MONEY AS A WITNESS TO HISTORY

The special links between money and history transcend that routine course of events with which are associated the great majority of the works of mankind. It is rare to come across articles that since their initial manufacture have preserved their form almost intact for twenty-five centuries, and thus for almost the entire historical span of the civilized world, while playing an identical role in the lives of societies as diverse as those of Europe and the whole of Asia. It is rare, furthermore, to find articles that are of such generalized use and interest, often even the source of common feelings. Finally, similar articles are rare, if they exist at all, which—as is the case with money—may be just as closely connected with the great currents of the political, economic and social history of entire nations and continents as with the personal fates of individuals and families: in other words, articles whose presence might equally well record the succession of epochs as the passage of days.

For over twenty centuries money has been a substitute for numerous, and not merely material, goods. It is defined as a standardized piece of metal, marked with the symbol of its issuing authority who would thereby guarantee its value, at

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the same time as being its original commissioner. The sovereign would fix the mandatory exchange rate of the metal, authorize the monetary units, would organize them into a system, and determine the conditions under which they would circulate. Such money, moreover, once in the hands of the populace, would start living a life all of its own, often independently of the desires and intentions of the issuer, and would follow the laws of the economy and the social reality. The interdependencies between money and history are therefore many: they are the product of the latter and constitute one of its elements; they also count among its sources, and their value as source material grows proportionally with the diminution in the quantity of the other evidence from which we gain historical understanding of an age, sometimes becoming the sole and indispensable source.

The informative significance of currencies becomes clear in various ways, and in our critical understanding of them we shall therefore have recourse to specialized methods and tools. On the one hand, currencies usually carry written texts, obviously brief but concise nevertheless, which in a few words give information of prime importance: the names of the states or places where the money was minted, the names and titles of rulers, the names of tutelary deities or patron saints, the date of coinage expressed according to one chronological system or another, fragments of religious texts, various maxims and commemorative phrases, and finally the name of the monetary unit, possibly accompanied by some dictum. Here we have a whole important vocabulary, often originating in a far-distant past, and considered by the historian as research-material.

More fertile yet, and almost inexhaustible, is the body of information carried by coins in the form of iconographic monuments—reliable evidence as to their eras and countries. They portray images by the thousand: human and divine figures, effigies of saints and angels, stars and moons, towns, sanctuaries and castles, animals of every species, birds, fish, dragons and centaurs, trees and fruits, crowns, swords, shields, armorial bearings, crosses, wagons, boats, and innumerable other objects in miniature. From this profusion of various subjects and motifs researchers, from historians of art and culture to representatives

of the natural sciences, can drawn in abundance. The users of these currencies would also find here a wide range of information. It might even be claimed that monetary markings enlarge their knowledge of the world and transmit historical traditions to them, while at the same time expressing their own aspirations.

In Antiquity and the Middle Ages, up to the spread of the printing press and even later, money was the sole medium for the communication to the masses of information and propaganda. It filled the role of long-range mass-medium, in geographical as well as social terms. Minted in thousands of identical specimens, and mobile by nature, it would gain entrance into households and pass through the hands of innumerable users. Eagerly received, it was usually carefully examined, and thus played the part of a particularly effective vehicle for messages, coded by the issuer in the effigy and inscription set upon the coin.

Finally, owing to its physical and chemical properties, money constitutes a monument to the physical aspects of culture, giving information as to coinage techniques and—what is more important—about nummumetric parameters, and consequently about its own economic function and the monetary policies of the issuers. Those very coins found underground somewhere, become archaeological monuments; each specimen thus becomes direct evidence concerning local financial operations, their scale and structure, and sometimes, if the find seems to have been deliberately deposited, even of the methods of saving. Generally speaking, whether recovered from tombs, sites of ritual sacrifice, or simply ordinary locations, money may serve as testimony about cultural phenomena, habits and customs.

Taking all these aspects and possibilities for research together, and applying them to the millions of antique coins the world over, we are led into the vast domain of numismatics: i.e. the study of money as a source of historical knowledge. Just like every other science, numismatics is concerned with collecting the objects of its research, old currencies therefore, and studies their objective and subjective characteristics, subsequently describing and cataloguing them for a final interpretation. Obviously, this will be accomplished by the use of different methods

and various tools and in collaboration with the other branches of history to which numismatics is closely linked.

