THE LANGUAGE OF CHARACTER

An Introduction to a Poetics of Monetary Inscriptions

I would have some body put the Muses under a kind of contribution to furnish out whatever they have in them that bears any relation to Coins. - Addison, Dialogue upon the Usefulness of Ancient Medals

INSCRIPTION AND INSCRIBED

Heraclitus's study of signs (sēmata) deals with coins as well as words.¹ Numismatics, he knew, concerns both economics and esthetics.² The study of economic and verbal symbolization, and of the relationship between them, begins at the mint, where Greek poet-coinmakers considered the relationship between the writing on coins and that to which the writing refers.

¹ See Heraclitus, frag. 93, in Hermann Diels, Die Fragmente der Vorsokratiker, 5th ed. (Berlin, 1934) with additions by Walter Kranz. (Epigraph to the Introduction, above.)

² Marc Bloch, for example, deals with economic concerns (“The Problem of Gold in the Middle Ages,” in Land and Work in Medieval Europe [Berkeley and Los Angeles, 1967]; originally published in Annales d'Histoire Sociale 5 [1933]: 7–16).

On esthetic concerns, see André Malraux (Psychologie de l'art, 3 vols. [Geneva, 1947–49], vol. 3: La Monnaie de l'absolu, p. 192), who aims to reintegrate Celtic coinage into the general history of art. “Leur nature [i.e., celle des monnaies celtiques dites gauloises], leurs dimensions, semblaient les exclure du domaine de l'art, où l'agrandissement photographique les fait entrer.” Malraux's essay is an analysis of the “régession invincible vers le signe” (p. 193) in the designs of Celtic coinage, of which the ideogram of the coin of Veliocassus is the best example. See also Cornelius Vermeule, Numismatic Art in America (Cambridge, Mass., 1971); C. H. V. Sutherland, Art in Coinage (New York, 1956); and Kurt Regling, Die Antike Münze als Kunstwerk (Berlin, 1924).
Coins were the first widely circulating publications or impressions in history. The charakte (upper die used by the coinmaker or impressed mark on the coin) and the coin preceded by two millennia the printing press and the printed page (Plate 1). The writing on coins—"vocal monuments of antiquity"—frequently referred to magistrates, political leaders, cities, mints, and denominations; dates and places of minting; and diemakers. It could also refer to (a) social events or conventions; (b) some other impression in the coin (the type, for instance); (c) the material on which the writing appeared (a piece of metal); (d) the coin, into which the writing helped to transform the material (c); (e) the monetary system of which the coin (d) was a token; and so on.

3. One of the first to recognize the importance of the analogy between the mint and the printing press was the economist and professional etymologist, A.R.J. Turgot. "Que les moindres progres sont lents en tout genre! Depuis deux mille ans les medailles presentent tous les yeux des caracteres imprimes sur l'airain et, apres tant de siecles, un particulier obscur soupconne qu'on peut en imprimer sur le papier" (A. R. J. Turgot, "Tableau philosophique des progres successifs de l'esprit humain" (1750) in Ecris economiques, intro. B. Cazes [Paris, 1970], p. 57).

4. John Evelyn (Numismata [London, 1697]) wrote that coins are "the most lasting and (give me leave to call them) vocal Monuments of Antiquity" (Coins and Vases of Arthur Stone Dewing, A Memorial Exhibition [March-April 1971], The Fogg Art Museum, Harvard University, Cambridge, Mass.).


In most inscriptions, including those on the monuments of Babylon, the "inscriptions" of Wordsworth, journalistic ballads, and monetary inscriptions, notation of date and place is important. (See Geoffrey Hartman, "Wordsworth, Inscriptions, and Romantic Poetry," in Beyond Formalism [New Haven, 1970]), esp. pp. 208 ff.)

The names of artists were rarely important visual features on coins. David Bowers (Coins and Collectors [New York, 1964], p. 83) suggests that rulers did not wish such signatures to conflict with their own heraldic devices. However, Cimon sometimes signed both obverse and reverse of the coins he minted (Plate 2). Euaenetus worked for more than one state (Catana and Syracuse) and had no special allegiance to the rulers he served (Plate 3), and Publius Maenius Antiacus engraved a signature larger than the name of the Emperor (Plate 4).

Signed coins are usually of very high artistic quality (as with Eucleidas's famous issue, Plate 5). Their makers seem aware of their "poetic" character. For example, on a coin issued at Clazomenae, "Theodotus epoie" (Theodotus made it) is inscribed to the left of the face of Apollo. In this instance poiesis can refer to both die-making and to word-writing (Plate 6). (Cf. n. 20, below, on Bowes's heraldic device.)

The material or commodity (c) on which coin-writing appears is, unlike Gutenberg's paper, an especially valuable one. The pictorial or verbal impression in this material qualitatively changes it (esthetically) from a shapeless piece of metal into a sculptured ingot and, more significantly, qualitatively changes it (economically) from a mere commodity into a coin or token (d) of money (e). The sometimes beautiful impressions on ingots transform them into always useful tokens. This transformation distinguishes minting from other kinds of sculpturing (even those that fashion equally valuable metals) and distinguishes monetary inscription from other kinds of inscription.

"The true inscription," writes Gotthold Lessing in Über das Epigramm, "is not to be thought of apart from that whereon it stands or might stand." According to Lessing's definition, we cannot properly consider an inscription (for example, the writing on a coin) without considering the material or thing (for example, an ingot) on which it stands. Yet some inscriptions (like Wordsworth's "Lines Left upon a Seat in a Yew-Tree") are written on one material but might also stand on some other material (a seat in a yew-tree). To determine whether the writing on some coins might more suitably appear elsewhere is difficult. It is unclear, for example, in what ways coins (nomismata) constitute the proper material on which to write about social conventions (nomoi) (a). However, there are numismatic writings that are

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7. *Utile dulce* is a common coin motto (Mosher, "Coin Mottoes").
9. Cf. the paper-money inscription in Faust 2 (6057 ff.).
10. Metal ingots, like postage stamps, are more suitable than some things for inscribing messages about social events (such as the Olympic games) and conventions or customs, but there is not always a necessary or proper connection between this medium and its messages. A similar difficulty arises in applying Lessing's definition, owing to his reliance on the particularity of the thing to which reference is made. "How specific, how occasional, must the object of the epigram be? If too general and abstract, does not the epigram become an apothegm or a maxim?" (Hudson, *Epigram*, p. 12).
clearly appropriate where they are inscribed. Inscriptions that refer to items (c), (d), and (e) can be considered to be monetary inscriptions *par excellence*. Whether an inscription refers to item (c), (d), or (e), it is evident that it should be thought of together with that into which it is impressed (that is, an ingot [c], which the inscription transforms into a coin or token [d] of the monetary system [e]).

