreting the evolution of monetary institutions in the light of the division between unit of account and medium of exchange (the transition from Type 1 to Type 2) and also a solution to Cippola's observation on why there should be a global trend to monetary depreciation.

Two basic postulates may be stated without going into methodological details. First, that the rules for measuring and comparing value *I1* and for exchange *I2* should be regarded *as* entirely independent institutions as regards historical genesis and development logic³². The former is intrinsic to social exchange, having emerged at the genesis of humanity; the latter appeared at a later stage and is essentially typical of economic exchange. Second, that money ought to be interpreted as an *institutional composite*: a complex network of institutions which develop not only as a result of the interplay between the two rules mentioned above, but are also subject to the influence of other basic institutions such as religion and state, to name but two. The monetary composite does not exist in a vacuum, being integrated in the overall institutional dynamics.

The institutions of reckoning *I1* and exchange *I2* may be complementary or exclusive, with the criterion being whether one boosts or cuts the effectiveness of the other³³. Institutional effectiveness relates to the ability to improve coordination and cooperation between agents and to render the distribution of incomes more acceptable. Effectiveness may also relate to the abilities of an institution to allow increasing complexity in agent behaviour and the appearance of new practices, to be open to new developments. Agent micro behaviour and demand for services linked with reckoning and exchange must be the basic criteria for judging the new rules.

There is a certain hierarchical relationship between the two institutions: the higher-placed rule would govern (be 'the rule of rules') and the lower-placed one would rarely change. Sociologically, the institutions of reckoning and exchange and their hierarchical relationship (within the monetary composite) reflect the efforts of diverse groups and individuals and the interplay of their economic, political and spiritual interests. These groups use other institutions (mostly the state and ideology, and prior to that religious ones) as levers to influence the institutional architecture of *I1* and *I2*. This results in the different configurations illustrated by Fantacci, Type 1 or Type 2 monetary systems.

From this point, I assume the following logic: starting from the status of *language* as the fundamental constituent institution which permits the existence of other institutions and which is the basic "medium of representation" (Searle, 2005)³⁴, we note that the *I1* rule of reckoning is *genetically* closer to language (it is a bridge linking language with economic exchange)³⁵. As with language, means of measuring value are ideal in themselves; their origin is not economic, but before all else social. This type of rule allows the development of abstract and rational thought, and

³² Searle (2005), Hodgson (2006).

³³ Masahiko Aoki and Bruno Amable developed the idea of institutional complementarity.

³⁴ According to Searle (2005, p. 12): "... you may have language without money, property, state, or family, yet you cannot have money, property, state, or family without language." Without being a monetary economist, he notes: "You can usually imagine a society that has money without having any currency at all" (p. 16).

³⁵ Early units of account were directly interchangeable with units of weight (ex. the pound), while so-called measurement scales existed yet earlier as discussed in detail in Burns (1927). On money as language, symbol and sign, see Foucault's *Les mots et les choses*.

subsequently monetary reckoning and accounting, in turn lending great impetus to trading. *I* is every bit as intractable to change as are measuring institutions similar to it (think of the failure of introducing the decimal unit of time in revolutionary France in 1792 or of the six-day week in the 1930s' Soviet Union).

The other institution *I2* is first and foremost linked with the emergence of markets and economies in human development. While the former institution sought uniformity (a shared measurement unit), this institution seeks diversity (a diversity of means of exchange). Within this institution we may discern two sub-rules or lower-order institutions, *I21* and *I22*. They coordinate respectively the behaviour of economic exchange within a state and between states, in other words they are internal and external³⁶. Though *I2* treats real rather than notional processes, following the logic of language internal money is closer to it than external money (proof of this is the presence of base paper bills in internal turnover and of noble metal coinage externally). In other words, the inclusiveness or totality of the rules under examination declines the farther away we move from language: $I1 \rightarrow I21 \rightarrow I22$

Continuing, we note that the rules of exchange as manifest in the means of exchange (coin or bill) are private by origin, there being no nexus with the state or the sovereign. This is historically documented, for instance in Burns (1927). The more a community grows (from city to state to empire), the stronger the functions of the *I2* means of exchange become at the expense of the *I* measure of exchange.