Money made its appearance in different countries and ages in basically analogous form: either as articles of general usage, recognized throughout a given land as a common measure of value, suitable for accumulation and used as a medium of exchange, or as precious metals which, albeit requiring some determined system of quantitative mensuration, had preceded it in operations for the transfer of property. These objects of general usage that fulfilled at least some of the functions of money were numerous. According to the natural, economic, and social conditions of the area this role fell to livestock, hides, cereals, axes, pins and knives, to rings and bracelets, to fabrics and shells etc. The subsequent stage consisted of replacing the given object by a symbol for it, executed in metal in a simplified and standardized form, and thus no longer suitable for its previous normal use but, on the other hand, manageable, and consequently easy to carry, count, and save.

This was the function in China, up to the third century B.C. of bronze miniatures of knives and spades, of small axes, also in bronze, in Western Europe, and of iron bars in the form of elongated axes in Central Europe and Scandinavia during the ninth and tenth centuries A.D. In certain African countries copper bracelets and other locally produced articles were employed for this purpose almost down to the present day. From here there is only one further stage to be passed in order to replace the symbolic-objects with pieces of metal in a shape better adapted for use. Experience soon proved that a flat disc of moderate size and easy to grasp lends itself well to the function of a unit that was to be used for circulation. This discovery had hastened the development of the monetary economy in the same way that the discovery of the wheel did that of transport. Both these inventions, furthermore, have

become stable elements of human civilization.

It seems, however, that the various abstract notions inherent in origins of money were beyond the understanding of its users, witness the fact that the first designs on coins sometimes refer back to premonetary measures of value. Vestiges of this can be seen in the bull on certain coins of Republican Rome, the

double axe on early Greek drachmas of littoral Asia Minor, and even the copper object in the shape of an oblique cross which figures on the coins of Katanga, dated 1961. Such vestiges, moreover, lingered on for much longer in language: the term "pecunia" perpetuated the recollection of livestock in which Roman currency had its origins; the Greek pin, the "obelos," which formerly served as a natural currency, lent its name to the obolus, a small coin: half a dozen of these pins constituted a "handful"—and the coin called a handful = "drachma" was worth six obolus; and the name drachma, still alive today, was borrowed by the Arabic world which minted its "dirhems" in silver. Examples of the same kind appear also in other languages, supporting the idea that money is a vehicle for particularly durable traditions, sometimes more resistant to the corrosion of time than the metal of which it is made.

Gold, silver, and copper, metals essential to minting, act as determining factors upon the function of their corresponding coins, as well as upon their social significance, although this situation is not universal. Thus the Far East, and above all China, was for twenty-five centuries acquainted only with bronze money, always in the same shape and with a square hole in the center. There, the most important monetary units were made up by threading such coins onto strings, a custom also adopted by numerous countries in Africa and Asia who in the same manner would string cowry shells together. This ancient tradition of pierced coins has been maintained in the Far East down to our own times, and has an equivalent in Europe in the name given to a Roman bronze coin: the "follis" = bag, originating in the counting of these loose coins in lots. In a slightly corrupted form, this name infiltrated through Byzantium into the Arab countries, Mongolia, and in the fifteenth century into Ruthenia, still as the name of a copper coin. Only Latin medieval Europe, in conformity with its monetary doctrine, did not consider copper as a recognized standard of value, though it was used, however, rather reluctantly as an alloy with silver. It is only in modern times that it has been accepted as material for nickel coinage, although it was also used in very large transactions. Evidence of this is attested by the copper plate-money, issued in Sweden during the seventeenth century,

whose weight would reach some fifteen kilograms. These may be considered as the descendants of the stamped bronze bars which twenty centuries earlier preceded the establishment of the monetary system of Republican Rome.