The early poet-coinmakers, who impressed verbal symbols into monetary symbols, wrote about coins, and, as we shall see, they sometimes personified coins so that the coins could speak about themselves. It was ambiguous to these coinmakers whether a monetary inscription should refer to an ingot (c), a coin (d), or the monetary system (e). The ambiguity arises out of an ideological as well as aesthetic confusion about the semiology of coins that marks the beginning of monetary theory.11

The **Sêma**: The Beginning of Monetary Theory

The first known inscribed coin (Plate 7) was minted in Ephesus around 600 B.C. On the reverse was punched (in reverse order): "Phanéos eimí sêma" (I am the sêma of Phanos). The inscription on the reverse calls the coin the sêma or token of the man Phanos, or it calls

11. The relationship between a numismatic inscription and the ingots inscribed is like that between a numeral or "number" (Zahl) and the group or "number" (Anzahl) of things represented or homogenized by it. A coin, like a number, is both a symbol and a thing: as a monetary unit it has symbolical properties, as has a numeral; as an ingot it has material properties, as have all things. The similarity suggests how minting may have affected Greek number theory and mathematical theory of ideas. (Cf. Chapter 1, "Hypothesis and Hypothecation," on *kermatidzenie* and *diairesis*, and Chapter 1, n. 107 on the comparison between a unit [monad] and a drachma.)

the figure of a stag impressed on the obverse the sêma, or heraldic badge of the goddess Artemis. At the same time, the inscription helps to transform the ingot into a sêma, or coin. Phanēs eimi sêma is twice semiotic: it is a sêma on a sêma.

An inscription on a coin of Gortyna shows that the sêma to which the inscription of Ephesus refers may be the coin as well as the type: "This is the paima (striking) of the people of Gortyna" (Plate 8). Paima (a variant of komma) refers to the coin itself and not to the type (a lion). On the coins of Ephesus and Gortyna, the inscription refers to the coin itself, which is explained as a sêma or paima.

Ancient seals were often engraved with messages like those on the coins just mentioned. One gem, for example, is engraved "I am the sêma of Thersis. Open me not" (Plate 9). This inscription, which refers to a seal as sêma, is like that on the coin of Ephesus. At the mint (sêmantērion) of Ephesus only a part of the political formulas of such seals and signet rings (sêmeia) was adopted, since the injunction against opening (as on a letter or vase) can hardly apply directly to a coin. Unlike a sealed letter, a sealed ingot is unopenable, or infinitely circulating. Its valuable contents or powers to exchange are "closed," or made "invisible," to would-be seers. (That God, alone and universal, is "opener," is thus the theme of many monetary legends. As we shall see, God, like money, is supposed to be a universal measure or equivalent.)

A signet ring is put to a new use when it mints coins. The growing consciousness of this new use was the beginning of that semiology, or science of signs, that is monetary theory.

12. Phanos may be a variant of "phaenō, a possible epithet of Artemis, 'the bright one,' whose association with the deer is well known." It is more likely, however, that by Phanos "an ordinary human being is meant, . . . a potentate or 'tyrant' either at Halicarnassus or at Ephesus, . . . the stag being a common type at Ephesus" (George MacDonald, Coin Types [Glasgow, 1905; reprint ed., Chicago, 1969], p. 51). Phanos probably is a man and not (as others have thought) a city.

13. Cf. Seltman, Greek Coins, p. 28. Other analogues to the inscription on the coin of Ephesus include a bronze weight and coins of Thrace and Metapontum (Charles Newton, "On an Electrum Stater, Possibly of Ephesus," Numismatic Chronicle [1870], p. 238) and some Byzantine coins (MacDonald, Coin Types, p. 242).


15. Aperiet Dominus thesaurum suum (The Lord will open his treasures). Aperiet cumcis (He has opened to all). Aperuit cunctia apostolor princeps (The Prince of the apostles has opened to all). Aperuit et clausit (He opened it and he closed it).

16. Sêmeion is used by Greek writers to refer to the stamp (charaktēr) on a coin as a symbol of its size and weight. See Aristotle, Pol. 1257a.
Conundrum: The Canting Badge

Into the surfaces of many of the earliest coins were impressed images intended to suggest the sounds of words not actually imprinted. These pictures, which seem to recall an oral or hieroglyphic culture, are usually called *types parlants*, canting badges, or *redende Zeichen*. Although they make writing itself unnecessary, they often depend (like conundrums) upon language and its homonyms. The sound of the name of the image sculpted into the surface of the coin is like that of the name of the issuing city. This sound yokes together two signifiés: the type and the city. It is often ambiguous what kind of linguistic relation exists between them. In the case of the coins of Selinus (Plate 10) and Rhodes (Plate 11), the types are plants that grow abundantly in the areas of their issuing cities. From these plants, as folk etymology might teach us, the cities were named. (Moreover, the types represent the surrounding environment of the city, and hence perhaps the city itself, without the need of intermediating language.) A coin (*nomisma*), however, is as conventional (nomic) as language and its puns. Many canting badges took advantage of purely linguistic or conventional homonymic relations between type and city. They are punning badges that purposely do not rely on images of things native to the region of the issuing city. A coin of Melos (Plate 12), for example, employs such a pun: *melon* means apple, but apples did not grow in the area of Melos. Similarly, the coins of Euboea (Plate 13), which means "rich in cattle," and those of Side (Plate 14), which means "pomegranate," are conventional canting badges. The unwritten puns of such coins play the same role with regard to the two signifiés they yoke together (type and city) that the coins (into which they are impressed) play with regard to the commodities they exchange on the basis of a conventional measure.

Most early canting badges were not impressed with inscriptions that helped the reader interpret the type. In a canting badge of Phocaea (Plate 15), however, the letter ϕ is such an inscription. It is the first letter of the name of the issuing city, Phocaea (*Phōkaia*), and also the first letter of the type, a seal, (*phōkē*), that appeared on earlier canting badges of Phocaea without any inscription. On this coin, then, the letter ϕ serves the same purpose of linking type and city as did the unwritten puns on the canting badges previously considered (Plates 12-14). The relationship between the widespread use of writing and the development of sophisticated numismatic semiology,

which this coin might suggest, is not part of the present inquiry. The short inscription of this coin, however, suggests a historical transition from the ordinary canting badge with no inscription to the long punning inscriptions that often explain much later coin types.

One coin with such a canting badge and long explanatory inscription is the fiorino d'oro (florin) of Florence (Plate 16). "There was no motto on the [original] fiorino, but only a lily or flower blossom (fiore) to indicate the city of Florence (Firenze)." The silver piece issued after the fiorino d'oro, however, did have an explanatory running Leonine hexameter: "Det tibi florere, Christus, Florentiam vere." The Florentines developed a whole series of short epigraphs that imitate the canting badge. Such poems were widely circulated as the first printed verse poems in the West.

The Canting Ducat

Venetian ducats minted after 1284 bear an inscription that surrounds a mandorla of stars. Inside the stars is the figure of Christ, to whom the inscription seems to be addressed.

