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**COMPLEMENTARY CURRENCIES
A PROSPECT ON MONEY FROM A RETROSPECT ON
PREMODERN PRACTICES**

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Complementary Currencies:
a Prospect on Money
from a Retrospect on Premodern Practices

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Abstract

Debasement has generally been condemned as a defect of premodern money, that was eventually amended by the institution of the gold standard. Building on monetary history and thought from the sixteenth to the eighteenth century, this article argues that debasement was instead an instrument designed to maintain the metal standard where it was needed, in the circuit of long-distance trade, while preserving the possibility of an autonomous distribution within local economies. The theoretical distinction between monetary functions (measure and means of exchange) was made effective by the articulation of ideal and real money (via debasement and enhancement), providing complementary economic areas with complementary currencies. Moreover the distinction between monetary functions appears as a constituent feature of money also in the perspective of a reappraisal of the milestones of monetary thought, from Smith to Keynes.

Complementary Currencies:
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‘In the long run, every monetary unit is subject to a process of progressive depreciation... Indeed, historians and economists do often refer to progressive currency depreciation as to a universal “law”. But why this law should hold and how it operates has never been satisfactorily explained’.¹ The matter outlined by Carlo Maria Cipolla in 1963 has been many times addressed, before and after that date, along the same lines. However until the question is set in these terms, it may never find a satisfactory explanation. I believe that there are three major flaws in this approach, that veil the specific nature of premodern monetary regimes, their long term trends, and the eventual prevalence of modern money concepts and practices.

(I) Cipolla speaks of ‘monetary unit’. In *ancien régime* however there were two different kinds of money – ideal money used as unit of account and real money used as means of exchange – and hence two monetary units.

(II) Speaking of ‘depreciation’, Cipolla refers to a reduction in the metal parity of the unit of account. In *ancien régime* however this could occur through two different forms of monetary alteration, both excluding rather than implying a direct and immediate

* This study was conducted within a research program on ‘Complementary Currencies in Historical Perspective’ at Bocconi University. I would like to thank Massimo Amato and Bernard Lietaer for precious comments on previous versions of this paper.

¹ C. M. Cipolla, ‘Currency Depreciation in Medieval Europe’, *The Economic History Review*, New Series, Vol. 15, No. 3 (1963), p. 413.

relation between unit of account and metal. Indeed such a relation will be commonly known and legally defined only later as the 'metal standard'.

(III) Consequently the universal law that historians and economists seek cannot have the 'ineluctable character of a physical law',² but rather the nature of an institution, a rule of conduct established by authority and enforced by legitimate power within a given political community. Money is never simply a matter of fact, not even when it appears in the form of a certain amount of precious metal. The metal standard may itself be more properly understood as the result of a radical (yet rather short-lived) reform changing a previous millenary framework, rather than as a natural outcome on which to measure the primitiveness of previous systems.

The interpretation I propose is based on studies both of monetary facts and economic thought. As long as money is considered an institution, the two fields cannot be kept separate. 'Whatever it may have been in the past, money has come to be what it now is only through thinking about it'.³ The empirical research was initially focused on Northern Italy, particularly on the Ducat (and subsequently Reign) of Savoy, from the fifteenth to the eighteenth century,⁴ while the theoretical enquiry spanned across the impressive amount of monetary treatises produced throughout Italy in the same period.⁵ However, widening the perspective to include the studies devoted to the monetary history of other European states, the basic assumptions of the model seem to hold. I shall be pleased to see it challenged on further grounds.

I shall start by concentrating on the distinction between measure of value and means of exchange, which operated not only theoretically but practically as the true keystone of premodern

² *Ibidem*.

³ H. Miller, 'Money and How It Gets That Way', in *Stand Still Like the Humming Bird* (Norfolk, 1962), p. 122; thereafter Miller, *Money*.

⁴ The main sources for the monetary history of Savoy are V. Saraceno, *Il corso delle monete seguito negli Stati di S.S.R.M. il Re di Sardegna di qua dal Mare, e particolarmente nel Piemonte dal 1300 sino al presente* (Torino, 1782), D. Promis, *Monete dei Reali di Savoia* (Torino, 1841), G. Felloni, *Il mercato monetario in Piemonte nel secolo XVIII* (Milano, 1969).

⁵ Collected in P. Custodi, *Scrittori classici italiani di economia politica* (Milano, 1804-1816); thereafter: Custodi, *Scrittori classici*.

monetary architecture (I). This allows in turn to distinguish between different kinds of monetary alterations, affecting different kinds of money. The whole picture may well be described as a dual currency system, with two complementary forms of money serving different purposes within separate and communicating economic areas (II). The landmarks of monetary thought, from Smith to Keynes, may be reread in this light, giving support to the idea that the institution of money properly involves the distinction rather than the identification of its functions, and hence requires the possibility of what is commonly called 'depreciation' (III).

I.

The first matter deserving consideration concerns the relationship between money and metal in the monetary system prevailing throughout Europe from Charlemagne to Napoleon. It may be worth noting that two major milestones of monetary history may be inscribed with the name of an emperor precisely because they involve a deliberate reform of monetary institutions, reflecting a radical change in the conception of money and of its functions, as well as of political sovereignty.

From the viewpoint of what Marc Bloch calls the 'external history of money', these dates roughly mark the time span between the resumption of precious metal coinage in Europe and the establishment of the gold standard. From the perspective of monetary functions, they encompass a remarkably long period in which precious metals started again and increasingly to be used as a means of payment without being defined as the standard of value. As many have already pointed out, this must be regarded as the true distinctive feature of premodern monetary systems, and not as a defect.⁶ It is in the light of this that the dynamics of those systems must be evaluated.

