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MONETARY THEORY AND ROMAN HISTORY

by

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1. "In the study of history we take from the past only what is of interest to us." This statement, which comes from a history textbook used in the fourth grade of Italian elementary schools, is a living testimonial to the influence of Benedetto Croce on the Italian education system. I was, however, reminded more and more frequently of it as I ventured out on a study of Roman monetary history which, I thought, would be useful as a starting point for my research on monetary regimes. After reading what a few modern historians of Rome had to say on the Roman monetary system and its vicissitudes, I began to realize that each of those learned gentlemen was looking at Roman monetary history through the filter of one or another version of modern monetary theory. I was, and still am, naîve enough to be startled by this revelation. I thus decided to dig deeper. The result is the present paper.

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* This paper was written while the author was a member of the Institute for Advanced Study, Princeton. It would be perhaps more appropriate to say that it was written because the author was, in the academic year 1983-84, a member of the Institute. It was conceived as an experiment in interdisciplinary writing, to be subjected to discussions and criticisms by people who, specialists in fields as diverse as Classics and Economics, were present at the Institute at the same time. For these reasons, the paper was read, at various stages of completion by practitioners of different Arts, like Glen Bowersock, Albert Hirschman, Fergus Millar, Axel Leijonhufvud, Paolo Baffi, Sir John Hicks, Stanley Fischer, Don McCloskey, Carlo Cipolla, Hartmut Galsterer. Most of these learned gentlemen gave the author many very useful comments, but they ought in no way be held responsible for any mistakes, which no doubt remain in the paper, and which are to be attributed solely to the author.

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2. Roman monetary history, as a separate discipline, was more or less invented by Theodor Mommsen, who published his Geschichte des römischen Münzwesens in 1860. Mommsen's work, which I am quoting in the French translation, which appeared, as Histoire de la Monnaie Romaine, in 1865, deserves the most attentive and careful treatment, not only for the display of scholarship it presents, but because its author, in writing about Greek and Roman money, demonstrates that he is not taking one or another monetary theory for granted. Rather, he subjects monetary theory as he has received it, to the test of Roman monetary history, and is capable even of trascending the monetary knowledge of his time. With Mommsen we retreat from the treatment of the Romans as primitives, and return to a previous era, when intellectuals approached Roman history with a high feeling of continuity.

Readers of Mommsen's other work are well aware of his predilection for a rather idealized vision of the Roman Republic, a feeling common among those who had taken part, as he had, in the awakening of Europe in 1848. Evidence of this feeling can be found in the passage in the Monetary History where he remarks on the disappearance of the objective symbols of the State, the ship's prow, the word ROMA, from Roman coins, and the appearance on them first of the initials, then of the names, finally of the profiles, of Rome's rulers, marking the beginning of a personality cult and the weakening of the cult of the State prevalent in what was for him the noblest period of Roman history.

Mommsen's Monetary History is preceded by a most interesting preface, where he expounds the main tenets of his monetary theory. If we give this preface the attention it deserves, and link it to the numerous theoretical remarks which are disseminated in the whole work, we can first of all dispel one common misapprehension about Mommsen. He is supposed to have been a convinced metallist. Sture Bolin, in his

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"State and Currency in the Roman Empire" (Stockholm, 1958), thus characterizes Mommsen's monetary theory: "The Roman monetary system, as Mommsen envisaged it, resembles the system of coinage based on a full metallic standard which prevailed in his own lifetime, the age of classical Liberalism - or, rather, it is the same system. Mommsen has, quite simply, shifted the monetary system of his own day two thousand years back in time and, in testing various ancient currencies, he has based his analysis and made his classification on principles which were valid for the coinage of his own time" (Bolin, p. 12).

Having read Mommsen's Monetary History, I became convinced that Bolin was radically wrong. In his Preface, Mommsen firmly expresses the idea that it is the State that has the right to establish "in the interest of all, what we could willingly call a derogation to Natural Law, by exclusively attributing to a particular substance the special privilege of representing the value of all others; only the State can compel all citizens to accept the choice it has made, and it keeps the right to change its choice according to changed circumstances" (Mommsen, XVI).

That in the course of history the choice has fallen on gold, silver and copper, after all sorts of other primitive substances had been used as money, Mommsen affirms soon after, but his is not a blind declaration of faith in the metallist persuasion. The importance of the State in the process could not be underlined more heavily.

Mommsen, however, is no simple Aristotelian, no blind believer in the Staatliche Theorie des Geldes, no pure chartalist. He is convinced, as he writes soon after in the Preface, that "commerce and usage have always preceded legislation" and "the changes introduced in the currencies have always been among the main causes of

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trouble which have agitated the domestic life of peoples." But, he says, "these revolutions have never been the result of any positive law; but laws had necessarily to intervene to put an end to crisis and consecrate the change, so that we can say that the legal consecrations of those revolutions is for history the only proof that they took place" (ibid., XVII).

Thus, he says, "Roman traders had been counting for a long time in silver pounds, while copper was still the only currency legally recognized by the State" (ibid., XVIII).

And, "modifications of this kind in the legislations", he adds, "were constantly motivated by a powerful impulse coming from outside, and can always be considered as the legal consecration of an accomplished fact. In Rome, the first issued of the silver denarius, he says, is linked to the conquest of Italy, and the gold currency dates from the time when the Roman government exchanged the domination of Italy for sovereignty over the world."