Precious metals proper, notably gold and silver, had already fulfilled their role as vehicles and measures of value in the premonetary era. Moreover, not being divisible by nature they always had to be measured out according to convenient units of weight. In principle money rectified this inconvenience: the metal available to any given community or its sovereign was divided up into countable units of equal weight; it was, nevertheless, the weighing out, which for long centuries remained the controlling factor in financial transactions. The weight of a large proportion of monetary units, or groups of them, was usually determined in reference to the system of weights used in the land in question. These relationships, even though the subsequent development of money had obliterated their meaning, lingered on in the terminology still used; such names as stater, lira, pound, mark, or peso also serve as examples of the role played by currencies as the transmitters of ancient tra-

The dimensions of monetary units were determined in the first place by their function as circulating articles. These had to be easy to carry while at the same time corresponding to the value of the goods whose exchange they were to facilitate. These two conditions were frequently fulfilled by discs of a weight that would vary from a few to some ten grams; moreover, discrepancies in either direction were fairly common. Thus certain Celtic coins weighed only half a gram, and the silver bracteates of central Europe in the Middle Ages between 0.1-0.2 grams. On the other hand, the Greek dekadrachmas used to contain over 40 grams of silver, the multiples of the Roman aureus 30-40 grams of gold, and, in modern times, silver thalers would weigh over 30 grams, while the gold portughés, issued in Portugal, around 40 grams. Note, furthermore, the hundred ducat coins minted in Poland in the seventeenth century and which contained about 350 grams of gold; these, however, though still in scale with the size of a man's hand, lost their function as a medium of exchange and became me-

dallions, there being no longer any place for them on the market.

This vast range of values was still further enlarged by the exchange rate between the various metals which until modern times would fluctuate normally for gold and silver by some ten per cent, subsequently becoming even more erratic. This was dependent upon the availability of these metals, their extraction from mines or river silt, upon the access to accumulated reserves, and above all upon their importation. The considerable influx of silver Islamic coins into central and northern Europe in the ninth and tenth centuries followed by a crisis in the mining of this mineral in the Middle East, the abundance of gold from Sudan and Senegal, and then from America—all this served to determine not only the relationship between the values of gold and silver in Europe, but also the system of monetary units and the monetary map of the continent. In other places and ages also, currencies would reflect the sometimes far-distant upheavals of economic, and not just economic, events like sensitive sismographs.

The formation of different types of currency was, nevertheless, primarily the expression of the needs of some or all of the inhabitants of a country. The variety in the physical parameters of simultaneously circulating issues is as clear a reflection of their diversity of purpose as of the structure of the society in question, of the accumulation and distribution of wealth, and the conditions of exchange. Obviously, here we have an indirect picture which demands careful analysis, exactly like the spectral analysis used in the detection of the chemical structure of an alloy. During the first stages of the history of money we find only relatively large denominations of value, indicating that at this time the uses of money were confined to the social elites. The appearance of smaller denominations, linked to the extension of the monetary economy, shows money to have come within reach of the whole population.

Sometimes, when minting operations could no longer keep abreast of practical requirements, people would take to dividing up denominations of too high a face-value into fractions corresponding to the amount of the current transaction. Thus it was that the Arabic dirhams which abounded in the Baltic States were reduced to fragments during the tenth century; in the same way in Russia, as late as the seventeenth century, the heavy thalers from abroad were often cut up into fragments corresponding to their owners' needs. It was not only foreign coins that were adapted to the structure of the local market in this manner: until the thirteenth century the mints of England and Ireland struck pennies that were destined in advance to be divided into halves and quarters along the double lines crossing at the center, inscribed on the hallmark for that purpose. In spite of the fact that they were a representation of the Christian emblem, in the eyes of the historian these lines fill a role similar to that of the clefs in musical notation: they determine beforehand the level of monetary circulation in terms of the social structure.

It is monetary systems, born out of and transformed by the growth of monetary activities, which most faithfully reflect social structures and activities. These systems comprise a vast network linking the various monetary and weight units by complex knots of figures. These latter not only determine the relations between the two kinds of units, but also sometimes intermediary values, and hence currencies of account, i.e., conventional monetary entities taken as measures of value. Here, names are polysemous. The name "pound" means equally a ponderal unit, and a variable weight at that, or a lot of 240 denarii and—in modern times a monetary unit. The ducat, which appeared in the thirteenth century, was first of all a gold coin; this name was soon also given to an equivalent number of silver Venetian coins, then to a stipulated number of them bearing a different value; it was finally necessary to use the definition "golden gold ducat" to refer to the coin in question.