Around 800 A. D. Charlemagne carried out a monetary unification by centralising the mints and issuing one and the same coin throughout the empire: the *denier* (penny). Out of one *libra*

⁶ L. Einaudi, 'The Theory of Imaginary Money from Charlemagne to the French Revolution', in F.C. Lane and J.C. Riemersman (eds), *Enterprise and Secular Change* (New York, 1953), pp. 229-31.

(pound) of fine silver (950/1000) 240 pennies were struck, of approximately 1.7 g each. Due to the exchange rate between silver and gold prevailing at those times, twelve of these pennies resulted having a value comparable to one of the late Roman gold coins still rarely circulating in Europe, the *solidus aureus*. The Carolinian reform therefor provided both a means of payment, in the form of a metal coin, and a system of account, which was to hold an entire millennium, until the Napoleonic reforms (and in England until 1971):

1 £ (*libra, lira, livre*, pound) =

20s (*solidi, soldi, sous*, shillings) =

240d (*denarii, denari, deniers*, pennies).

No coin was minted for the value of one shilling or one pound for about four centuries. Pound and shilling were therefor just units of account, albeit with a fixed proportion to the means of exchange: one pound was always equal to 240 pennies, and one shilling to 12. What changed, and rather drastically, was the metal content of the denier.

In fact the monetary system resulting from the Carolinian reform was soon dismantled by the fragmentation of the empire. Local authorities resumed, either legally or abusively, autonomous minting activity, and started to issue their own deniers, of varying weight and fineness. A formerly unified economic area progressively split into separate political and economic units, each with its own measure of value, and corresponding means of payment. All different pennies had one thing in common: a downward trend in their metal content. This occurred for a number of reasons, that have been many times recounted: consumption, clipping, counterfeit, imperfections in production – these sometimes deliberate on the part of the state authority. The same coin therefor did not contain a constant quantity of pure metal. Hence a first distinction must be seen operating in the variable relationship, legally defined within the mint and possibly altered in circulation, between metal money of a certain denomination and the weight of fine metal it contained (*intrinsic value*).

By the end of the twelfth century the intrinsic value of the pennies had diminished by more than ninety percent.⁷ These small pennies did not supply an adequate means of payment for increasing large scale transactions, carried out particularly by the merchants of emerging commercial centres. Genoa and Venice resorted therefor to striking heavy coins of fine silver before 1200; they were soon followed by Florence and Milan, in the first half of the thirteenth century, and by France, Flanders and England in the second half. The new coins were called 'large' coins (*grossi*, *gras*, *groten*, *groats*), to mark their difference from the old, small pennies (*piccoli*). This difference did not concern just the level of the intrinsic value but, more significantly, its variability. In fact, pennies continued to lose metal content, while large coins were generally maintained at their original weight and fineness.

Now small coins continued to have a fixed relationship with the unit of account: however light it may become, a penny (coin) was always worth a penny (unit). As a consequence, the heavy coins that preserved their metal content must be valued at a higher rate, in terms of units of account. Hence a second important distinction must be seen operating in the variable relationship between (large) metal coins and the corresponding value expressed in units of account (*extrinsic value*).

In the next paragraph we shall analyse the dynamics of alterations in the extrinsic and intrinsic value of large and small currency. In order to do so, we must first attempt a formal definition of the basic elements of medieval monetary architecture.

On one hand, there was *real money*, comprising various kinds of metal coins. After the resumption of gold coinage in Western Europe, and for more than five hundred years, metal coins were made of gold, silver or copper. They were rarely of just one metal. In the great majority of cases, an alloy was used: of high fineness, generally greater than 900/1000, for *large coins* (*moneta grossa* or *moneta alta* in Italian), and of reduced fineness, less than 500/1000, for *small coins* (*moneta piccola* or *moneta bassa*).

On the other hand, there was *ideal money*, also called imaginary money (*moneta immaginaria*): each political entity had its own unit of

⁷ M. Cattini, *Lo Scudo d'oro Moneta e potere da Augusto a Carlo V* (Roma-Bruxelles, 1996), pp. VI 6-7.

account, which served to indicate the value of goods exchanged, including the (extrinsic) value of metal coins. This value was variable over time, being determined by the authority through a public decree called the 'tariff'. At the same time, one coin could receive a different and alternative evaluation on the market, through negotiation between merchants in violation of the law.

Let us then formalise the variables involved and their reciprocal relationships. I will use the following notation:

Metal: ag = precious metal

cu = base metal

Real money: a = large coin

b = small coin

Imaginary money: u = unit of account

A further notation can be introduced to indicate the value relationships according to the contexts in which they occur:

Value: i = intrinsic value (mint)

l = extrinsic legal value (tariff)

m = extrinsic commercial value (market)

The tariff value of a large silver coin e.g. will be indicated by: l_u^a , and its metal content by: i_{ag}^a .

The State did not directly establish the metal content of coins that the mint had to produce; it established the fineness and the *taille*.⁸ The metal content of a coin can be calculated by multiplying its purity by its weight, i.e. by dividing the fineness (f) by the *taille* (t):

$$i_{ag}^a = \frac{f_{ag}^a}{t_{ag}^a}$$

The metal equivalent of imaginary money also has to be calculated with reference to a specific metal coin (large or small), by comparing its metal content with its value (legal or commercial). Thus, for example, if one takes the legal value of a large coin, the

⁸ The *taille* gives an indication of the weight in relation to the mark: a *taille* of 90 to the mark, for example, means that 90 coins would be struck from one mark.

metal equivalent is given by the relation between its metal content and its tariff value:

$$\text{Metal equivalent} = p_{ag}^u(a, l) = \frac{i_{ag}^a}{l_u^a} = \frac{f_{ag}^a}{l_u^a \cdot t_{ag}^a}$$

At least three variables have to be defined in order to provide a univocal indication of the specific metal equivalent that is intended: not only the unit of account (u) and the metal (ag), but also necessarily the coin with reference to which the relation is calculated (a) – and possibly the context in which it is determined (l). There is no official metal equivalent defined for the whole system, and managed as an instrument of monetary policy. Each coin incorporates a potentially different ratio between metal and money (of account).