Bolin, and those who agree with him, might have been led into thinking of Mommsen as a metallist by the sentence which follows immediately after. "The tendency of further development of ancient monetary systems, Mommsen says, has been to arrive, little by little, to fixing legally and in a stable way the relative values of the three metals; but this aim, which is a chimera in reality, was based on a false principle, which is in opposition to the natural law which consecrates the continuous mobility of the values of objects. However, the fiction lasted, as a transitional system, for many centuries, and dominated the trade of Italy and Greece. The return to the simpler principle of setting all values against one and the same term of comparison, legally represented by only one metal, is due only to the improvement of economic science which teaches that several terms of comparison make the unit of value an illusory one."

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But Mommsen, immediately after, hastens to show the difference between a unit of account, which can be a metal ingot with a government seal, and a piece of currency, where the state seal is not attributed individually to each coin but to the whole issue, and the public must accept each coin without having to check whether, as it can with sealed ingots, it is really corresponding to what is declared on its face.

The essence of money is therefore, according to Mommsen, in its having a fixed nominal value. And he says that, among Roman coins, only the Victoriatus is a piece of coined metal circulating without a fixed nominal value. Mommsen is well aware of fiduciary currency, as well as of currency which can be considered half way between full value and fiduciary. He knows very well that a mixed or fiduciary currency, in order to remain in circulation, must be overvalued and that, to quote him again, "the surplus value assigned to these coins has no other raison d'être than the authority of the Government which has issued them and the trust it receives from the public. The day such authority is destroyed or when, for one reason or another, the subjects refuse to accept them, they lose their fictional values, and are accepted only according to what they really are" (ibid., XXIV).

If one wants to characterize Mommsen's approach to Roman monetary history, it is of no use to go by Bolin's caricature of it. Mommsen certainly expresses the enthusiasm of his age for the new science of Political Economy. But he is clever enough to use the concepts of his legal upbringing as well as those of classical economics.

This clearly emerges from the quotations I gave above from his work. But his work contains another very important interpretative key to Roman monetary history. Mommsen is convinced that the use

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of the power to issue coins to a large extent replaces, in Ancient Rome, the use of taxation as a State prerogative. He is so conscious that the two financial instruments, taxes and coinage, are equivalent, that he even overextends available evidence to prove that the money issuing function is treated in the Roman constitution on the same footing as the fiscal function; that it is as limited and subjected to the authority of the Comitia Tributa. The same can be said of his treatment of the originas of the tresviri monetales. And the fiscal function that coinage performs in the Roman economic system through the permanent overvaluation of Roman currency and the recurrent debasing of the same is seen by Mommsen, as we already noted, as a condition which does not lead to inevitable ruin, but which can, if well managed, last indefinitely and constitute the very essence of ancient economic policy and one of the instruments of ancient statecraft.

The fiscal approach to monetary policy is definitely not consistent with the doctrine of nineteenth-century pure laisser faire. Had Mommsen been a doctrinaire contractualist, who read Roman monetary history through the spectacles of his own age, he would not have written the following passage, with reference to the monetary policy adopted by the Roman Republic in the course of the Punic Wars. The Republic, having to finance the first war, had forced more and more the course of the copper coins. At the beginning of the Hannibalic War - noted Mommsen - this de factor debasement was legalized by establishing a 1:112 silver-copper ratio, compared to the previous one, which had been 1:250.

"The financial aim of this measure," wrote Mommsen, "was to give to coined copper, which was exchanged for silver in trade, a value double its metallica value. This result... was adequate to the exceptional circumstances in which the State found itself at that moment: its finances were damaged, but its credit remained still intact" (ibid., vol. II, p. 68).

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Equally aware was Mommsen of the redistributive effect of monetary policies. He noted the revolutionary effect of the Lex Valeria of 84 B.C., by which the As Librale which was worth 1/10 of a denarius was suppressed and replaced by another As, worth 1/16 of a denarius, and debtors were allowed to repay old debts with the new As. This measure, he writes, was the equivalent of a discount of 75 per 100 on the capital that had been lent out, and was brought about just by changing the unit of account. "A legalized bankruptcy was thus consummated," he wrote. "But this state of affairs was too violent and arbitrary to last. Sylla quashed the Lex Valeria and reinstated the old unit of account (ibid., p. 75).

Mommsen's theoretical syncretism is apparent also when he comes to dealing with the most interesting part of Roman monetary history. "The monetary crisis of the III century" and "The reorganisation of Money in the IV century." These are the chapter headings he chooses for this period, and his interpretation has withstood the test of time.

The concept of monetary crisis is, for Mommsen, a completely financial one. The Roman Empire, in the third century, experienced a growing inability to match revenues and expenses. This fiscal crisis was solved by increased recourse to monetary debasement. None of the three coined metals escaped overvaluation in this period. But it was the silver and copper coins that bore most of the brunt of progressive debasement. And it is the Antoninianus of Caracalla which can, according to him, be called the "Assignat of this period."