The birth of new units of varying value, and their everchanging relationships to one another, always closely followed fluctuations in the supply of precious metals, the development of agricultural or industrial production, of local commercial relations, and, more broadly, the expansion of towns, the growth of transport, and the exorbitant cost of wars. Nevertheless, the components of certain monetary systems were resistant to the vicissitudes of history. Thus the tripartite monetary system of the Carolingian era, in which each pound was worth 20 solidi or 240 denarii, functioned unchanged until very recent times in Great Britain. It has also lingered on in a residual form in the decimal system that swept all before it, in that the French "sou" or Italian "soldo" are the current terms for 5 centimes (or centesimi), in other words for one twentieth of a franc or lira. We can see here what we might call the fossil of an economic structure that is over a thousand years old. It does not, however, seem to be the advantages of such a numerical combination that ensured the stability of this monetary system, but rather the Carolingian tradition still extant within the culture and structure of the states of Europe.

The evolution of currencies proper, above all those of silver, tended towards their gradual depreciation. The Carolingian denarius, which weighed some 1.7 grams, contained a few centuries later only about 1 gram of silver, and subsequently declined to only a fraction of a gram before its complete disappearance. The grosz, which by definition represented in the thirteenth century "gross" money of great value in comparison to the denarii of the time, subsequently became small change which nonetheless retained its pretentious name. Such was the fate also of other units; with time their weight decreased and their grade deteriorated, or fluctuated along with the development and proliferation of monetary functions. It was only when they began to spread throughout the market, as they did in the numerous young European states of the late Middle Ages, and to circulate side by side with other silver objects such as bars, ornaments, or metal pieces, weighed on the scales, that there was no longer any reason for this devaluation. But the stabilization of money as a unit of accounted rather than weighed value had opened the way to various transactions and abuses whose consequence was a diminution, at first covert and subsequently official, of its intrinsic value, while its face value was preserved unchanged.

In Rome, already by Republican times, the silver of coins contained an alloy of base metals, and the fluctuations in their grade constituted an index of the country's economic situation. The crisis that affected the Roman Empire in the third century had been accompanied by a great decline in the grade of its denarii. From the Middle Ages come numerous examples of

declines and increases in the quality of silver, and even of gold coins, in the great kingdoms just as much as in the small feudal principalities. This movement was the result not only of objective causes, but also of the fiscal transactions of the rulers.

For the majority of its issuers, medieval money was an inexhaustible source of profit, and hence the applications of a large number of counties, cities, dioceses, and monasteries for the procurement of minting rights. Seignoriage—the time-hallowed profit from the custom of appropriating the differential between the intrinsic and the face value of the coin—would sometimes considerably exceed the fixed rate and arouse public indignation. By historical tradition the French king Philip IV The Fair, also known as the "counterfeiter king," is considered to be the master in the art of these complicated transactions. But this was really a general custom, adopted by the great majority of European rulers and practiced to the extent of their opportunities and talents. This practice harked back to a generally accepted doctrine according to which the currency belonged to the sovereign, who might fashion it at his will. "Nevertheless the prince must act with moderation," counselled Saint Thomas Aquinas in his penetrating analysis of the mechanism of the social functions of money, without, however, disputing the ruler's rights in the matter. This doctrine was to be modified only over the centuries.

The frequent alterations during the Middle Ages in the countries of western Europe, the variety of monetary units as well as the periodic renewals, in other words the changes in circulating currencies, sometimes even effected at intervals of several months in central Europe, constituted a kind of tax paid to the sovereign by whoever possessed the money in question. The latter would complain bitterly; "No epidemic, no devastation of the land through pillage and fire, would be so baneful to the people as the frequent changing and the treacherous deterioration of the currency," wrote one Bohemian chronicler at the beginning of the twelfth century. This fiscal practice is nevertheless evidence that money was by then an indispensable element of economic life. Everybody would complain, but nobody could do without it. The population would confer the most unflattering, sometimes even contemptuous,

names upon depreciated issues, while continuing to use them; they accepted them, spent them, and saved them, inasmuch as they were a vital medium, sanctioned as legal tender.