II.

Even on the basis of this simplistic scheme, it is clearly insufficient to talk about ‘value’, ‘devaluation’, or ‘depreciation’ of medieval money. Real money had, as we have seen, at least three different values. Ideal money, on the contrary, had no value at all, being itself the measure of value. As the Italian economist Carlantonio Broggia still clearly states at the middle of the eighteenth century: ‘imaginary money appraises but is not itself appraised’.⁹ In spite of that, historians refer often tacitly to the value of ideal money in terms of metal – the ‘metal equivalent’ of the monetary unit. Historically however there is no relationship at all between imaginary money and metal, in the strict sense that there is no institutional context in which they are *directly* compared and their relative value is determined.

Money is not a thing, but an institution, an agreement within a community: ‘this is why money is called *nomisma*, because it does not exist by nature but by custom (*nomos*), and can be altered and

⁹ C. Broggia, *Trattato delle monete* (Napoli, 1743), in Custodi, *Scrittori classici*, vol. 5, pp. 99-100.

rendered useless at will'.¹⁰ The identification of money and metal reflected in the metal equivalence is not universal, like a law of nature. It has to have an institutional sanction within a political context, such as a law establishing the relationship between unit of account and weight of pure metal, or a market in which they can be exchanged. Until the eighteenth century however this did not occur.

In order for there to be an exact correspondence between metal content and nominal value, the imaginary system would have required the immediate convertibility of large and small coins and this was not always possible in practice for a number of reasons. The physical transformation of billon into noble money, or vice versa, would cause considerable minting costs.¹¹ Secondly different kinds of money were used in different contexts. Small coins were used for small local trading, while large coins were used for long distance wholesale.¹² As a result there was no single market in which the two different types of coins could be exchanged.

The economic separation of the two contexts also had explicit sanction in legislative terms. 'For example the Comune of Florence prohibited fixing its employees' wages in gold coins in 1294, and insisted that they were fixed in small coins... Legal regulations at the beginning of the fourteenth century established that only Calimala merchants, exchangers, silk traders and leather craftsmen could fix their prices and maintain accounting records in florins. All the other categories had to refer to small coins.'¹³

No relationship between unit of account and weight of fine metal was explicitly established by law up to the time of the French Revolution. True, this relationship had already been *stabilised* by 1717 in England and by 1726 in France. In both cases however the

¹⁰ Aristotle, *Nicomachean Ethics* 1133a 30, in *Aristotle in 23 Volumes*, Vol. 19, translated by H. Rackham (Cambridge 1934).

¹¹ Felloni's calculations for several Italian states between the sixteenth and eighteenth centuries show that these costs could exceed 50% of the value of metal in billon money; G. Felloni, 'Finanze statali, emissioni monetarie ed alterazioni della moneta di conto in Italia nei secoli XVI-XVIII', in V. Barbagli Bagnoli (ed), *La moneta nell'economia europea: secoli XIII-XVIII*, (Firenze, 1981), p. 203.

¹² R. Romano, 'La storia economica. Dal secolo XVI al Settecento', in *Storia d'Italia* (Torino, 1974), v. II, t. II, p. 1834.

¹³ C. M. Cipolla, *Il governo della moneta a Firenze e a Milano nei secoli XIV-XVI* (Bologna, 1990), p. 34 n. 56.

metal equivalent of the unit of account was not *established* by law. There was no *livre* piece in France, or sterling piece in England. The franc was to be coined in 1793, while the pound sterling was only to appear in 1816. It was only then, with the physical identification of imaginary and real money, that there was also a legal definition of the metal equivalent of the unit of account.¹⁴

Hence, if it is *insufficient* to speak of devaluation of premodern money, it is absolutely *inadequate* to speak of devaluation referring to the metal parity of the unit of account. Let us therefor return to consider the dynamics of medieval monetary variables, according to their true terms. 'Mutation' was the name for any variation in the relationships between imaginary money, real money and metal. The mutations could be of two types. The first of these occurred in the mint, where metal coins were susceptible to a variation in the fineness or weight, reducing (or possibly increasing) the metal content. In this case one would speak of a 'debasement' (or 'reinforcement') of the metal money. The second type of mutation was brought about by a simple variation in the tariff, increasing (or reducing) the value of real money in terms of the unit of account. This was called 'enhancement' (or 'abatement') of the metal money. Significantly, these distinctions appear in most European languages.

	increase	decrease
metal content (determined by the mint)	reinforcement (to strengthen the coinage) [Fr.] <i>renforcement</i> [It.] <i>rafforzamento</i>	debasement (to weaken the coinage) [Fr.] <i>affaiblissement</i> [It.] <i>indebolimento</i>
nominal value (determined by the tariff)	enhancement (to raise or cry up the money) [Fr.] <i>augmentation</i> [It.] <i>alzamento</i>	abatement (to lower or cry down the money) [Fr.] <i>diminution</i> [It.] <i>abbassamento</i> or <i>diminuzione</i>

¹⁴ M. Bloch, *Lineamenti di una storia monetaria d'Europa* (Torino, 1981), pp. 105-106; thereafter: Bloch, *Lineamenti*; R. Sédillot, *Storia delle monete* (Roma 1975), pp. 56-7.