Impression: SIT.T.XRE.DAT.Q.TV.REGIS.ISTE.DUCAT
Reading: Sit tibi Christe datus, quem tu regis, iste ducatus
Translation: Let this duchy, which thou rulest, be dedicated to thee, O Christ

(Plate 17)

An unscientific etymology based on a pun has it that the name of the coin is derived from the last word of the legend. "The word ducat was first applied to the silver grossi of Venice before any appearance in monetary [inscriptions]. The poet of the first inscribed ducat (1284) was aware of the linguistic affiliation of ducatus (the political state) with ducat, and of the way in which the type (a doge [dux] pictured on the coin) made the ducat a canting badge. Ducatus is the

19. It is unclear whether fiore and Florence are related by folk or scientific etymology. See MacDonald, Coin Types, pp. 254 ff.
20. Canting badges also play an important role in the Renaissance. In England, for example, "Sir Martin Bowes, master of the mint under Henry VII and Edward VI, sometimes placed a bow as a symbol on coins for which he was responsible" (MacDonald, Coin Types, p. 257). The canting badges of Granada portrayed a pomegranate (as did those of Side).
21. MacDonald, Coin Types, p. 254. Similar false etymologies exist for the noble and the angel.
culmination of the sounds of datus (the last word of the first phrase) and regis (the last word of the second phrase). As ducatus follows iste (the word that modifies it), so datus follows Christe (to whom the ducatus is given). The coin maker seems to put the words of his inscription into the mouth of the doge (dux), who kneels before Saint Mark. The doge offers to Christ either his duchy or his ducat or both. Christ had warned against offering Him the coins of secular political rulers.23 To many pseudosecularized men, however, money appeared as abstract and limitless as the holy grail and as infinitely desirable as the grace of God. (Aristotle comments that sometimes money and grace may be infinitely desired in similar ways.)24 Perhaps the supposedly merciful merchants of Venice did not so much wish to give ducats to God as they wished Him to give (ducats of) grace to them. The posture of the doge, perhaps, is like that of the devil when he offered Christ all the riches of the material world with the words "tibi dabo."25 Ducat is the gift that the dux would give to Christ; grace is that which he would receive from Him. "Pro gratia gratis" and "Dat accipit reddit" are favorite Christian mottoes for coins.26

The Noble

One of the great numismatists, John Ruskin, writes that the English noble is "the most important in all English history, having been struck to commemorate the first great naval victory over the French [at Sluys] on Midsummer day, June 24th, 1340."27 Ruskin finds the motto on the noble ambiguous.

Impression: I H C AUTEM TRANSIENS PER MEDIUM ILLORUM IBAT
Translation: He, however, passed through the middle of them

(Plate 18)

He interprets this motto (from Luke 4) by clever references to Sir Edward Creasy's History of England, in which a naval victory at Sluys is chronicled.

23. See Chapter 2, "Literature about Coins."
25. "All this dominion will I give to you and the glory that goes with it" (Luke 4.6).
26. Mosher, "Coin Mottoes."
27. The Works of John Ruskin, ed. E. T. Cook and A. Wedderburn, 39 vols. (London, 1903-12), 30: 272-77. Ruskin is fond of showing the supposed relationship between monetary inscriptions and the political events that inspired them. See John Ruskin, "Catalogue of Coins in St. George's Museum" (Works, 30: 268 ff.), where he interprets inscriptions as symptoms of political and economic reality, but does not consider that the coin maker was aware of this role.
Wroth proposes a similar passage from Thomas de Burton's chronicle of the battle to explain the popular legend.

Quod videns Edwardus rex, ordine disposto per medium ipsorum transibat, et de illis victoriham... adeptus est. Quapropter ipse rex Edwardus impressionem monetae suae aureae fecerat commutari. Unde in suo nobi... ex una ejus parte navem cum rege armato in eo contento, regio nomine circumscripto, et ex altera ejus parte crucem imprimi constituenis, hanc circumscriptionem adhibuit "Jesus autem transiens per medium illorum ibat." 28

The king passed through his enemies just as Jesus passed through his enemies. If this were the only interpretation of the legend, the inscription would not bear the relation to that on which it is impressed that makes it a true monetary inscription. The inscription, however, was supposed to have a power in its own right apart from its impression on Edward's coins. It was commonly impressed into many magic objects of the fourteenth century and especially into rings. 29 A fourteenth-century version of the ring of Gyges, for example, was impressed with the same words as the noble: "An elegant method [to become invisible] is to wear the Ring of Gyges on your finger; you can then become visible or invisible at will simply by turning the stone inward or outward... Round the stone must be engraved the words, 'Jesus passant par le milieu d'eux s'en allait.' You must put the ring on your finger, and if you look at yourself in a mirror and cannot see the ring it is a sure sign that it has been successfully manufactured." 30 At the battle of Sluys, the king passed through his enemies. He was as invisible as Plato's Gyges, who had a ring that made him invisible and who was said to have been the first minter of coins.

Longer Monetary Inscriptions

Speculation such as that about nobles is not necessary to understand most monetary inscriptions, which state explicitly their relation to that on which they are impressed. Sometimes the topic is the monetary system: "Sans changer" (Without changing) or "Dedit pig-

29. The quote from Luke is known "as the inscription of a gold ring of the fourteenth century, found at Montpensier in Auvergne;... [as] occurring in treatises of alchemy;... [as] the text carved upon the wooden front of a druggist's shop... attached to a house of the Templars in Toledo;... [as being] mentioned in the well-known passage of Maundeville [*Travels*, ch. 10]" (ibid).
nus” (He has given a pledge).\textsuperscript{31} The subject can be the manufacture of money, as when coins explain pictorially or verbally their own minting.\textsuperscript{32} Sometimes the theme is wealth: “Die menschen der welt trachtn also nach gelt” (The men of the world aim thus for money), or “Crescite et multiplicamini” (Increase and multiply).\textsuperscript{33} Often the topic may be the relationship between the coin as commodity and the coin as medium of exchange: “Non aes sed aere” (Not money, but the things it will buy), or “Det klipperne yder vor bergmand underyder vyadhytten da gider af mynter vinyder” (What the mountains hide the miner brings up; from that we get money for our use).\textsuperscript{34}

Among the longer monetary inscriptions are the legends in verse (usually distich) published on Muslim coins. The topics of these inscriptions often include coin and money.

To the Shah Jahangin belongs the whirligig (circle or passing) of time; In Agra by his name gold shines brightly: So long as the pomp (ceremony or ritual) of the Five Guards (the five daily prayers) lasts in the world. May the stamp of his Five Muhrs (stamps) be current.\textsuperscript{35}

The only other mark on this riddling coin is the number 5. The reader must guess what unit is being numbered.

Minting itself is an important topic in many Persian monetary inscriptions.

I make madness till on my head a tumult (noise) falls. Coin I strike on metal (gold), till its master (owner) be found.\textsuperscript{36}

This legend, beautiful and riddling, suggests the full potential of poems on coins.