Public opinion always demanded a good, stable currency, which it considered to be a guarantee of general prosperity and of the vitality of the State. According to one well-known story of Pliny the Elder, a Roman sailor was forced by a storm to land on the coast of Ceylon. Upon examining the denarii of the shipwrecked man, adorned with the portraits of different emperors but all of the same quality and weight, the Singhalese prince saw in them the incontestable evidence of Roman power and of the fairness of its rulers—issuers of such fine currency. He thus immediately sent a legation to Rome with the proposal of an alliance. The merchants of the Middle Ages, especially those of the urban republics, strove to ensure monetary stability. The regulations of the mints in the thirteenth and fourteenth centuries, in Florence and Venice, might serve as a model of particularly ingenious organization and scrupulous control which protected their manufacture against any defect. The gold florins and Venetian ducats both in fact constituted an immutable standard of value for many years, known and recognized throughout the length of Europe, in the East, and even further afield. By the fifteenth century the florin was fluctuating somewhat, whereas the ducat maintained its 3.5 grams of pure gold for over 500 years and thereby became a stable point of reference for numerous monetary systems, representing the aggrandizement of the Venetian Republic and subsequently its mere lingering ambitions.

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Whether fine or flawed, minted in gold or copper, large or small, money bears distinctive symbols imprinted upon at least one if not both its faces. These symbols constituted one of its integral characteristics, vital to its very existence. The imprinting of the hallmark upon the the disc brought it to life and changed precious, but still inanimate, metal into money endowed with special values not all of which were purely economic.

Irrespective of its place of origin and the road by which it had arrived at the mint, the hallmark placed upon it would determine the status of the metal within an actual political, social, and economic framework. By means of some distinctive symbol the hallmark would confer upon it a legal sanction, elevating what was mineral to the same rank with those phenomena associated with the functioning of the higher social institutions, primarily that of the state. Money in principle grows out of the existence of the state which is an indispensable authority if the former is to be generally recognized throughout a certain territory. While guaranteeing the value of money, the state also has at its command the means of coercing the recognition of that guarantee should it ever become necessary. Money, moreover, is one of the physical manifestations of the existence and functioning of the state, whether it be one of the Greek citystates, one of the great kingdoms of Oriental Antiquity, or one of those states born at the end of the Middle Ages in Europe or elsewhere.

Over and above any other insignia, the hallmark imprinted upon its coinage would take on the role of the universally recognized symbol of a state or nation. Such a symbol would initially be associated with the person of a god or sovereign and later appear in a more abstract guise, such as would characterize a religion or power, and thus become an established conventional symbol corresponding to a dynastic emblem or, later on, to the armorial bearings of the state. A head of Zeus, Apollo, or Hercules initially symbolized the city-states of which these gods were the patrons and who would often take an active part in the lives of their protégés. Athena, who from the middle of the sixth century appeared on the coins issued by the city that bore her name, was crowned with triumphant laurels after the victory of Marathon. Other gods, provided with some symbol typifying the ruler whom they represented, would thus become a counterpart of, and stable substitute for. the latter. But it is only Alexander the Great among the Greeks and Julius Caesar in Rome who-in the opinion of their contemporaries, and perhaps their own too—crossed the frontier separating mortals from immortals: they were the first to dare introduce their own likeness onto the coinage. For twenty cen-

turies since, sovereigns have presented themselves to the mass of their subjects in full majesty, wielding their power in accordance with the precepts of sentiments of the time. They have done so either through their facial expression of stature, through the insignia of their sovereignty and the splendor of their apparel and armour, or by the use of emblems and inscriptions to entrench the conviction of their permanence, of the celestial origins of the "august," and of the charisma of the crown of the Christian kings who rule by the grace of God. The likeness of the sovereign thus in its own turn was substituted for that of the divinity, or was more or less identified with the country, State, and social system in question.

The monumentalized portraits of the Roman emperors conveyed the idea of the sovereignty of Rome extending from Britain to Africa, from Spain to Mesopotamia. They would even penetrate beyond the borders of the empire, as far as India and the Baltic littoral, as clear evidence of the Empire's power, its organization, and infallible stability. "Cuius est imago haec et inscriptio?" asked Christ of the Pharisees who showed him a coin. "Dicunt illi, Caesaris. That which is Caesar's, render unto Caesar." These few words suffice for a whole series of treatises on the function of the Roman denarii as an integrating factor in the political mentality of different peoples and cultures.