One might be induced to establish a correspondence between debasement and enhancement. In both cases there was a reduction in the metal equivalent of the unit of account. Similarly, reinforcement could be assimilated to abatement. This is precisely what is done by most treatises on money and monetary history, starting from the late seventeenth century, mainly to condemn any form of mutation.

John Locke (1692) treats debasement and enhancement separately, but for both cases uses the same expression, 'the raising of Money'.¹⁵ Charles Dutot (1738) uses two different expressions but with the same meaning: 'reducing half the value or the weight of specie without reducing the price; or increasing half the value without increasing the weight or purity, is the same thing'.¹⁶ Ferdinando Galiani (1750) speaks simply about 'raising', 'which is carried out by law or by re-minting all the money and reducing the weight or purity in carats'. He then discusses the effects of all mutations without distinction.¹⁷

Yet this very fragment that is rejected by the builders of the metal standard was the keystone of premodern monetary architecture. Supporters of imaginary money repeat this unequivocally even in the eighteenth century. François Melon, in controversy with Dutot, clearly states:

Historians, and those writing specifically about money, nearly always confuse (at least in their discussions) the enhancement in nominal terms with the disproportion between different metals or the excess of seigniorage.¹⁸

Melon agrees with the other authors I have quoted in condemning debasements:

Some of our Sovereigns, in case of emergency, adopted this sort of artifice. King Philip of Valois and King John recommended the Masters of the Mint to keep it secret, under oath on their own

¹⁵ J. Locke, *Some Considerations on the Consequences of the Lowering of Interest, and Raising the Value of Money* (London, 1692), pp. 138 ff. (on debasement), pp. 162 ff. (on enhancement).

¹⁶ C. Dutot, *Réflexions politiques sur les finances et le commerce* (La Haye, 1738); Italian translation by G. Costantini, *Delle monete, controversia agitata da due celebri scrittori oltramontani* (Venezia, 1754), p. 470; thereafter Costantini, *Delle monete*.

¹⁷ F. Galiani, *Della moneta* (Napoli, 1751; republished Milano, 1963), pp. 187 ff.

¹⁸ F. Melon, *Essai politique sur le commerce* (Paris, 1734), in Costantini, *Delle monete*, p. 62.

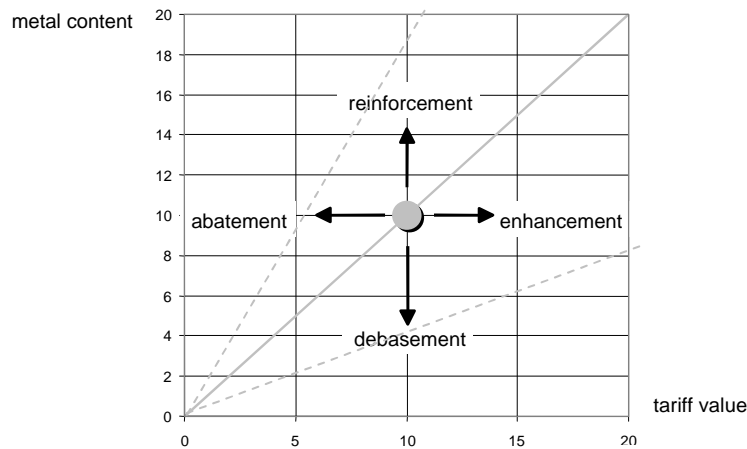
honour and under menace of penalty: but they were themselves compelled to cry down the Money they had issued, which should be called false rather than light.¹⁹

But enhancement must be distinguished from debasement. For Melon, as for most of the juridical and canonical tradition, only the debasement is to be condemned as a form of counterfeit and forgery. On the contrary, enhancement is a legitimate exercise of monetary authority, and accordingly:

the protests of the People concerned the debasement of the Money, the disproportion in the debasement or the excessive Seigniorage, and not the raising of its nominal value.²⁰

In order to appreciate the distinction, that disappears in the metal standard perspective, premodern money must be considered within its proper institutional context, referring to the true levers of its management.

Figure 1. Monetary mutations



A simple graph may be used to represent the variables identifying a coin: on the vertical axis the metal content, e.g. in terms of marks of pure silver (*i*); on the horizontal axis the legal value, e.g. in terms of shillings (*l*). The equation I have written above for the metal parity describes the linear relationship between tariff value and metal content, with reference to a specific coin.

¹⁹ *Ibidem*, p. 64.

²⁰ *Ibidem*.

The inclination of the corresponding half-line represents the metal parity implicit in that coin. All coins lying on the same half-line have exactly the same metal parity.

Any mutation produces a rotation of the half-line. A debasement, by reducing the metal content without affecting the legal value, produces a downward shift in the point that identifies the coin and hence a reduction in the inclination of the line indicating the metal parity (a reinforcement, produces the opposite effects). An enhancement, by augmenting the legal value without touching the metal content, produces a rightward shift in the coin point and hence a reduction in the inclination of the parity line (an abatement the opposite).

The graph shows together the analogy and the difference between the two kinds of mutation: enhancement and debasement (abatement and reinforcement) appear to have identical effects if we consider the inclination of the parity line, and quite different effects if we consider the projections of the coin points on the axes.

An example from the Ducat of Savoy might help us understand the meaning and relevance of this difference. I shall consider the alterations, over a whole century from 1500 to 1600, of two coins that may be considered representative of the two-tyre system.