Similar monetary inscriptions include the following:

Since on my soul I struck the stamp of Ali’s love, The world obeyed my rule by grace of God above.\textsuperscript{37}

\textsuperscript{31} Mosher, “Coin Mottoes.”
\textsuperscript{32} A coin of Paestum, for example, illustrates pictorially the process of coin manufacture. (Cf. MacDonald, Coin Types, p. 4.)
\textsuperscript{33} Mosher, “Coin Mottoes.”
\textsuperscript{34} Ibid.
\textsuperscript{36} Coin of Muhummad Jan. Codrington, Musalman Numismatics, p. 106.
\textsuperscript{37} Coin of Safi II, Sulaiman (Persia). Ibid., p. 96.
Ashraf laid hold on majesty;  
Let his coin's legend read "Requited by unright."\textsuperscript{38}

Silver and gold through all the world have now become the moon and sun,  
Thanks to the true Imam's imprint, the Age's Lord (the rightful one).\textsuperscript{39}

The order proceeded from the Incomparable Creator to Ahmad the king:  
"Strike coins in silver and gold from the ascension of Pisces up to the moon."\textsuperscript{40}

The revolution (of the heavens) brings gold and silver from the sun and moon,  
that it may make on its face the impression of the coinage of Taimur Shah.\textsuperscript{41}

The explicit topic of these lengthy inscriptions is the coined money of  
which they are part and into which they are impressed. These widely  
published and circulated verses are about and on reverse and obverse.

**LETTER AND LETTERED**

One problem facing Muslim and other inscribers of coins is the  
small number of words to which they are limited by technique, space,  
and state regulations.\textsuperscript{42} Attempts to overcome spatial limitations led

\textsuperscript{38}. Coin of Ashraf (Persia). Ibid., p. 98.
\textsuperscript{40}. Coin of Ahmad Shah (Duranni). Ibid., p. 102.
\textsuperscript{41}. Coin of Taimur (Persia). Ibid.
\textsuperscript{42}. "Consider the limitations and difficulties that beset the [American] designer. Artistic rendering and a super-abundance of lettering do not go hand in hand towards the best results. Our artists at the start are handicapped by having to place on the coin 'United States of America,' 'E Pluribus Unum,' 'Liberty,' 'In God We Trust,' the date, and the denomination'" ("The New Dime," in Selections from the Numismatist, p. 155. Cited by Vermeule, Numismatic Art in America, pp. 13-14).

With the development of printed paper monies, of course, long and elaborate inscriptions were made possible. The difference between these impressed objects (economically valuable gold and economically worthless paper) made one especially serious concern of paper-money inscriptions the explanation and prohibition of counterfeiting. Persian paper money contemporaneous with that described by Marco Polo in China (see Ch. 1, n. 10) and bearing lengthy inscriptions is described by Colonel Sir Henry Yule (The Book of Ser Marco Polo, ed. and trans. Yule [London, 1929], p. 428n). Among the first modern paper monies is the famous issue of Georgia (1769), with an acrostic puzzle: "At the base of the note the comical counterfeiting warning is upside down, the words read from right to left like Hebrew, the words are in both English and Latin, and the word order is scrambled. Reconstructed, the warning reads "TO COUNTERFEIT IS
to the employment of symbolic dots and dashes, impressions into the perimeters or edges of coins, canting badges, and calligraphy. Calligraphy, which would make beautiful designs out of letters of the alphabet and the words they compose, appears particularly suited to coin-writing because coins and letters are similar to each other and lend themselves to similar kinds of interpretation. Both coins and letters may be understood as symbols and also as material things: coins, for example, as commodities interpreted apart from any "symbolic" mediation of economic exchange, and letters as designs without phonetic meaning.

Theorists of calligraphy, such as Emilio Marinetti, believe that the fetishization of letters into designs is the "liberation of the letter" that the spatialist poets defended. Their analogy from coin to letter is misleading because commodity and design are fundamentally different. Yet such an analogy, and the corresponding theory of letter as design (image) and also as symbol, influenced numismatic calligraphers who impress well-designed literal symbols (letters) into the symbols of the economic exchange system (coins). In numismatic calligraphy, lettering may seem to imitate on a coin, which is a commodity, the objectification or fetishization of the coin as mere symbol.

Religion also helps to explain widespread calligraphy on coins. Calligraphy enables Muslim minters, many of whom are prohibited from making pictures, to produce beautiful and lengthy inscriptions. For example, in Persia, the obverse of a dinar of the seventh

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43. "The 'Tombac' nickel of 1943 had an arrangement of Morse Code dots and dashes around the perimeter, instead of the usual beading or denticles. Decoded, the dots and dashes read: WE WIN WHEN WE WORK WILLINGLY" (Bowers, Coins and Collectors, p. 198). Warnings to counterfeiters often were printed in the perimeter or edge of coins. One well-known coin, for example, reads: RODAT Avara manus ne me falsificans (The greedy hand cannot betray by clipping me).

44. Massin (Letter and Image, trans. Caroline Hill and Vivienne Menkes [New York, 1970], p. 19) writes that "the essential job of the letter is to be as unobtrusive as possible." Letters, he suggests, are hardly sensible (material). "Perceptible, but invisible, silent, and yet a mental projection of speech, a letter has only the weight of ink" (p. 19). Similarly it might be argued that a coin as money is a weightless or nonmaterial symbol. Massin also writes that "one has only to pause in the slightly illogical process of reading, dissect the construction of the sentence and untie the links of a word, to get at the letters" (ibid.). By such dissection, the letter may be fetishized as mere design. Similarly, one has only to pause in the process of economic exchange, sale, and purchase of commodities to get at the commodity aspect of money.

45. Ibid.

46. "The Muhammadan coinage, with some few exceptions, avoids, in accordance with religious tenets, the representation of living objects or indeed of any objects at all..."
century fitted circles of writing (adapted from the Koran) to a square. "There is no god but Allah alone. He has no partner. Muhammad is the Apostle of Allah whom He sent with guidance and the religion of truth that He may make it victorious over every other religion." Square calligraphy (Plate 19), circular calligraphy (Plate 20), monogrammatization (Plate 21), and simple script (Plate 22) played the principle roles in Muslim coinage.

Calligraphy on European coins is rare. Nevertheless, such coins do appear from time to time, during the reigns of Charlemagne (Plate 23) and, as Ruskin notes, William the Conqueror. In 1643, moreover, the artist Nicholas Briot minted a famous calligraphic coin (Plate 24). "The reverse of these noble coins," writes C. H. V. Sutherland, "is movement pure and simple: by a conception unique in English monetary history a banner floats, fold upon fold, across the field of the coin, proclaiming the king’s adherence to the Protestant religion, the laws of England and the liberty of Parliament. It is doubtful if English designers have ever achieved anything more fluid or more original." Briot’s coin, however, is not entirely calligraphic, since the banner is more important to the design than the letters that fill it.

Calligraphic design and similar techniques would eliminate that conflict between design and lettering on which John Ruskin based his theory of numismatics. In Modern Painters, he emphasizes the importance of images for Greek minters and de-emphasizes that of letters.