In his account, however, Mommsen is not interested in inflation. He has no analysis of the effect of monetary oversupply on prices. He concentrates instead on describing the gradual disintegration of the Roman monetary system in this period.

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When it comes to analyzing the monetary reorganization conducted by the Illyrian emperors in the fourth century, he is quite clear about setting the beginning of the reorganization in the Reign of Aurelianus, in the last quarter of the third century, pointing out that this emperor had closed the municipal mints and repressed the frauds of the monetarii, the mint employees, with measures that had led the latter to riot in the streets of Rome and to be repressed in a bloodbath.

About the reform of Diocletian Mommsen again establishes the terms of future discussion. He notes that Diocletian's policy was self contradictory. On the one hand, good gold and silver coins were issued, on the other an immense quantity of debased copper coins were put out, which nullified to a great extent the effect of the reorganization of the gold and silver coinage.

Writing on the further reform of the coinage realized by Constantine, Mommsen expresses what I consider his most subtle analytical remarks on Roman monetary history. "We know," he writes, "that under the reign of Constantine all payments in gold coin were made according to weight and that, moreover, gold ingots were accepted in payment by weight, and that their weight was controlled regularly. The government had manufactured and placed in the main cities special standards, to facilitate the control of the weight of the gold coins, and had ordered that special employees had to effect these controls upon requests of the citizens... This is what explains to us the immutability of the gold coin which, in a state like the Byzantine Empire, could seem extraordinary if the gold coins had been a currency in the strict sense of the word. But this currency, in these peculiar circumstances, was more enunciative than dispositive, nobody was compelled to accept it by its nominal value, which was the most effective way of putting a

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stop to all debasement because, once weighing had been permitted, the reduction of weight did not bring any profit to the state; the seal impressed on the coins was no more than a sort of control on the quality of the metal, and things had gone back, by the force of events, to the primitive system, where a seal was impressed on copper bars" (*ibid.*, vol. III, p. 157).

"It was," he concluded, "inevitable to get to the point where the Romans had got, that is, to *demonetize money* and to consider it only as a precious metal; because private citizens take back their right not to accept currencies, when the latter have no longer weight and title fixed by law" (*ibid.*).

In this long quotation I find the essential elements of Mommsen's monetary theory. And it is certainly impossible to define it as *laisser faire*, liberal, metallist, anachronistic, as Bohlin has done. It seems to me, on the contrary, pragmatic and relativist in the extreme.

3. The twentieth century can be called a century of inflation and of great monetary experiments. It is not the only century in modern times to deserve this label, but it is an appropriate label. Being, like the rest of us, men of their times, Roman historians have fallen, in our century, easy prey to the temptation to interpret Roman monetary history in terms of contemporary history and contemporary economic theory.[1] Our century, moreover, has seen the triumph of Anthropology and Economics among the social sciences. Roman historians could not be unaffected by these cultural trends. Roman monetary history, however, has been, during the whole course of the century, heavily influenced by the great debate between primitivists and modernists that raged in the second half of the previous century

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among ancient historians. As we can see in historical perspective, this debate was no more than a continuation of the polemic conducted in the XVIII and XIX centuries by people like Mengotti, Ferguson, Ferrara and Dureau de la Malle. The debate was enhanced by the blossoming of the German historical school, which emphasized historical relativism. It involved monetary history from the beginning, as the propounders of "primitivism" had emphasized the distinction between the natural economy and the monetary economy, stressing the predominant character of the natural economy in the classical world.[2]

There was not much intellectual distance between stressing the relative unimportance of the monetary economy in the classical world and defining the monetary systems of antiquity as dominated by primitive forms of money, especially as the study of primitive money by anthropologists made great progress in our century. We shall deal with this intellectual trend later. First, however, I want to devote my attention to what can be called, without irony, the discovery of Roman inflation in the twentieth century.

As I noted above, Mommsen's monetary history did not deal with the connection between money and prices. There is evidence that Mommsen was fully aware that the monetary crisis of the third century had inflationary consequences. He wanted, however, to stress that it had been above all a fiscal crisis and a crisis of State authority, which the Roman State had survived only by abdicating its sovereign prerogative to tax by issuing money, or as he put it, by a "demonetisation of money." Roman monetary historians who wrote after the great European inflations following the First World War turned to interpreting the decline of the Roman Empire as being chiefly determined by inflation. They were helped in this revision by the perfecting, by economists, around the turn of the century, of the modern versions of the Quantity Theory of Money.

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The Quantity Theory of Money is an old theoretical discovery, but it came into new fashion around the turn of the century and it was in full bloom in the twenties and thirties. Roman monetary historians were well documented, and were becoming even better documented, on Roman monetary vicissitudes in the third and fourth centuries. They had not been much interested in the dynamics of prices in the same period. They now dedicated themselves to the task of finding evidence that, first of all, there had been inflations in Roman times, and especially in coincidence with the decline of Rome and, secondly, that those inflations had been caused by the dramatic debasements of the Roman currency especially in the third century A.D.