The *quarto* was a small coin: in the year 1500, it had a taille of 216 to the mark, i.e. from one mark of alloy the mint would strike 216 coins of 21 grains each.²¹ The fineness of the alloy was of 2 deniers 12 grains;²² hence each *quarto* contained approximately 4.38 grains of pure silver. The tariff value of the *quarto* was fixed, as its name indicates, at one fourth of a *grosso*.²³ The implicit metal parity was therefor equal to 17.5 grains to the *grosso*. Over the following one hundred years, the *quarto* underwent a drastic debasement,

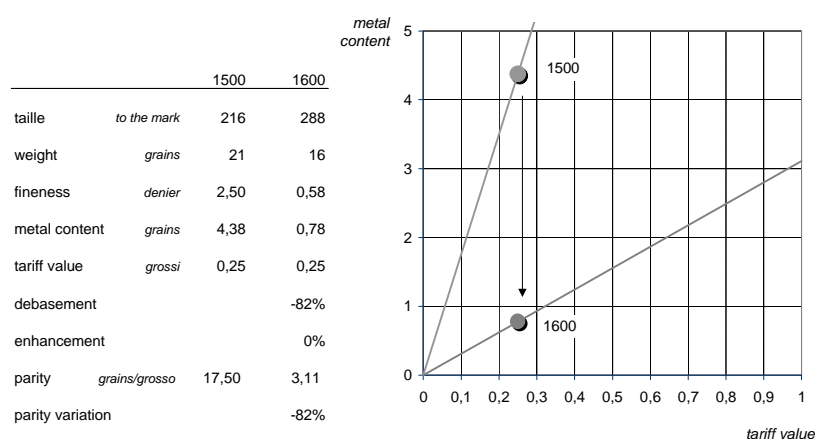
²¹ The mark was a measure of weight for gold and silver, varying from state to state, and corresponding to half a pound. It was divided into 8 ounces, each of 24 deniers of 24 grains.

²² The unit of measure for the fineness of silver was the denier. Pure silver measured 12 deniers. Each denier was divided into 24 grains.

²³ Unlike most European states, the Ducat of Savoy did not use the traditional system of account based on *lire*, *soldi*, *denari* until 1633. Before this date, the unit of account was the *fiorino*, divided in 12 *grossi*.

reducing both its weight and its fineness. The metal content declined consequently from 4.38 to 0.78 grains of pure silver, corresponding to a debasement of 82 percent. Since the nominal value remained fixed, the metal parity of the *grosso* implicit in the *quarto* also fell by 82 percent.

Figure 2. Debasement of the *quarto*, 1500-1600

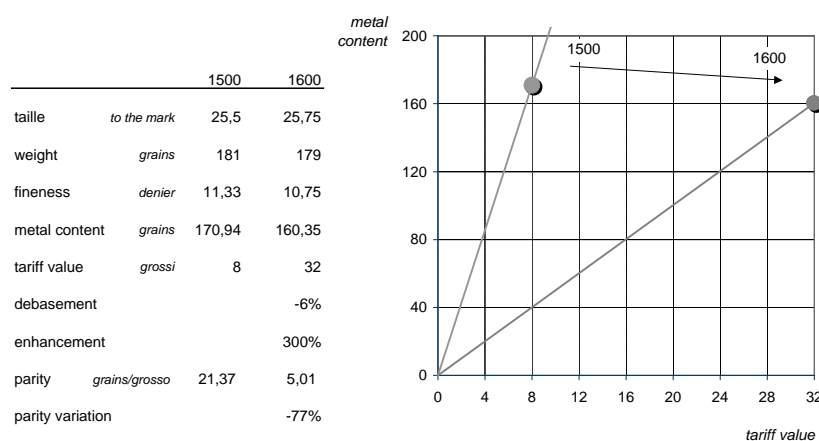


sources: see note 4.

The *testone* was a large coin: in 1500, less than 25 coins were struck from a mark of silver of very high fineness (11 deniers 8 grains). One *testone* therefor contained over 170 grains of pure silver. Its tariff value was set at 8 grossi; hence, the implicit metal parity was equal to 21.37 grains to the grosso. This proves that the metal parity could be significantly different in large and small coins: in this example, 22% higher in the *testone*. This is a first important difference between large and small coins. The second concerns their long-term dynamics, and is apparent if we look at the *testone* alterations over the following century. By 1600, the metal content was only slightly reduced by a small loss both in weight and fineness, resulting in a debasement of barely 6 percent. Conversely, the tariff value was raised, gradually but substantially, from 8 to 32 grossi, corresponding to a 300 percent enhancement. The combined effect of debasement and enhancement produces, in this case, a 77% reduction in the metal parity. As a consequence, the difference in the parity between small and large currency is even stronger in 1600 than it was in 1500 (61%). However, the most significant difference is in the way the change of parity is

produced: exclusively by debasement in the small coin and almost only by enhancement in the large coin.

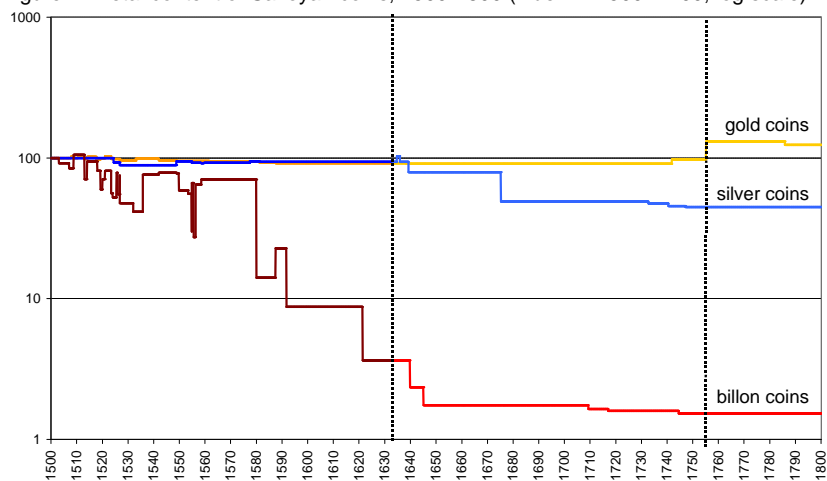
Figure 3. Enhancement of the *testone*, 1500-1600



sources: see note 4.