47. Gold dinar of Umayyad Caliphate (696-97 A.D.), trans. Carson, Coins of the World, p. 478. Other purely religious inscriptions are recorded by Codrington (Musalman Numismatics), for example: "Allah is One, Allah is the Eternal; He begets not, neither is he begotten."


Philip Grierson ("Note on the Stamping of Coins," in History of Technology, ed. Charles Singer, E. J. Holmyard, and A. R. Hall, 5 vols. [Oxford, 1954-58] 2: 490) points to technical aspects of the minting process that necessarily affected the reproduction of letters. He suggests that "in Carolingian times... both device and letters could be formed by a limited range of punches capable of producing straight lines, large and small crescents and curves, annulets, pellets, triangles, and so forth." He also remarks that "the lettering on the coins of eleventh- and twelfth-century France was often produced by the use of little more than a small selection of wedge-shaped punches, which yielded patterns that bore only the vaguest resemblance to the letters they were intended to represent."

49. Sutherland, Art in Coinage, p. 182.
He seeks to explain why "in the finest Greek coins the letters of the inscriptions are purposely coarse and rude, while the relievi are wrought with inestimable care" (7: 356). Ruskin's first observation (about the Greek sculptor's unwillingness to engage in difficult and time-consuming work) is hardly a convincing explanation of the supposed crudeness of letters on Greek coins. His second explanation of the supposed crudeness of the letters is more convincing.

"Letters are always ugly things..." Titian often wanted a certain quantity of ugliness to oppose his beauty with, as a certain quantity of black to oppose his colour. He could regulate the size and quantity of inscription as he liked; and, therefore, made it as neat—that is, as effectively ugly—as possible. But the Greek [sculptor of coins] could not regulate either size or quantity of inscription. Legible it must be, to common eyes, and contain an assigned group of words. He had more ugliness than he wanted, or could endure. There was nothing for it but to make the letters themselves rugged and picturesque; to give them, that is, a certain quality of organic variety. (7: 356)

Ruskin suggests that the Greek coin maker can make something unnatural or inorganic (letters) appear natural or organic. A mere symbol of a sound, he says, can look like an organ. In "Athena Ergane" (in The Queen of the Air), Ruskin explains the verbal unimportance and organic importance of the letters in the inscription of "The Hercules of Camarina" (Plate 25).

Look, for instance, at the inscription in front of this Hercules of the name of the town—Camarina. You can't read it, even though you may know Greek, without some pains; for the sculptor knew well enough that it mattered very little whether you read it or not, for the Camarina Hercules could tell his own story; but what did above all things matter was, that no K or A or M should come in a wrong place with respect to the outline of the head, and divert the eye from it, or spoil any of its lines. So the whole inscription is thrown into a sweeping curve of gradually diminishing size, continuing from the lion's paws, round the neck, up to the forehead, and answering a decorative purpose as completely as the curls of the mane opposite. (19: 415)

Of course, letters (however crudely made) play a fundamental role in the design of many coins. In an "owl" of Athens (Plate 26), the eyes...

50. "In an English coin, the letters are the best done, and the whole is unredeemably vulgar. In a picture of Titian's, an inserted inscription will be complete in the lettering, as all the rest is; because it costs Titian very little more trouble to draw rightly than wrongly, and in him, therefore, impatience with the letters would be vulgar, as in the Greek sculptor of the coin, patience would have been. For the engraving of a letter accurately is difficult work, and his time must have been unworthily thrown away" (Ruskin, Works, 7:356).
(which see at night, when things are invisible to other animals) are massed on the coin like two letters: 00. Plain letters become beautiful eyes.

In his discussion of "The Hercules of Camarina," Ruskin argues that the legibility of numismatic inscriptions is unimportant to the art of minting. Elsewhere, however, he asserts that the esthetics of a great coin (including its literary aspect) must be as pure as its metal. Metallic purity is costly "since there is a loss by wear" but "if a nation can afford to pay for the loyal noise and fancies in fire [salutes and fireworks], it may also, and much more rationally, for loyal truth and beauty in its circulating signs of wealth" (28: 430–31). In Fors Clavigera Ruskin offers a detailed proposal, for coins for the Companions of Saint George, that includes consideration of the inscription "Sit Splendor" from Psalm 90 (28: 430–31). Part of the "truth and beauty" of this inscription lies in its relation to other impressions in the coin and to Ruskin's crucial definition of the work of the Companions and their "Economy of Life" (28: 541). The seriousness with which Ruskin considers his own inscription belies his argument that inscriptions are necessarily unimportant and "irredeemably vulgar" (7: 356). "Sit splendor" plays no small part in his thinking, and he intended his coin to have literary and philosophical beauty. The relation that Ruskin notices, between the truth and beauty of an inscription and the purity of the material upon which it is inscribed (28: 430–31), aids in understanding both his proposed coinage and the "Economy of Life" of which it is the visible and legible symbol.

SCULPTURE AND SCULPTED

A monetary inscription can be defined by its relationship to that upon which it is inscribed and together with which it forms an integral, whole coin. This coin is a work of sculpture, whose economic value is defined by the supposed commodity value of the material sculpted and whose beauty derives in part from its formal relationship to the physical properties of the material sculpted. The form or architecture of coins is important to the specific study of monetary inscriptions only insofar as the inscription itself suggests consideration of the material problems of design, value, or meaning. The unique shape of some coins, however, does make their architecture significant. For example, incuse coins (Plates 27–29) are different in appearance from any other Greek money: "Each piece displayed in relief the state's blazon and some letters of its name, all within a
round cable border, and each piece had on its reverse side the identical picture but sunk in intaglio. 

It has been suggested that there was a philosophic basis for the form of incuse coins. Manufactured by stamping obverse and reverse with one punch (die) at one time, incuse coins are associated with Pythagoras of Samos, the city where hollowcasting was invented. A student of metalwork, Pythagoras was the son of Mnesarchos, the stone engraver. During the reign of the tyrant Polycrates, Pythagoras left his home for Croton in Sicily, where he "made incuse coinage, introduced a philosophy, and founded Pythagorean brotherhoods," which minted the only incuse coins. Historians argue that the Pythagoreans represented the "new class of rich industrialists and merchants." The purpose of the incuse form cannot be deduced from this observation alone, but rather must be inferred from Pythagorean philosophy itself. George Thomson writes that "the Pythagoreans believed that the upper and lower parts of the universe stood in the same relation to the centre, only reversed. Evidently, therefore, ... they were intended to symbolize the Pythagorean unity of opposites." This interpretation of Pythagorean coinage is difficult to substantiate. Ideological significance, however, can properly be attributed to different kinds of minting processes. Pythagorean philosophers are only the first of many political thinkers to become involved in minting. Hume, Locke, Copernicus, Newton, and Franklin all interpret the representational system of wealth. Pythagoras, too, was a philosopher-minter interested in the relation of form—the shape of a coin—to that which is formed—the metallic commodity—and the relation of the money form to the philosophic One.