In time, within the priorities of the state the profit motif begins to dominate over those of effective money circulation (again Burns, 1927). The state gradually turns into an instrument for the domination of certain groups and monopolises the rules of internal exchange or *I21*. Changing internal money into token coinage gives the state the opportunity to boost its income and to broaden its redistributive abilities. The transition from a dual money system to a syncretic one may also be interpreted using the proposed logic. The interests of the state (or rather of its governing group) are in favour of merging the means of reckoning and of exchange with a view to boosting its capacity for discretionary redistribution. The state gains a *direct*, yet relatively unnoticeable, ability to influence relative prices and income differentials between groups and individuals by controlling the supply of means of exchange and their movements. In other words, manipulating the rules of exchange results in manipulation of that part of the monetary compound which is closest to language. This destroys information, harms the entire system of planning and decision making, increases uncertainty, and destroys incentives, *inter alia*. It now reverses priorities and changes the hierarchical relationship between the two institutions: *I21* assumes primacy and determines *I* structurally.

We have seen how hierarchy within the monetary institution changes under the influence of external non-monetary institutions (the state) and how the monetary compound is removed from the primordial significance of language. In this sense, within the Type 2 model the two institutions are at odds with each other, or rather *I21* is at odds with *I*. From this situation stem not only logical proposals for decomposing this '*institutional mutant*' by privatising the means of exchange *I21*, but also the pinning of hopes on the ability of new decentralised information technology to tear apart (even to remove) the means of exchange from the unit of account (through online barter), and to resolve "exact change" issues.

As regards the dilemma of what the word "money" has meant through the ages, Searle's definition of what an institution is would be suitable: it is the "assignment of status function, *X counts as Y*, or, more typically, *X counts as Y in context C*" (Searle, 2005). In the case of money, means

³⁶ See the empirical analysis by Pryor (1977).

of reckoning have the status of money in Type 1, while means of exchange have the same status in Type 2³⁷.

If we now return to the Cippola “law”, we see that a possible solution is precisely the existence and expansion of the state: manipulating the monetary compound in its favour (most of all by passing from Type 1 to Type 2) devalues the medium of exchange in the long run. Thus, we are witnesses to what is mostly a social dynamics in which a basic institution (the state), being an arena of conflict between different groups, changes the basic structure of the monetary institution in its favour. Indeed, though he focuses only on the mediaeval period, Cippola himself lists this as one of several possible reasons, without going into Type 1 to Type 2 transitions.

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Yet, can we judge history and accuse it for the choice of one model of monetary evolution rather than another? Can we divine what may have happened had a different institutional path been chosen?

I can only state that what we may regret is the simplification of monetary rules, or as Hayek put it, the non-use of “broadly defined rules.” He showed that the state limited experiments with money from the very outset. This turned money into a “deformed offspring which has suffered in having to traverse too-limiting channels and whose potential has thus been stunted” (Hayek, 1985, pp. 323-335). This lack of experiment and innovation is the basic reason which limits our theoretical speculation as to possible trajectories of monetary regimes.

If we strive to improve the effectiveness of monetary institutions in a future doubtless full of deep change, our sole guide to correct decisions would be a striving to understand the various motives of agent micro-behavior, be it in value reckoning or in exchange practice. This means not only the mechanical measuring of perceived links, but also attempting to understand the interests, reactions and strategies of these agents within a broad social context which includes not only the economy but also the political sphere, the emergence of ideas and behavior models. The words of the great Italian historian, Carlo Cipolla, sound like a warning to any scholar who is thinking of investigating the history of money: “It will be a big mistake to look at the history of money simply according to its technical elements – it reflects political as well as economic history too”, Cipolla, 1975, p. 102).

Fantacci has followed this advice engendering discussion on basic issues of monetary theory. Further research will have to look into the mechanisms of interplay between the processes of measurement and exchange and its different shapes and forms in time and space.

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³⁷ In Type 1 era the names of means of exchange derived from those of units of account. Aristotle called money *nómsma* (“institution”), while means of exchange were named after popular commodities such as animals or leather. Hesitation as to what constitutes money is evident as early as Aristotle. In *Nichomachean Ethics* he links money with measurement and ideal money, while linking it with means of exchange and thus real money in *Politics*.

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