Fritz Heichelheim is the Roman historian who has done most to lend credibility to the theory of the inflation-determined decline of the Roman Empire.[3] In his work, which appeared at the beginning of the thirties, he strove to demonstrate that State expenditure, especially soldiers' pay, had brought about the monetary crisis of the Roman Empire, which had led, through successive dramatic debasements, to raging price inflation. It is worth remembering that this was the view (if we do not put the emphasis on soldiers' pay, but on general State expenditure) the British Government had of the great German inflation, a view which Bresciani Turroni defined, in his famous book on the German inflation, as the "Inter-Ally view". In its application to British domestic economic policy, it became known as the "Treasury View".

But we do not have to concentrate on Heichelheim. The Quantity Theory of Money, and in particular Irving Fisher's famous equation, acquired a surprising popularity among Roman historians. Fisher's equation stands out, I must say rather conspicuously, in the pages of Santo Mazzarino's "Aspetti sociali del Quarto secolo". It is used by Edmond Frezouls to prove that Diocletian's monetary reform

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might have actually been successful, in the sense of bringing the Roman public back from the natural economy where it had taken refuge, to the monetary economy, with disastrous consequences on prices. But the equation also looks at us from the pages of Mario Mazza's "Lotte sociali e restaurazione autoritaria". And C.R. Whittaker wheels it out, as recently as 1980, though he uses it to criticize the "great inflation" theory.[4]

4. The emphasis, one may say the over-emphasis, given by Roman historians, especially in the inter-war period, to the theme of monetary crisis leading to inflation leading to decline, could not fail to engender a reaction. This duly came in the post-war period, even if one can see, in the writings of Marc Bloch in the early thirties, that not everyone had jumped on the band wagon, even when it was rolling most noisily.

The theory of the inflation-induced decline has been criticized from different angles. Some writers concentrated on an examination of available evidence, to distill from it, for instance, that after all there had not been much price inflation in the third and fourth centuries.[5] Others have questioned the meaning of inflation, by pointing out that, in a system where prices were expressed in gold, silver and copper, one has to be clear in what unit one is counting, to assess price dynamics properly. Still others, like Julien Guey, have vented the hypothesis that the Romans might have been successful in their devaluation policies, i.e., that they had managed to effect debasements not followed by price inflation. It is interesting to note that Guey's article was published in 1962, soon after the French franc had been successfully devalued by Antoine Pinay.[6] Others, in particular Mireille Corbier, have attempted to apply Keynes's criticism of the Quantity Theory to Roman monetary history, in order to prove that

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an increase in the Roman money supply could have induced a rise in output, rather than in prices.[7]

5. A whole new school of Roman historians has criticized the theory of inflation-induced decline from a much more fundamental point of view. These are the ancient historians who derive their inspiration from the criticism Karl Polanyi levelled at the application of modern monetary theory to explain the functioning of primitive monetary systems.

The inapplicability of standard monetary theory to primitive systems stems from Polanyi's belief that in primitive economies money is a series of specialised instruments, while modern economies are equipped with a so-called "general" money.[8] I must say, however, that I am a little disturbed when I see this theory attributed to Polanyi, when Max Weber gave a very clear and articulate earlier version of it.[9] In the relevant literature on Roman money, however, the canonical references are to Polanyi, not to Weber.

There are, however, people, among Roman monetary historians, who ought to be counted among the forerunners of the "substantive" school, who did not know, like M. Jourdain, that they had been speaking prose. I refer here to Sture Bolin, who aimed, in the whole of his book on State and Currency, to show that money in Rome had been above all an instrument of taxation. He took great exception to what he considered a common misapprehension, that, as he put it, "objects of a never varying type have had never varying functions" (Bolin, p.11). I cannot find in Bolin's book, references to either Weber or Polanyi. As I have noted above, it is a great pity that he chose as his intellectual adversary Mommsen who was, as I hope to have conclusively shown above, perfectly aware of the predominantly fiscal function that money had in Roman times.

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What is remarkable in Bolin's analysis is that, after having stated his evolutionary theory of money, and his conviction that money was always circulating, in Roman times, at a value well above its intrinsic value, he attempts to prove that Roman overvalued coins remained in circulation because the Roman monetary authorities knew exactly how to apply the modern theory of the 'gold points'. He uses, to prove that, an extremely elaborate statistical test. One is left wondering what kind of evolution can possibly take place after such a level of sophistication in monetary management had been reached by the Roman authorities.

The only explanation for Bolin's rather emphatic reiteration of his thesis can be found in the obdurate defense, by people like Mickwitz and Johnson and West, of pure metallist theories, with reference to the Roman monetary system. But, in the case of Johnson and West, we have to understand their obduracy. If we read the preface to their book, Currency in Roman and Byzantine Egypt, we note that they thank Erwin Kemmerer and Frank Graham for advise on monetary theory, and economists know what convinced metallists those two eminent economists were.[10] Subsequent literature shows that, in spite of Bolin's efforts, his thesis of the fiduciary nature of Roman money (which had also been Mommsen's thesis, as I have tried to show above) does not seem to have convinced the profession. Recent literature, like Julien Guey's "De l'or de Daces au livre du Sture Bolin" (Mélange Carcopino, quoted) and Claude Nicolet's review of Roman economic thought[11], still express the conviction that Roman money was mostly accepted at its metallic content, in spite of Bolin's efforts to prove the opposite (which constitute an impressive show of applied economic scholarship) and in spite of the whole corpus of Roman legal evidence. Francesco de Martino, in his massive review of Roman economic history (Storia Economica di Roma, Firenze, 1980) guardedly accepts the metallist thesis.