The architecture of incuse coins unites or doubles obverse and re-

52. Seltman, *Book of Greek Coins*, p. 11. Incuse coins were probably first minted in Croton (plate 27) about the same as the arrival of Pythagoras. The end of the minting of incuse coins in the middle of the fifth century corresponds to the liquidation of the Pythagorean brotherhood.
54. Ibid., p. 252; cf. Seltman, *Greek Coins*.
55. See, for example, Franklin's famous *fugio* coins.
56. The analogy between philosophical being and the money form helps to explain further a general relationship between coinage and the Pythagoreans' philosophy. The Pythagoreans established special conventions or laws, such as the ordinance against wearing signet rings. (See G. S. Kirk and J. E. Raven, *The Presocratic Philosophers* [Cambridge, 1971], p. 227.)
verse. Verbal inscriptions, like the incuse technique, can also unite (or at least consciously relate) obverse and reverse. In one early and very long Persian monetary poem, for example, "one verse of the couplet is on the obverse and the other on the reverse of the coin: the poem begins at the top of the obverse and continues at the bottom of the reverse." On the reverse are the words PARTHENÊSOI POLUAÎNE, which Jean Sabatier translates: "En ton honneur, Vierge très-glorieuse." The inscription probably refers to the picture of the Virgin holding the infant Christ in her arms. On the obverse are the words OS ELPÎKE PANTA KATORTHOI, which Sabatier translates: "Qui espère en toi rôussit en tout." These words are written around the figure of the emperor, a cross in his right hand and a goblet surmounted by a smaller cross in his left hand. George MacDonald, however, translates the two inscriptions together, reading the reverse first and the obverse second: "Whoso hath set his hopes on thee, most glorious Virgin, he succeedeth in all things." The inscriptions on obverse and reverse being intelligible both together (as in the case of the Persian coin) and separately, the two sides of this coin are united architecturally and also verbally. Architectural design is thus integrated with inscription.

COINS ABOUT LITERATURE AND LITERATURE ABOUT COINS

The consideration of the relations of coins and numismatic semiology to literature includes two studies I have not yet mentioned: that of coins depicting or quoting works of literature and that of works of literature interpreting coins.

57. Oftentimes coin makers present double images not by relating obverse and reverse but rather by conflating two opposing images on a single verse. See, for example, the silver drachm of Istrus (fourth century B.C.), showing two heads, one upside down and the other right side up (Ancient Coins, ed. G.M.A. Hanfmann and M. S. Balmuth, The Fogg Art Museum, Harvard University [Cambridge, Mass., 1956], Plate 19).
58. Codrington, Musulman Numismatics, p. 95. (Cf. similar coins discussed by Codrington.)
Coins about Literature

In Addison’s Dialogue upon the Usefulness of Ancient Medals, Philander argues that “there is a great affinity between Coins and Poetry, and that your Medallist and Critic are much nearer related than the world generally imagines.” The kind of relation between verse and reverse that Philander suggests is based on a mistaken belief, that “a man may see a metaphor or an allegory in picture as well as read them in a description” (p. 448), and that the arts are merely “Comments on each other” (p. 449). “When . . . I confront a Medal with a Verse,” says Philander, “I only shew you the same design executed by different hands, and appeal from one matter to another of the same age and taste” (p. 448). Philander counts coins as he accounts for literature: “I have by me a sort of poetical cash, which I fancy I could count over to you in Latin and Greek verse” (p. 450). This relation between coins and poems is nevertheless useful to the historian. “A reverse often clears up the passage of an old poet, as the poet often serves to unriddle a reverse” (p. 446). And indeed, many students of coins do little more than unravel reverses by referring to verses (see Plate 31 and Aeschylus, Agamemnon, v.110 ff.). Other characters in Addison’s dialogue, however, mock the “learned avarice” (p. 436) and “Medallic eloquence” (p. 438) of Philander, who charges his “Coins with more uses than they can bear.” Their arguments are directed only against the accuracy of his historical explications des textes. They should have been aimed also against the assumed identity of the designs of medal and verse.

In the Laokoon, Lessing argues that the assumption of a formal identity between medal and poetry is methodologically misguided. He mocks philandering numismatic zeal that will “sooner find the Prosodia in a Comb as Poetry in a Medal” (Addison, Ancient Medals, p. 447). Arguing that Addison and his epigone Spence do not take

61. Joseph Addison, Dialogue upon the Usefulness of Ancient Medals, No. 1, in Works (London, 1921), 1:446.
62. See Coins and Vases of Arthur Stone Dewing, A Memorial Exhibition (March–April 1971), The Fogg Art Museum, Harvard University, Cambridge, Mass., p. 5. The numismatist argues that “the reverse of the coin (plate 31) shows two eagles tearing a pregnant hare, a type probably referring to a passage in the Agamemnon of Aeschylus.”
63. G. E. Lessing, Laokoon, trans. Ellen Frothingham (New York, 1969), appendix, n. 17. Lessing also attacks the accuracy of some of Addison’s interpretations, such as that of an ancient coin (in Addison’s Travels) that Joseph Spence (in Polymetis 7) believes to explain a passage of Juvenal. Though he admits that “illustrations of this kind are not to be despised though neither always necessary nor always conclusive” (p. 52), Lessing suggests that such interpretations are perforce incomplete.
into account the differences between coin-making and poem-making, he regrets the easy substitution of a passage of a literary work for a coin type, and vice versa. Lessing himself tries to consider coins as integral works of sculpture. In the Laokoon, however, he seems to ignore the fact that coins are also literature. This ignorance is strange since, as we have seen, his theory of the epigram necessarily includes the kind of literature called the monetary inscription.

Coinmakers not only depict works of literature but also quote them. For example, Expectate veni (Plate 32) recalls a phrase of Virgil, whose context (in the Aeneid) helps to explain its suitability as a Roman monetary legend. Aeneas is telling Dido about the plunder of Troy by "gold-hungry Greeks." Just before he describes the final Greek victory, Aeneas reports the words he spoke to the vision of the dead Hector: "Quibus Hector ab oris exspectate venis?" (From what shores, Hector, comest thou, the long looked-for?) Hector (the dead hero of the Iliad) responds by encouraging Aeneas (the living hero of the Aeneid) to prepare for the founding of Rome. Hector gives Aeneas the following advice: "All claims are paid to king and country; if Troy's towers could be saved by strength of hand, by mine, too, had they been saved. Troy commits to thee her holy things and household gods [Penates]; take them to share thy fortunes: seek for them the city—the mighty city which, when thou hast wandered over the deep, thou shalt at last establish" (Aeneid 2:291 ff.). Hector exspectatus frees Aeneas of debt to his country and transfers to him the Trojan household gods. Thus he helps Aeneas to purchase the establishment of Rome with the disestablishment of Troy and to transform Troy into the mighty city that supervised the minting of this token of exchange.

64. Addison's Travels and Dialogue inspired Spence's Polymetis, in which the latter tried to show direct relations between works of several art forms, among them coins and poems. On Addison, Spence, and Lessing, see Austin Wright (Joseph Spence [Chicago, 1950], esp. pp. 90 ff.). On the relation between the visual and verbal arts, see Lessing, Laokoon, p. 50. On numismatics in English literature, see Mark Jay Levin, Literature and Numismatics in England, 1650-1750 (Ph.D. diss., University of Pennsylvania, 1974).