The emperors, moreover, were given to publicizing their great deeds and valour. Egypt conquered! Judea conquered! Dacia conquered! Such are the inscriptions that appeared in their turn on the Roman denarii along with the expansion of the empire. These words would be accompanied by images or symbols: an Egyptian crocodile, a Jewish candlestick, or a Dacian prisoner, each of which in its own way distinguished these successes. On other occasions the hallmarks would represent the personifications of virtues and ideals, such as magnanimity, happiness, perpetuity, or peace, obviously referring to the perpetuity of the Empire, or to Roman peace—Pax Romana, the symbol of world domination. Brutus used the same language to proclaim his plans and reveal his success, perhaps while also wishing to eternalize them in some way: his denarius shows a Phrygian cap between two drawn daggers, along with the inscription: "Ides

of March". Here we can see a synthesis in miniature of one of the crucial events in history.

In the Byzantine culture the role of mouthpiece and transmitter of political and religious ideas fell to the gold coinage, inscribed with hieratic designs of Christ, the saints, and sovereigns. For six centuries, in the same shape and practically identical alloy, the solidus—also called the nomisma in Greek—constituted the symbol of the splendor and immutability of the Eastern Roman Empire that was to last for ever. In the course of that long period the basilei and their dynasties succeeded one another in the train of natural or tragic events, the frontiers of the empire underwent changes, but the gold nomisma always weighed about 4.5 grams and carried the effigies of Christ and the emperor, each—or so it seemed—as unperishable as the other.

Charlemagne readopted the proven traditions of Antiquity by having his imperial denarii minted in the pattern of the coins of the Roman emperors. Frederick II did so in an even more pronounced manner, thus underlining his political ambitions. His coins, minted in Sicily and carrying the pompous title of "Augustales," copied the characteristics of the Roman aurei, notably the laureate bust of the sovereign and the eagle with outstretched wings. Later, from the Renaissance onwards, these motifs reappear, either to express the real or simply illusory ambitions of rulers who appear on their coinage draped in Roman togas and crowned with laurels, or merely for ornament and as a manifestation of the universal right to the heritage of Antiquity.

Hallmarks would also bear other emblems—symbols of the state or nation—so contributing to the birth of such symbols, to their establishment, and their becoming known, as much among the local population as among the more or less neighboring nations. The drachmas from the Island of Rhodes in the fifth and sixth centuries B.C., just like the golden Florentine coins minted seventeen centuries later, broadcast the names of their countries throughout the world in a form that was simultaneously particularly beautiful and simple: that of the rose, or the fleur de lys. It is also through coinage that the Portuguese quinas-shield, the Bohemian lion, the Polish eagle, or the

three crowns of Sweden emerge with the first evidence of their role as emblems and symbols of the sovereignty of their countries of origin—symbols whose prestige grew with the course of time.

But the political message of monetary markings comprises but one aspect of their import, above all in Antiquity and the Middle Ages. A second aspect, the religious message, was so pronounced during the first phases of the development of money that some researchers thence deduced that its origins must have been sacred. These two aspects are not incompatible however, since the events of the political and religious worlds were inextricably interrelated until the end of the Middle Ages. It was only the laicization of the modern states that brought with it the gradual secularization of monetary hallmarks. Whatever the case may be, the religious motifs common on coins give an additional and higher sanction not only to the price of the metal, but also to the prestige of the currency in terms of social value, rooting it firmly into the political and religious system then in force. It is no accident that the first Roman mint was situated on the Capitol, near the temple of Juno Moneta, this being a fact that we unconsciously recall even today each time we speak of money and use the various derivatives of that name.

Coin hallmarks reproduce a good part of Greek and Roman mythology and elements of the religions of the ancient East, of Hinduism, Judaism, and Islam, besides numerous Christian symbols, from the cross, which reappears upon thousands of coins of every type, to portraits and emblems of Christ, the Virgin Mary, and uncountable numbers of saints. The functions of these elements, so different in their doctrinal origins, were often analogous and sometimes even identical. The owl—a bird endowed with the wisdom of Athena and which appeared on Attic drachmas—played the same role as the lion of Saint Mark on Venetian coinage; the personifications of Roman virtues proclaimed practically the same moral standards as the symbols of Christian virtues reproduced on medieval coins; the truths expressed in the verses from the Koran on the hallmarks of dinars and dirhams, while quite different from those taken from the Bible which figures on the grosz, nobles, or thalers, clothed a

similar preoccupation with matters of faith. These were proclamations with a universal validity, transcending local or national frames of reference, characteristic of the great cultures of mankind and addressed to the whole following of a particular creed—perhaps even to God himself.