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Readers will derive from the present paper the impression that, as an ignorant reader of secondary sources, I tend to side with Mommsen and Bolin. This conviction has also led me to disregard, in the present paper, one of the loci classici of debate of Roman monetary history, the controversy about Pliny's "gold drain". Early on in my reading, I encountered Edward Gibbon's treatment of the subject. I found it so convincing that I decided that reference to it would be sufficient treatment for this subject. "It is no easy task to confine luxury within the limits of an Empire", says Gibbon. Imports flowed into Rome and the Romans paid, he says, quoting Pliny, with precious metals. However, since the gold/silver ratio had risen between Pliny's time and the reign of Constantine, Gibbon concludes that the supply of silver, from Spanish times, must have been so abundant to more than make up for the drain to the East.

Following Gibbon, I fail to be worried by the Roman Empire's balance of payments problems.

6. Apart from Sture Bolin, who seems to have got there all by himself, other Roman monetary historians acknowledge the influence of the "substantivist" school on their thought.

I want to dedicate some time to the writings of Michael Crawford, who is an eminent Roman monetary historian and acknowledges a Polanyist inspiration, an inspiration which he shares with other Cambridge-based ancient historians and which he probably derives from the "affirmative action" of Moses Finley on ancient economic historiography.

In a closely argued article he wrote in 1970 Crawford set himself a very ambitious task.[12] "A wide variety of objects," he writes, "may function as money in the different uses which this possesses, for pay-

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ment, for storing wealth, for measuring value, and as a means of exchange." "In the Roman world," he goes on to say, "coined money was clearly dominant over other forms of money in the first three uses, and I want here to explore the extent to which it served as a means of exchange, partly because this is the most distinctive function of money and one for which coined money or a token substitute is essential to achieve any great versatility and partly because the problems involved seem particularly complex."

Crawford makes, in this sentence, a very convinced and very trenchant statement on what type of monetary theory he subscribes to. He says, in fact, that serving as a means of exchange is "the most distinctive function of money."[13]

It so happens, however, that the type of monetary theory Grawford shows to prefer is the same preferred by general equilibrium theorists. It has, for a number of decades, been argued by all sorts of critics of general equilibrium theory, that it is in fact impossible for general equilibrium theorists to include within their analytical frame a type of money which is at the same time means of exchange and store of value. If one does that general equilibrium theory cannot survive. One may say, for instance, that this is the core of the Keynesian criticism of traditional monetary theory. What we have to ask ourselves, at this point, is whether one can logically conceive of a money which plays the means of exchange role without at the same time being a store of value. This can only happen if, after having served as a means of exchange, in a round of exchange, this money promptly disappears, and nobody ends up with a stock of money. There must be, in other words, no intertemporal transactions. People are only buying today's goods and selling today's goods.

But, if this is true, one does not know whether money, in such a system, can exist at all. Its convenience as a means to remove the

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difficulties inherent in double coincidence is undoubted but, in a system without past and future, how is money to come about and how is it to disappear? In other words, how do you create it, at the start, and how do you destroy it, at the end of each round, so that nobody will be stuck with it?

A timeless economy, or one composed of non communicating periods, is the only one which does not need a money. Historical economies, which have a past, a present, and a future, all need, and have, money, that is to say, a commodity more saleable than others, which will transport values across time and space and which, for that capacity, will be trusted as a means of exchange.

Granted this, one has to ask whether an historical economy needs coined money. From the pure contractualist point of view, the answer is that it does not. Coined money requires the existence of the State. But there have been States which have gone on for centuries without resorting to coinage. Usually, in the most developed among those coinless economies, trade availed itself of metal bars, graded to control their weight and purity, by respected merchants. Those economies had moneys functioning as media of exchange because they were good stores of value, but the State did not take part in the process.

With a successful coined money system, the State takes over the money supply function. It is clear that coined money, to be successful, must be superior, as a means of exchange, to privately graded metal bars. And, to be a good means of exchange, as we have noted, a coin has to be a good store of value. Of course, we must think of possibilities of a trade off between these functions. People kept using dollars, which involved holding them, because they were the most widely known and used currency, even when their ability to serve as store of value began to diminish. They looked for a substitute only when the U.S.Government

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exaggerated its supply of dollars, and did not want to give a higher interest rate to people who held them. Thus the capital loss envisaged on dollars exceeded the convenience yield accruing from using dollars in trading and in carrying values through time and space. Crawford, in separating the means of exchange function from the others, in particular from the store of value function, negates the possibility that a coin keep its function as money. In other words, he envisages the possibility that a coin can be store of wealth, measure of value, means of payment, but not be a means of exchange.