66. These symbols of the transference of power are mentioned again when Aeneas confronts Helen at Vesta's shrine, when Panthus carries certain holy things and vanquished gods (Virgil, Aen, 2: 320, 567 ff.), and when Aeneas asks his father to carry the sacred things (cape sacra manu patriosque Penatis) (Virgil, Aen, 2: 717).
Literature about coins

Writers often aid the student of coins by interpreting monetary inscriptions within a larger political and linguistic framework. The role of the paper money inscription in *Faust*, Part 2, is perhaps the most interesting example, but numismatics also derives inspiration from Jesus' interpretation of a Roman denarius. In the Gospels (which articulate the redemption of the human economy of credit and debt through the divine economy of belief and grace), Jesus' interpretation of Caesar's coin helps to define the Christian relationship of man to God. The telling of the story illustrates Jesus' prudent economy of truth (withholding the bare truth) as well as his political economy.

'Tell us, then, what you think. Is it lawful to pay taxes to Caesar, or not?' But Jesus, aware of their malice, said, 'Why put me to the test, you hypocrites? Show me the money for the tax.' And they brought him a coin. And Jesus said to them, 'Whose likeness and inscription is this?' They said, 'Caesar's.' Then he said to them, 'Render therefore to Caesar the things that are Caesar's, and to God the things that are God's.' (Matt. 22:17-21. Cf. Luke 20:21-25 and Mark 12:14-17.)

Jesus escapes his enemies' attack by offending neither the nationalist parties (with an overt approval of paying taxes) nor the seat of the empire (with an overt disapproval of paying taxes). He is a prudent steward or economist of the truth.

It is significant that Jesus asks for a coin. Ordinary commodities could have served equally well as examples of that with which taxes might be paid. The special kind of commodity that is a coin, however, offers Jesus a manifold interpretation. The likenesses and inscriptions on Roman coins often displayed religious signs. Many denarii, probably including the one that the Pharisees and Herodians bring to Jesus, bore inscriptions claiming that Caesar was divine (just as some of Jesus' followers believed that Jesus was the Son of God). If Caesar is a God, what are 'the things that are Caesar's'? If Caesar is

67. Johann Wolfgang von Goethe, *Faust* 2 (Hamburg, 1964): 6057-62. In context, the fictional inscription in Part 2 suggests that verbal and economic media are semiotically identical and that an explicit explanation of (paper-) money is also an implicit explanation of language.

68. On the "economy" of truth, see Chapter 3, below.

69. James Ross Snowden (*The Coins of the Bible and Its Money Terms* [Philadelphia, 1864]) suggests that the New Testament refers to a silver denarius of Tiberius Caesar (14-37 A.D.). On the obverse of this coin was a portrait of Caesar, with the inscription *TI. CAESAR.DIVI.AUG.F.AUGUSTUS* (Tiberius Caesar Augustus, son of the divine Augustus). On the reverse was inscribed *PONTIF.MAXIM.* (chief priest).
the human or secular head of state, what then are his things—the thing from which the denarius was made (probably a silver ingot) or only the likeness and inscription impressed on it? The likeness and inscription on the coin are “of Caesar;” they are among his things. Like any commodity in the political economy, however, the ingot that these impressions transform into a coin belongs to its current owner. Or, like anything in the natural world (including, perhaps, Caesar himself), the coin belongs to God. Thus Jesus defines taxation in terms of the relationship between the inscription and the material on which it is stamped; he raises implicitly a question about the divine and political authority of money.70 (Curiously, the impression of divine images on coins may have precipitated the destruction of the divine aura and cult worship of the gods. As we shall see, coins may have secularized the gods in much the same way that cinematography may have destroyed the aura of “original things.”)

Herman Melville's interpretation of economic symbols suggests a similar theory of numismatic semiology. In Moby Dick, Pierre, and The Confidence Man, Melville implies that there is a necessary relation between an inscription and that upon which it is written, and also that money (of which the coin is a symbol) and language (of which the letters of the inscription are symbols) are similar media of social exchange. The pattern of “The Doubloon” in Moby Dick, for example, is the pattern of the book.71 Interpretations of the doubloon nailed to the mast of the ship begin by zeroing in on an object at once esthetic and economic. “On its round border it bore the letters, REPUBLICA DEL ECUADOR: QUITO. So this bright coin came from a country planted in the middle of the world, and beneath the great equator, and named after it; and it had been cast midway up the Andes, and in the unwaning clime that knows no autumn.”72 The doubloon is a coin shown to be not merely an economic token with exchange value but also an esthetic symbol to be infinitely interpreted.

During the course of “The Doubloon” (the ninety-ninth chapter of Moby Dick), many members of the crew reveal themselves through their thoughts about it, none more significantly than Ahab.


One morning, turning to pass the doubloon, [Ahab] seemed to be newly attracted by the strange figures and inscriptions stamped on [the doubloon], as though now for the first time beginning to interpret for himself in some monomaniac way whatever significance might lurk in them. And some certain significance lurks in all things, else all things are little worth, and the round world itself but an empty cipher, except to sell by the cartload, as they do hills about Boston, to fill up some morass in the Milky Way.73

What is true of interpreting the doubloon is true of interpreting *Moby Dick* itself. Ishmael must explain his book "else all these chapters might be naught."74 The book as naught and the round world as empty cipher: these are one and the same possibility entertained as the literary hypothesis of Symbolism. Melville's theory of symbolism and his diatribe against the superficiality of economic exchange and representation in the markets of Nantucket is a warning to those who would interpret any coin outside the whole system of linguistic, economic, and pictorial exchanges in which it operates. "The Doubloon" (probably modeled, ironically, on Addison's *Dialogue upon the Usefulness of Ancient Medals*) illustrates a relationship that Melville saw between the verbal and economic worlds.75

Emerson, who also considered himself knowledgeable about verbal and economic symbolization, wrote that "nature itself is a vast trope, and all particular natures are tropes."76 All language, in this sense, is figurative. The American Symbolists loved this configuration but did not always see in it precisely the same economic exchange system that they themselves pretended to abhor. For them God is the "algebraic x," like the money form itself.77 For Melville, the doubloon (or indeed any such symbol) is hardly such a "polysensum" or "plenum" of meaning; its ontological status remains undefined and uncreditable: we never know whether it is an empty or a full cipher.78

Melville opposes the coin's role as exchange value to its role as "navel" nailed onto the mast in the center of the ship. Is this opposi-

73. Ibid, p. 427.
77. Ibid., p. 159.
78. Ibid., p. 179.
tion real, or is one kind of exchange (economic), like the other (esthetic), endlessly tropic and infinitely hermeneutic? Melville's numismatic semiology is a biting theory of language and economics in which the ontological status of the world itself is threatened with annihilation.