This result does not depend on the specific coins I have selected as examples, and it is not limited to the already broad time span I have considered. Indeed, the same conclusion holds if we look at the trend of all Savoyan currencies over two and a half centuries, starting from 1500. Figures 4 and 5 plot the metal content and the tariff value of gold, silver and billon currencies.

Figure 4. Metal content of Savoyan coins, 1500-1800 (index n. 1500 = 100, log scale)

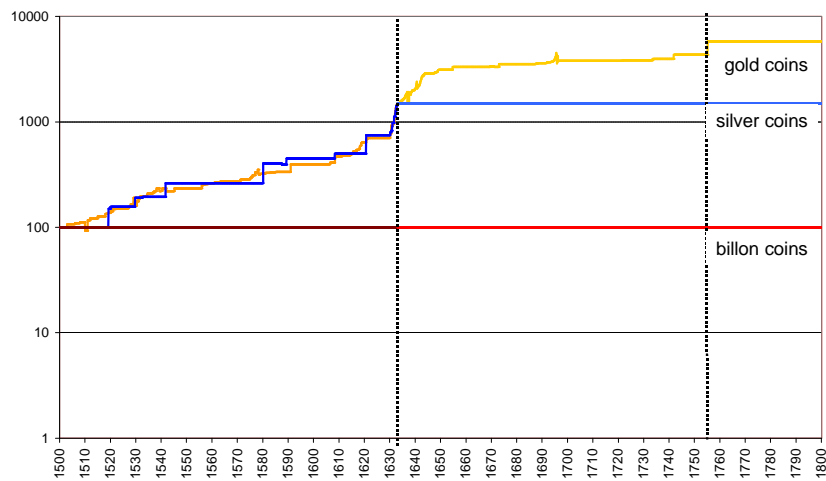


sources: see note 4.

Figure 4 therefor traces the debasement, and it shows that in the long run this kind of alteration affected significantly the small currency, while it only rarely and marginally touched the large currency (with the silver coins functioning as large currency until 1633 and as small currency thereafter).

Figure 5 traces the enhancement, and it shows that in this case, on the contrary, the large currency was characterised by an upward long term trend, while the small currency remained stable (with the silver coins acting as indicated above).

Figure 5. Tariff value of Savoyan coins, 1500-1800 (index n. 1500 = 100, log scale)



sources: see note 4.

Different kinds of alterations therefor affect different kinds of money. My hypothesis is that the difference in the behaviour of the two currencies was due to a difference in their function.

Small currency was used to exchange goods in view of their immediate use within the local economy, where the prices were mainly fixed by customary laws and remained rather stable; hence the stability of the extrinsic value of small currency was more important than the stability of the intrinsic value. The effects of the alteration (debasement) of a small coin are not shown by the metal parity (i.e. by the *decline* in the parity line), but by the tariff value (i.e. by the *constant* projection of the coin point on the horizontal axis): the only thing that was important for its users.

On the contrary large coins were used by merchants that didn't belong to one political community and contracted prices spot, considering nothing else but the equivalence of the goods exchanged, in view of further exchanges; large coins served as the universal *commodity* and hence the stability of their intrinsic value was more important than that of their extrinsic value. Again the effects of the alteration (enhancement) of a large coin are not shown by the variations of the parity (line), but must be traced on the only relevant ground for its users: the metal content (the vertical axis).

The dual currency system responded therefor, this is my thesis, to the need of distinguishing and keeping separate two different economic and political areas, that correspond to a fundamental partition described by Braudel:²⁴

market type A

1. public, regulated
2. where goods are exchanged retail in view of their immediate use
3. in a local setting
4. for subsistence
5. by direct exchange of resources between the country and the city, producers and consumers
6. according to a principle of distributive justice
7. the means of exchange being small coins, of copper or billon
8. the measure of value being imaginary money (horizontal axis)

and market type B

1. private and free
2. where goods are exchanged wholesale in view of further exchange
3. on a global scale
4. for profit
5. by merchants, members of a restricted caste of specialised intermediaries
6. according to a principle of commutative justice
7. the means of exchange being large coins, of gold or silver
8. the measure of value being the weight of pure metal (vertical axis)

²⁴ F. Braudel, *La dinamica del capitalismo* (Bologna 1981), pp. 55 ff.

The intention of the previous analysis was to show exactly how the dual currency system could provide the instruments for a separation and an interchange between the two areas; in other terms, how complementary currencies allowed to balance complementary exchange circuits.

Now a further remark must be devoted to the two principles on which all other distinctions rest: it was Aristotle who first described two forms of justice, later called distributive and commutative by Thomas Aquinas. *Commutative justice* rules the relations between two individuals belonging to the same community and requires that each receive exactly the equivalent of what she has given to the other; an exchange carried out according to commutative justice has in view only the equivalence of the goods exchanged regardless of the persons involved. *Distributive justice* rules the relations between an individual and the community, and assures that she participates in the distribution of what is common, proportionately to her relation to the whole; an exchange carried out according to distributive justice has in view both the things exchanged and the persons involved, with reference to their relation to the whole.²⁵ The distinction between the two forms of justice was clearly present throughout the late middle ages and early modern era. To keep them in balance was a fundamental principle of good governance, as depicted explicitly by Ambrogio Lorenzetti at the beginning of the fourteenth century, in his famous *Buon Governo*.

To sum up, the separation of monetary functions allowed to operate two different kinds of mutations; and this in turn allowed to have different monies for different exchange areas ruled by different principles. If this may explain the need to distinguish between debasement and enhancement, it does not yet explain why there was a need for monetary alteration after all. This question deserves to be at least briefly restated in the light of the previous analysis.