But is it really possible that an instrument serving all these functions does not serve the last one? We have already seen that the reverse is not possible, i.e. that in order to be a means of exchange, a money must be a store of value and a means of payment. I think that if we were not considering a coin, but a privately graded metal bar, it would be possible to envisage that such an abode of purchasing power would be only infrequently exchanged. But, in Crawford's example, we are considering coins of small face value. And he proves, in his article, that, since he fails to find them in hoards in the countryside and in the northwest part of the Empire, coins, in the period he studies, which spans the four centuries divided by the birth of Jesus Christ, did not function as a means of exchange. From that he infers that, since money's most important function was not served, coined money, as it existed in Rome, did not serve all functions and thus was specialized money.[14]

This reasoning implies a rather common misapprehension, which it is necessary to dispel. A monetary system is composed, even today in highly developed economies, of different monetary instruments, each serving a specialized purpose. They are all part of a system because they are fungible with one another, even if at a cost. And the subset of goods comprising all the money instruments that

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form the monetary system is as a whole composed of goods more saleable than any goods comprised in the subset of non monetary goods. This does not imply that all the goods comprised in the monetary subset are the same, from the functional point of view. Some of them are better suited to serve as store of wealth, others are better suited to serve as means of payment. Small transactions, for instance, are usually effected with coins of small denomination. A large denomination instrument cannot always be used to finance a small transaction. Milton Friedman used to say in his lectures in the golden sixties that twenty-dollar bills were not money because one could not use them to pay for a small purchase in a supermarket.

Large denomination instruments are used for storing wealth in the countryside and among the poor even today. At the same time, there are regions of less intense monetisation even today in developed countries. This does not mean that the whole economy is only imperfectly monetised, or that money does not function as a means of exchange. As long as some of the instruments forming the monetary subset are used, a monetary system can be said to exist, and the economy can be called a monetary economy, even if some of the monetary instruments are used for some functions and some for other functions. That things are so is the idea of a system.

What Crawford would have to show to prove his point is that, if you tried to finance a purchase by <u>any</u> of the instruments that were part of the Roman monetary system, your payment would be refused. But, in the article I am dealing with, all he can show is the absence of certain coins in certain parts of the Roman economy, and the persistence of an <u>agio</u> between Roman coins, which allowed bankers and moneychangers to earn a living. On the first point, the absence of small coins in the countryside and in the more rural northwest, it makes sense that people would be more self sufficient in the coun-

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tryside, and that they sold crops once a year and were paid for those large transactions in silver, which they hoarded. On the agio that persisted between coins of the Roman monetary system, I would like to call to Crawford's attention those money-changing machines one finds in airports and such places, where one puts in his dollar bill and receives 75 cents in small change. Or he could try to change a personal cheque in a part of Britain where he is not known, or try to pay for a small purchase with a large banknote in a plce where counterfeiting was widespread. Upon being refused those particular monetary instruments, would he then conclude about the U.S. or Britain what he has concluded about the Roman monetary system?

One of the pieces of evidence he quotes to prove his thesis is worth considering in some detail. He tells us that, in spite of attempts on the part of Roman legislators, variable exchange rates existed among Roman coins, throughout the period he examines. To analyze precisely what this phenomenon may mean, we have to go into the problem of the Roman financial system. The financial life of ancient Rome is one of the least studied parts of Roman life. Prima facie, judging from the wealth of material, legal, and literary evidence available, this should not be so. But it is so. Starting from ignorance, therefore, we can only conjecture about the meaning of the phenomenon Crawford brings to our attention. A differential between the rate of exchange of different monetary instruments in different parts of the same monetary area exists even today, in very developed countries. Given the specialized functions of the various instruments comprised in the monetary system, it is altogether possible that demand and supply conditions for each of them may not be the same everywhere in the monetary area. The instrument used for saving may be in great demand in a high saving part of the country, while the instrument used for paying the poor may be in great demand, and in short supply, in parts of the area where a lot of payments of that kind

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take place. In developed countries today, there are regions where the interest rate banks pay on deposits is much higher than elsewhere, or much lower than elsewhere. These differentials persist in spite of excellent communications, because of market imperfection and segmentation, and in spite of the activity of central banks and other monetary authorities. Crawford concludes, from the persistence of differential exchange rates between Roman coins in different parts of the Empire, that there obviously was no conscious monetary policy or, as he puts it, no economically motivated monetary policy. Would he conclude, upon noting a persistent deposit rate differential between Norwich and Manchester, that Britain had no economically motivated monetary policy?

It would be fairer, however, to compare conditions in the Roman Empire to those prevailing in the last quarter of the nineteenth century and until the First World War. Right until the First World War, the Bank of England experienced what were called "internal drains", which were seasonal and thus foreseeable, and which it could not, unlike what Crawford believes, offset completely. To those we may add the equally seasonal "Autumn drains", which drew gold reserves, every year, from the coffers of the Bank of England to the plains of the Midwest. American farmers had to be paid for their crops and they wanted gold coins. Gold had to come from New York and from London, attracted by a seasonal interest rate differential. The differential would reverse itself when farmers returned the coins, by purchasing in the shops, by paying taxes and other debts.

In the same period, in spite of the presence, in British India, of an administration of exceptional economic sophistication, the phenomena that Crawford notices in the Roman Empire with reference to the money market, all existed and persisted. They were studied by

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scores of specialists, who wrote admirable reports on them. But suppose this written evidence had perished, and only evidence of the existence of the phenomena had survived, would Crawford think the monetary policy of the Raj had no "economic motivation"?