ESTHETICS AND ECONOMICS

The tension between a coin as an esthetic object and as an economic object often gives rise to ideological confusion. Aristotle, for example, detects a difference between a coin as an inscription or sculpture and as a monetary token. On the one hand he suggests that minting and ring-sealing produce imitative or natural copies of the original die *(On Memory and Recollection, 450-51)*. Similarly, mental impressions *(pathēmata)* or affections are likenesses *(homoioimata)* of the soul and not mere symbols like spoken or written words *(On Interpretation 16a)*. Works of art are also likenesses *(homoioimata)* or reproductions of originals and not symbolic representations of them. On the other hand, Aristotle suggests that the copied impression *(charakter)* on a coin is a conventional symbol *(semeion)* of weight or issuing authority *(Politics 1257a)*. Such symbols, like spoken and written words and unlike affections and works of art, bear no natural relationship to the things signified. Thus, coins are both natural (as stamped art) and unnatural (as monetary tokens). This tension between the superstructural (or esthetic) and the substructural (or economic) roles of the mint implies a corresponding tension between nature and convention *(nomos)*, a tension that the mechanical reproduction of coin *(nomisma)* helped to emphasize in ancient Greek thought.

In “Art in the Age of Mechanical Reproduction,” Walter Benjamin tries to relate superstructure (artistic reproduction) to substructure (economic production) by relating photography or cinematography to statistics. In the modern age, he argues, photography (an art) and statistics (an economic science) both seem to equalize things. Benjamin allies this sense of the universal equality of things only with the modern age. However, at no time was this sense greater than when


80. In the *Politics* (1258b) Aristotle argues that monetary interest *(tokos)*, which is a homogeneous likeness of its principal, is unnatural. Cf. Chapter 3, below.

coins (or mechanically reproduced works of art) or money itself (of which coins are the tokens) were being developed. Money is the universal equivalent *par excellence*. Benjamin mentions coinage only once in his essay, although it serves better than photography as a case study of the relation between or confusion of reproduction and production. The esthetics of coinage, after all, does not demand metaphorical reference to an apparently unrelated economic science like statistics. Coins are themselves both artful reproductions and active participants in the sum total of the relations of production. They are things ontologically equal to each other as products of the same die, and money, which they symbolize, equalizes *in potentia* all (other) things.

In his essay, Benjamin challenges the Aristotelian theory of imitation by arguing that photography annihilated the ontological status of the original and its imitation. "The technique of reproduction detaches the reproduced object from the domain of tradition. By making many reproductions it substitutes a plurality of copies for a unique existence. And in permitting the reproduction to meet the beholder in his particular situation, it reactivates the object reproduced. These two processes lead to a tremendous shattering of tradition" (p. 223). Even more than photography in the modern world did the mint in the ancient world shatter tradition. Coins destroyed the aura of individual objects and encouraged a sense of the universal equality of things. The mechanical reproduction of the mint, Benjamin might argue, liberated men from dependence on divine cults and on the cult value of art. Stamping out impressions of the gods and other "originals," coinage had less cult value and more exhibition value than previous forms of art. With the advent of the mechanical reproduction of coins (often bearing, ironically, impressions of the gods), "the criterion of authenticity [of the original] ceased to be applicable to artistic production, [and] the total function of art [was] reversed. Instead of being based on ritual, [art began] to be based on another practice—politics" (p. 226). Benjamin generally asserts that mechanical reproduction must be a catalyst for democracy, since its products

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82. Benjamin suggests that the Greeks knew only two methods of mechanical reproduction: casting and stamping ("Mechanical Reproduction," p. 220). Most coins are made by stamping; a few large coins of the Roman period and some counterfeits of the modern period were cast. Since both casting and stamping were techniques older than the first coins, coinage was not a true invention, but rather the culmination of certain forms of knowledge of counting and sculpting.

83. "From a photographic negative... one can make any number of prints; to ask for the 'authentic' print makes no sense" (Benjamin, "Mechanical Reproduction," p. 226).
require some sort of universal testing when they cease to be the center of a cult. Coins, of course, must and can be weighed by everyone.84 Coinage, a new kind of sculpture, shattered the Greek view of statues as objects of cult veneration confronting the beholder with their uniqueness and aura. It heralded the modern age of mechanical reproduction.

In our time, weighing and criticizing coins no longer seem necessary or pleasurable, despite large fluctuations in the gold markets. The artlessness of modern coins (the result in part of modern modes of mechanical reproduction) has worked to dim our appreciation of older coins.85 Photography and photographic enlargement (another modern mode of mechanical reproduction) have helped renew the study of coins, however, and have made it easier and perhaps more interesting for us who live in the modern age of mechanical reproduction.86 The study of coins as examples of visual and literary art in an

84. A money weigher, of course, must give his testing full attention. The test of a coin is its weight as well as its beauty. Ibid., pp. 226, 242-43.

85. Ancient coins often lack the technical finesse sometimes associated with “high art.” Hegel notes that “in the art of stamping coins the ancients created veritable masterworks of beauty, although from the purely technical point of view they obtained results inferior to those which we obtain nowadays” (G. W. F. Hegel, The Philosophy of Fine Art, trans. F. P. B. Osmaston, 4 vols. [London, 1920], 3: 198). The mindless, apothegmatic advertising slogans on today’s coins may correspond to the new mode of numismatic reproduction. The modern artist allows a reducing machine (which the ancients did not have) “to transform his large clay model into miniature size” (Sutherland, Art in Coinage, p. 200). Some die-casters use a reducing glass in making their models, but the design suffers. “A reduction is about as true to model,” writes Sir George Hill, “as a cheap colour-process illustration is to the original picture” (Sutherland, Art in Coinage).

Modern coins, moreover, lack the contours in portraiture for which ancient coins are famous. “The contours are fogged, however infinitesimally: the impression is slightly soft: the definition—by contrast with coins struck from directly made dies—is quite certainly impaired. Thus the peculiar distinction of the coin-design, namely, its fineness of clear line—a distinction for which the master-artists of all ages were famous, is lost” (Sutherland, Art in Coinage, p. 203). Parts of the original model are made invisible by reduction, so that the modern artist is doubly separated from the “original.” Mechanical reproduction had separated the artist from his original in ancient Greece. Nowadays the artist no longer makes even a die directly.

86. The artful photographic enlargement of coins has been a tool of the numismatist since Ruskin (who notes its influence in Works, 19: 410). A photograph of a coin is the mechanical reproduction of a mechanical reproduction, changing the popular appearance of the coin and destroying its “aura.” Malraux believes, however, that photography “qui reproduit un original” (La Monnaie, p. 192), merely rescued coinage from being forgotten by the art historian. He did not consider how photography may have transformed numismatics and how photography, like minting, seems to reproduce an original.
The economy of literature suggests the consideration both of economic production and representation and of esthetic reproduction or imitation. Coins should be studied as *śemata* at once artful and economic. In this sense, numismatics not only counts coins but also accounts for the significance of and the relationship between economic and esthetic signs.