As Bloch shows in his magisterial sketch, the problem was the 'shortage of money', increasingly experienced in the modern era, not just by governments but by the economy in general. There is a lack of money everywhere. The issue is not simply one of quantity. What is lacking is not a quantity of money for dealing with a

²⁵ Thomas de Aquino, *Summa Theologiae*, IIa-IIae q. 61.

deficit, but an instrument that allows for *continuously* increasing the quantity of money in line with the expansion of the economy. What is needed is not just 'more money' but a different kind of money. For this reason 'not even the injection of American silver or gold could fill the gap'.²⁶ Indeed the issue was not filling a gap, but generating a structural surplus.

'But how was this abundance achieved? ... In great part it was due to the development of credit.'²⁷ So the period of stability that begins with the eighteenth century was made possible by the abundance of a new form of money. The establishment of the gold standard wouldn't have been possible without the contemporary emission of paper money, and vice versa: gold and paper are two faces of the same coin. Mutations came to an end in France and Piedmont at the end of the eighteenth century, just as in England one century earlier: the start of the metallic standard always coincides with the issue of the first legal bank notes.

Money is always 'imaginary': it is a '*fictio juris*', an institution.²⁸ However not all institutions are the same. In *ancien régime*, the distinction between medium of exchange and measure of value ensured the separation of payment contexts with different principles of distribution through a dual monetary system. Further, the lack of a monetary form fulfilling the function of a reserve of value impeded the generalised transfer of value over time and the accumulation of purchasing power: there was no logical (let aside moral) base for the legitimacy of interest.

Conversely the modern form of imaginary money is *at once* medium of exchange and measure of value, and this results in the loss of a degree of freedom in monetary policy, and more generally, in the weakening of the faculty to set distinctions and boundaries between and within politics and economics. Modern money, whether it is gold, paper or electronic money, is treated as a commodity like all others, with the sole difference that it is the commodity that, by definition, is not consumed. The real feature of modern money, which is completely alien to premodern money,

²⁶ Bloch, *Lineamenti*, p. 102

²⁷ *Ibidem*, p. 102-3.

²⁸ On this point, the fundamental reference is the entire work of Pierre Legendre, and particularly his latest book, *De la société comme texte* (Paris, 2001).

is the reserve of value, the transfer of value over time, and the anticipation and delay of payments. As Bloch puts it in the 1930s:

Delaying payments or reimbursements and constantly piling these delays upon one another – this is the great secret of the modern capitalist regime, a more exact definition of which might be: ‘a regime that would die if it were to pay all its accounts at the same time.’ It is nurtured by an optimism that continually discounts future revenue, its perpetual unstable equilibrium. No matter how far back its roots lie, it was developed only in the eighteenth century and it was only then that monetary mutations came to an end.²⁹

Premodern money was functional to the separation of the local economy from long-distance trade. Modern money is functional to the extension without boundaries and the expansion beyond any given measure of the self-regulated market.

III.

The monetary alterations of the Middle Ages are commonly described as a form of depreciation, and are interpreted in the light of modern phenomena such as inflation and devaluation. A more accurate analysis of premodern money systems suggests that, on the contrary, inflation and devaluation should be seen as a particular form of monetary alteration, and specifically the only form that is left since money (measure of value) has been arbitrarily identified with a certain commodity (means of exchange), be it a piece of gold or a piece of paper. It also suggests that the distinction, and not the identification, between measure and medium of exchange, and in general between different monetary functions, is the true distinctive feature of money as an institution.

Not only monetary history, but also the history of economic thought seems to support this view. I cannot turn exhaustively to this front in these pages. However I would like to provide at least a couple of surprising testimonies drawn from two classical (and normally opposed) economists, only to suggest that they ought to be reread in this perspective.

²⁹ Bloch, *Lineamenti*, p. 103.

The following remarks may be read in the *Wealth of Nations* of Adam Smith:

1. Money is not metal; the institution of money occurs only when the metal is coined, when its quantity and quality are certified by being wholly incorporated by the stamp, and hence when the metal itself is made useless and is thus received by tale and not by tael.³⁰ The institution of money therefor consists in the distinction, and not in the identification, of measure and medium of exchange in the coin.

The inconveniency and difficulty of weighing those metals with exactness gave occasion to the institution of coins, of which the stamp, covering entirely both sides of the piece and sometimes the edges too, was supposed to ascertain not only the fineness, but the weight of the metal. Such coins, therefor, were received by tale as at present, without the trouble of weighing.³¹

2. Money is not wealth itself, but only a means to circulate wealth among the members of society. Money is not a store of value, but a means of exchange.

Money, therefor, the great wheel of circulation, the great instrument of commerce, like all other instruments of trade, though it makes a part and a very valuable part of the capital, makes no part of the revenue of the society to which it belongs; and though the metal pieces of which it is composed, in the course of their annual circulation, distribute to every man the revenue which properly belongs to him, they make themselves no part of that revenue.³²

3. Money is not part of the fixed capital, which produces revenue by staying still, but it is part of the circulating capital, which produces revenue only by circulating. Moreover, it is the only part of the circulating capital of a society, of which the maintenance can occasion actually a diminution in the net revenue. The institution of money has a cost that must be supported by society, and that, in the common interest, may be reduced by introducing more convenient (e.g. lighter) forms of money.

The stock of money which circulates in any country must require a certain expense, first to collect it, and afterwards to support it,

³⁰ The expression is due to Miller, *Money*, pp. 142-3.

³¹ *The Wealth of Nations* (1776), Book I, Ch. 4.