Religious motifs would often, however, appear on hallmarks for reasons of a more practical nature, such as the intercession of a place's patron saint or the publicizing of particular devotional events. Thus on Venetian ducats the Doges in turn bend their knee before Saint Mark to receive from his hand the standard constituting the mandate of authority and visible proof of his unchanging benevolence. For three hundred years the Madonna on the coins of Hungary, which was threatened by the Turkish invasion, assured that country of her patronage. When the issuer was also a religious believer he would likewise often appeal for celestial aid when facing impending difficulties. As early as the twelfth century the Polish Duke Boleslas III, who figures on his bracteate in genuflection before the feet of Saint Adalbert, shows his appeal for protection against the imminent danger of the submission of the Polish Church to German ecclesiastical authority. In the sixteenth century the inhabitants of the besieged town of Gdansk struck thalers bearing the figure of Christ and the eloquent inscription: "Defend us, Oh Christ our Savior". Money must have helped to broadcast such appeals, reproduced in thousands of specimens somewhat after the fashion of a political manifesto, or like the ringing of the tocsin, simulaneously alerting both heaven and earth.

It is not always clear, however, as to which is the intended audience of the message transmitted via a monetary hallmark. The latter is therefore ripe for semiological analysis. It is obvious that the class of those who use a currency is larger than the class of those to whom its message is being addressed. For many, the hallmark was simply the coin's distinctive token, a characteristic of its value and not a vehicle for communications of a more complex nature. In the case of each cultural group, the essential iconographic figurations had to be easily comprehensible: as to other subjects or symbols, their reception remains a matter of doubt. Neither is there any lack of examples showing motifs borrowed and then transformed into others

better adapted to the local mentality. With time, the Greek gods transferred onto Celtic coins take on the features of local divinities, and those symbols that are harder to understand undergo strange alterations that witness to the fact that not only the users of the currency, but those issuing it themselves, did not grasp their meaning.

Restricted by the nature of circumstances, the class of those able to read inscriptions in the Europe of the late Middle Ages was limited to a small intellectual elite. Though this grew in time, it was only very much later that it came to include the whole population. Hallmarks have nevertheless included inscriptions almost from the time of their first appearance, which even constituted their unique element, as was so in China from the third century B.C. and in the Moslem countries after the end of the seventh century. This does mean to say either all the users of money from the Maghreb to India and the Far East possessed reading skills, or that the intended audience of these markings was confined to the literate. Sometimes the coiners themselves, in both Latin and Arabic worlds, would be illiterates, making approximate reproductions of the written characters, and turning coins bearing pseudo-inscriptions. It would seem, therefore, that the inscription constituted one of the ingredients of the hallmark, which was thought of not only as the vehicle for a chosen message but also as a conventional sign that was indispensable to the functioning of money. Numerous coins finally, ancient, medieval, and modern alike, were furnished with symbols that were only destined for a restricted group of initiates. These include "secret dots," the initial of the mint, sometimes whole systems of whorled lines, single letters, mint emblems, and other markings permitting the identification on the one hand of the issuing mint and the real value of the coin, and on the other hand those responsible for its quality. These features, which help establish the identity of money, comprise a kind of discreetly mentioned sender's address.

It is thus in the course of long centuries that money, while fulfilling its economic and political functions, has also in its own way been a cultural force, either according to the intentions of its issuer or independently. For many people it was a first, if not only, contact with writing and was perhaps an encouragement to decipher it. For others it was the first work of art they had ever held in their hands, and one that some began to copy. No doubt, we should not overestimate this role; but nevertheless, though for a variety of reasons, this kind of production was often counterfeited, which fact notably enlarged the group of possible recipients of the message encoded in the stamp of the prototype coin.