Generally speaking, and as a conclusive note to this review of the monetary theories of Roman historians, one could say that what a practitioner of Economics sadly misses when reading Roman monetary history, is a sense of the development of the Roman monetary and financial system, in the millennium spanned by the Roman State. The centuries Crawford refers to, for instance, saw the transformation of Rome from a relatively unimportant republic into a great world power. Yet he writes that in that period "The Roman coinage system underwent no sudden, major changes". But, in that very period, the Romans developed their monetary system from the relative simplicity of a predominantly copper currency to the extreme sophistication of a tri-metallic system, and extended it to apply to the greatest part of the lands they conquered, thus forming a domestic monetary area larger than any the West has ever known. Crawford's statement is equivalent, in historical terms, to saying that the British monetary system had undergone no sudden major changes from the time Sir Isaac Newton established the sterling/gold parity to the outbreak of the First World War.

But no satisfactory description exists of this evolution, which a practitioner of money and banking finds very remarkable indeed, even if he has to reconstruct it from many different sources. Roman monetary authorities may have known finance but not Economics, as Ferrara, Finley and Crawford tell us, but they did manage to supply the Empire with coins for the 400 years Crawford examines. The system of mints they established and the division of power between central and local authorities on coinage supply was highly functional.[15] As to the motivation of money issues, be it to enrich themselves, as Finley as-

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serts, or to pay their soldiers, as Crawford maintains, Roman emperors do not seem all that remote from our own statesmen's motivations.

In a world that knew no rapid transportation system, new coins reached the farthest corners of the Empire with surprising rapidity. And when there were discontinuities and interruptions, there seem to have been enough argentarii, nummularii, foeneratores, oppii, trapezitae, to regulate the velocity of circulation and reconcile demand and supply conditions. One should pause to reflect on the very number of words that were used to describe, in current Latin, financial functions and financial intermediaries. How did this sytem acquire the depth, width, and resiliency it obviously had reached by the second century A.D.?

Finally, a few words are perhaps in order on the dangers of passing judgement on a society where the practitioners do not seem to have been bent on describing how the economy worked. Suppose the only documents about the British financial system were the minutes of the Court of Directors of the Bank of England. One could read them and, at least until the 1920s, find precious little evidence that that august body had any idea of what Finley and Crawford call Economics.

Economics, as our two eminent historians use this word, is a discipline really invented by Keynes. But, if knowing Economics means to be aware of the results attendant upon some actions in the economic sphere, then a careful study of Roman literary and legal evidence will convince anybody that the Romans knew a lot of it.[16] Only, like Montague Norman, the legendary Governor of the Bank of England, they had never found it necessary to study it formally or elegant to talk about it. The same could not be said of English bankers who lived and worked in the early decades of the nineteenth century, who were extremely well versed in the new science of Political

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Economy and have left very original writings about it. Shall we conclude from that that Norman did not know his job as well as Henry Thornton or Horsley Palmer, or, more modestly, that some periods see a greater integration of intellectual and practical functions than others?

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FOOTNOTES

1. The "contemporary" inspiration of much Roman historiography has been noticed by A.Momigliano in his appreciation of Rostovzev's work.

2. A most original attempt to place the phenomenon of money in ancient Rome within the context of Roman institutions was made by H.von Scheel, in his short article translated as "I concetti fondamentali del 'Corpus Iuris civilis'" in V. Pareto, Biblioteca di Storia Economica, vol. II (Milan, 1907), but which orginally appeared in German in the 1860s. Von Scheel shares in his article the antipathy Momigliani has noticed in seventeenth- and eighteenth-century Italian jurists for the Roman world and Roman law in particular. Von Scheel's thesis is that the Romans, unlike what they were made to appear by Rodbertus and his followers, had an exclusively monetary economy, because they had no economic production, no modern property relations, no concept of the individual as separate from the State. As they had no free-labor production, they had no value in use and only value in exchange. Hence the dominance of monetary relations in their economy. Von Scheel sees the modern world as originating from the barbarians' institutions. "While German property is a consequence of labor, Roman property is a consequence of possession; while the German State grew as a gradual limitation of individual property rights, the Roman State is itself the source of property rights" (p. 247).
The extensive monetization of the Roman economy in the imperial period, even outside the cities, and in the more agro-pastoral context, was confirmed recently by Fergus Millar's elegant textual analysis of Apuleius' novel. See his "The world of the golden Ass" in Journal of Roman Studies, 1981.

3. The main reference is to his "Zur Währungskrisis des römischen Imperiums im 3. Jahrhundert n. Chr.," in Klio, 26 (1932-33), although the same theory is still advanced in his An Ancient Economic History, vol. III (Leyden, 1970). The monetary crisis of the Roman Empire had been likened to the collapse of Central European monetary systems after the Great War by A. Sepré, in Circolazione Monetaria e Prezzi (Rome, 1922).

4. Frezoul's article, "A propos de la hausse des prix sous Dioclétien", is contained in the Mélanges Carcopino (Paris, 1965). C.R. Whittaker's article, "Inflation and the Economy in the Fourth Century A.D.," is published in C.E.King (ed.), Imperial Revenue, Expenditure and Monetary Policy (Oxford, 1980) (BAR Series 76).

5. See Whittaker, op.cit.

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6. Julien Guey's article, "L'Aloi du dernier romain de 177 à 211 après J.C.," was published in the Revue Numismatique, IV (1962).