³² *Ibidem*, Book II, Ch. 2.

both which expenses, though they make a part of the gross, are, in the same manner, deductions from the net revenue of the society... as every saving in the expense of erecting and supporting those machines, which does not diminish the productive powers of labour, is an improvement of the net revenue of the society, so every saving in the expense of collecting and supporting that part of the circulating capital which consists in money, is an improvement of exactly the same kind.³³

4. This distinction between the functions of money allows, in turn, to provide two different monies for two different needs. To serve as a legal tender of obligations within a given community, money is spent by tale, regardless of its metal content, and the monetary authority may for this purpose legitimately change the nominal value of coins. To serve as a means of payment for commercial transactions between merchants, i.e. between intermediaries not belonging to any particular economic and political space, the correspondence between the name and the material must be assured.

A positive law may render a shilling a legal tender for a guinea, because it may direct the courts of justice to discharge the debtor who has made that tender. But no positive law can oblige a person who sells goods, and who is at liberty to sell or not to sell as he pleases, to accept of a shilling as equivalent to a guinea in the price of them.³⁴

Keynes is renowned for his 'liquidity-preference': he is generally considered a supporter of monetary expansion, i.e. inflation as a means to counteract under-consumption. However, as I shall argue, this position does not reflect a preference for a rule of conduct of monetary policy, but rather a radically alternative conception of money as an institution.

In the *Tract on Monetary Reform* (1923), Keynes states the economic soundness of monetary depreciation and the need to incorporate it in appropriate institutions:

The tendency of money to depreciate has been in past times a weighty counterpoise against the cumulative results of compound interest and the inheritance of fortunes... By this means each generation can disinherit in part its predecessors' heirs; and the project of founding a perpetual fortune must be disappointed in

³³ *Ibidem.*

³⁴ *Ibidem.*

this way, unless the community with conscious deliberation provides against it in some other way, more equitable and more expedient.³⁵

Keynes accurately points out the evil consequences of the modern dogma of stable money, i.e. of money as a store of value, and he suggests the remedy:

For these grave causes we must free ourselves from the deep distrust which exists against allowing the regulation of the standard of value to be the subject of *deliberate decision*. We can no longer afford to leave it in the category of which the distinguishing characteristics are possessed in different degrees by the weather, the birth rate, and the Constitution – matters which are settled by natural causes, or are the resultant of the separate action of many individuals acting independently, or require a revolution to change them.³⁶

What Keynes does not say is that this was exactly the keystone of premodern monetary systems. In any case it is evident that devaluation is for Keynes a constituent and not a contingent feature of money. In the *General Theory* (1936), he explicitly mentions one possible institutional alternative to inflation – demurrage:

those reformers, who look for a remedy by creating artificial carrying-costs for money through the device of requiring legal-tender currency to be periodically stamped at a prescribed cost in order to retain its quality as money, or in analogous ways, have been on the right track; and the practical value of their proposals deserves consideration.³⁷

It is in the *Notes on the Monetary Reform of Solon* (1920) that Keynes provides the historical background of similar proposals:

The fall in the value of money throughout almost all periods of recorded history deserves brief discussion. It has been effected in two ways, if not by the one then by the other – by an increased abundance of the metal of which the money is made, or failing this by diminution of the metal content of the monetary unit. It is convenient to call the former *Depreciation* and the latter *Debasement*.

³⁵ *The Collected Writings of John Maynard Keynes* (London, 1971-1989), vol. IV, p. 9; thereafter Keynes, *Collected writings*.

³⁶ *Ibidem*, p. 36.

³⁷ Keynes, *Collected writings*, vol. VII, p. 234.

If the course of history and nature does not occasion the former, man generally falls back upon the latter.³⁸

In other terms the depreciation of money might appear as a law of nature until it works. If it does not work, it must be substituted by a law of man, a law in the true sense. But this means that the distinction between the measure of value and the means of payment responds to a political necessity, to which the institution of money may succeed or fail to respond.

When first the use of money supplants barter, a coin is no more than a quantity of bullion, of which the stamp may certify the quality and indicate the quantity, but which will not circulate except for its bullion value. In this elementary stage the expedient of debasement is not available. It cannot appear, until with the development of contract the conception of a money of account has emerged, and the coins issued by a state have acquired the character of *legal tender* and enjoy a *cours forcé* as the legal discharge of obligations calculated in this money of account. It is at this stage that money, in the sense in which we understand it, makes its entry into human institutions. For this reason the History of Money begins with Solon, the first statesman whom history records as employing the force of law to fit a new standard coin to an existing money of account.³⁹

What qualifies the primitive regime of barter is the coincidence of measure and medium of exchange. Now the existence of barter *before* the institution of imaginary money is only a supposition, but it is certainly a fact *after* it was dismantled. What in fact is the gold standard, if not a monetary system in which money 'is no more than a quantity of bullion', in other terms, a monetary system without money?

According to Keynes the institution of money appears to be the institution of the difference between unit of account and metal. This was exactly the purpose of what may be regarded as Keynes' testament, the project for a Clearing Union presented officially as the British proposal for the reform of the international payment system at the Bretton Woods Conference in 1944: the institution of an international money different from gold (*bancor*), that could not serve as a store of value (bearing symmetric charges on

³⁸ Keynes, *Collected writings*, vol. XXVIII, p. 226. In the light of our previous analysis, we might add a third possibility: enhancement.

³⁹ *Ibidem*.

positive and negative balances), in view of distinguishing different payment circuits (current and capital account).

This institutional solution was rejected, the gold standard was restored in a different form (the dollar standard), until 'history and nature' eventually reaffirmed the impossibility of identifying money and metal (imposing the suspension of dollar convertibility in 1971). We still lack a true modern monetary institution that may provide the necessary articulation of its functions.