The practice of imitating coins emerges in every age, above all in the most ancient, when legal protection of the symbol figuring on the stamp was either nonexistent or could only be enforced with great difficulty. Greek coins were imitated in numerous countries of the Near and Middle East, in Rome, Africa, and by the Celts. Byzantine ones were used as models for issues by the Ostrogoths, Visigoths, Vandals, and Franks, for the oldest Arabic, Ruthenian, Bulgarian, Serbian, and Venetian coins, and occasionally for German and even Danish coins. English pennies, pounds sterling, and then golden nobles were reproduced in various countries from Sweden and Russia to Portugal. Such examples can be multiplied ad infinitum, all the more so since there were successive generations of imitations which grew into whole systems, like the genealogical trees of ancient families with their numerous branches. Just as in genealogy, the archaic form of the type was sometimes astonishingly durable, while on other occasions it would undergo a gradual evolution, going into degeneration and imperceptibly arriving at a different form, new and original in appearance only. Thus a great part of the mass of iconographic motifs figuring in monetary hallmarks, especially those of distant times, can be reduced to a relatively modest number of archetypes from which they all derive.

The causes of these affinities and their often complex character were various: there were economic, political, ideological, or artistic forces at work, and sometimes simply chance. Certainly, the economic impetus is of primary importance, in other words: the issuer. He would wish to ensure for his own coinage the same role in the market played by its prototype. We thus are dealing with parasite coinage that makes its fortune at the expense of the model coinage already recognized as a medium of exchange and accepted onto the international market. It

was through economic motivation then, and not for artistic or religious reasons, that some hundred or so European mints decided to strike florins with the images of the fleur de lys and Saint John the Baptist, the patron saint of Florence. It was for the same reason that the crusaders struck coins in the name of Mohammed and with verses from the Koran, modelled upon the dinars of the neighbouring Arab countries. It was only upon the intervention of the Pope that these inscriptions were changed: to the detriment of the economic profit.

The lure of gain was an even more determinant force behind another category of coins which in every age would leap in like a pack of jackals behind the caravan of official issues. Counterfeiting represented a temptation to which not only clandestine forgers succumbed, working away in countless secret workshops, but even the representatives of the elites: knights, bishops, and princes. The art of the counterfeiter was to try to produce and put into circulation a coin whose external characteristics were almost identical with those of the original while its instrinsic value was altogether different. This procedure was only effective on the prior condition that the relevant official issues had already integrated into the economic structure of the state or society in question. Counterfeits thus in some way attest to the good standing of their prototypes; they also, in an unexpected way, fill in the gaps in our information on the functioning of a particular country's monetary economy. They furthermore entailed other historical consequences that go beyond the scope of economics.

Forgers would make their profit at the expense of the state and the whole of society; they were thus treated with particular severity both by the canons of the law and by public opinion, on a par with murderers, arsonists, and rapists. The great majority of statutes, from ancient times onwards, threatened them with the penalty of a particularly horrible death—by crucifixion, by burning at the stake, or by being boiled in a cauldron of water—or with some kind of mutilation to the arm, or banishment. Sometimes the populace itself would even mete out a summary execution; for this was not simply a question of prosecuting an economic abuse, but also of protecting the social fabric, a question of the state's prestige suffering an injury to its sovereign rights, of punishing the crime of high-treason.

As a youth, our old friend Diogenes of Sinope stepped into his father's shoes and became a forger after his example. According to the legend, his initial doubts as to the morality of such conduct were dispelled by the oracle of Pythia at Delphi: "It is better to forge money than the truth." While being artificial, this choice puts the worth of money on a rank with the most exalted moral values. We may see the same association of ideas in Dante, who places the forger in the last circle of Hell along with the branded liars, and not among the thieves and looters: "You lied with each bad florin"—he was told by a companion in misfortune, who thus summed up the essence of his crime. Alongside its other properties money represented a specific moral category, for it was a tangible realization of the notions of honesty and trust between men, or might equally well bear witness to the violation of these laws. This conviction, which has been inseparable from the phenomenon of money for twenty centuries, is expressed in the inscription FIDEI PU-BLICAE PIGNUS—a pledge of public good faith—which appeared around the rim of the royal Polish thalers of the second half of the seventeenth century.

The long history of money represents a process in which there are many elements. It is only at first sight that it seems the subject of a narrow specialization, closeted within the impervious walls of the numismatist's sanctum. In reality it can, and should, be of help to all those who study economic and political history, the history of art, of ideas, religions, and cultures, the development of social patterns, and international relations. To all those, in fact, who search amid the dense undergrowth of universal history for those enduring elements