7. See her "Fiscalité et monnaie, problèmes de méthode," in Dialoghi di Archeologia (1976-77) and "Devaluations et fiscalité" in AA.vv., Les Devaluations à Rome (Rome, 1975). In the first of these articles Ms. Corbier points out that Heichelheim had been influenced by the monetary situation of the Europe of his time, but fails to repeat the procedure of what concerns Guey and herself.

8. The standard reference is K. Polanyi's "The Semantics of Money Uses" (1957), reprinted in his Primitive, Archaic and Modern Economics, ed. G. Dalton (Boston, 1968).

9. M. Weber, General Economic History (a course of lectures delivered in 1920, edited by Hellman and Palyi) (New Brunswick, NJ, 1981). See pp. 236 and ff.

10. L.C. West and A.C. Johnson, Currency in Roman and Byzantine Egypt (Princeton, 1944).

11. C. Nicolet, Il pensiero economico romano, in L. Firpo (ed.), Storia delle idee politiche, economiche e sociali, vol. I (Torino, 1982).

12. M. Crawford, "Money and Exchange in the Roman World," Journal of Roman Studies, 1970. I have selected this article for careful analysis because the main opinions he expresses in it are repeated in his numerous more recent works.

13. Another Cambridge ancient monetary historian, Philip Grierson, in an article on "The Origins of Money" published in Research in Economic Anthropology, ed. G. Dalton (Greenwich, 1978), maintains that serving as a means of exchange is the function anthropologists usually indicate as money's most important function. Grierson himself prefers to indicate the "measure of value" as the main function money performs. He reproaches Sir John Hicks for preferring the "store of value" function. He would, I presume, not agree with what I say (following Sir John's teachings) à propos of Crawford.

14. In the article I quoted above, H. von Scheel expressed, on the contrary, the opinion that in Rome, money's main function was to serve as a means of exchange. "In the pecunia there is first of all the concept of the universal and publicly recognized means of exchange." "The aim of money is to constitute a means for the circulation of goods which, through its intromission, and the juxtaposition of merx and pretium, becomes a special negotium, the emptio-venditio"

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and "for juridical _negotia_ we cannot think of any other measure than what is represented by _pecunia_" (_op.cit._, p. 736). Crawford tends to play down juridical evidence, but one cannot fail to be impressed by the remarkable wealth of quotes from the _corpus juris_ von Scheel is able to assemble in order to back his statement on the main function of money in Rome. The period he studies coincides with that studied by Crawford.

15. On the supply of money and working of the Roman monetary system, compare Crawford's pessimism with what is, in my view, a more realistic assessment, contained in K. Hopkins, "Taxes and Trade in the Roman Empire", _Journal of Roman Studies_ (1980).

16. A similar viewpoint is expressed by E. Lo Cascio in a very perceptive article "State and coinage in the late Republic and early Empire", in _Journal of Roman Studies_, 1981. Claude Nicolet, in his famous contribution for the _Annales_, ESC, 1971, had even contended that the Roman writers had a clear understanding of the relation between money and prices. He quoted very convincing passages from Roman writers, among which the famous one from Suetonius, which Lo Cascio quotes again in his article, proves that that writer, at least, kenw not only that money has an influence on prices, but that it also influences changes in output through changes in the interest rate. For the _verbatim_ quotation, see Lo Cascio, op.cit., p. 86.

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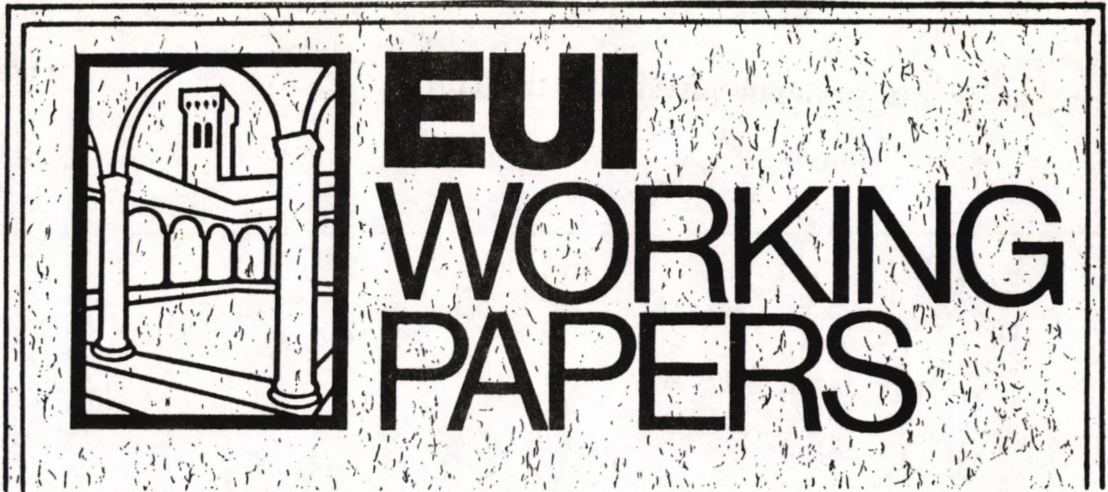

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