

BYZANTINE COINAGE

Philip Grierson

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Second Edition

Cover illustrations. Solidus of Justinian II (enlarged 5:1)

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Preface

This publication essentially consists of two parts. The first part is a second edition of *Byzantine Coinage*, originally published in 1982 as number 4 in the series Dumbarton Oaks Byzantine Collection Publications. Although the format has been slightly changed, the content is fundamentally the same. The numbering of the illustrations,* however, is sometimes different, and the text has been revised and expanded, largely on the advice and with the help of Cécile Morrisson, who has succeeded me at Dumbarton Oaks as advisor for Byzantine numismatics. Additions complementing this section are tables of values at different periods in the empire's history, a list of Byzantine emperors, and a glossary.

The second part of the publication reproduces, in an updated and slightly shorter form, a note contributed in 1993 to the International Numismatic Commission as one of a series of articles in the commission's *Compte-rendus* sketching the histories of the great coin cabinets of the world. Its appearance in such a series explains why it is written in the third person and not in the first. It is a condensation of a much longer unpublished typescript, produced for the Coin Room at Dumbarton Oaks, describing the formation of the collection and its publication.

* The coins illustrated are in the Dumbarton Oaks and Whittemore collections and are reproduced actual size unless otherwise indicated. Weights are given in grams.

HISTORY AND DENOMINATIONS

Phases of the Coinage

The Byzantine Empire regarded itself as a continuation of the Roman Empire, differing from it only in being Christian in religion and Greek in language. No elements in its coinage, however, apart from the use of Latin in its inscriptions, go back before the fourth century A.D. The coinage of the early Roman Empire disappeared in the great currency inflation of the second half of the third century, and a new system took shape gradually under Diocletian (284–305) and his Christian successor, Constantine I the Great (306–337). This system involved a gold coin known as a solidus (or *nomisma* in Greek) and a varying number of denominations of silver, billon (debased silver), and bronze, whose weights were altered several times in the course of the fourth century and whose names and value relationships have long been the subject of debate.

The Constantinian subsidiary coinage in turn collapsed in the early fifth century, at the time of the barbarian invasions. All that survived at the accession of the emperor Anastasius I in 491 was the gold solidus and its two fractions, the half (semissis) and the third (tremissis), and a tiny copper coin known as a nummus, worth, in the mid-fifth century, $1/7200$ of the solidus and weighing less than 1 gram. In order to provide a stable subsidiary coinage, in 498 Anastasius introduced a series of multiples of the nummus, the chief of them

being a copper coin worth 40 nummi and known as a follis (Fig. 29). This denomination was to be one of the most conspicuous features of Byzantine coinage for the next six centuries, and since only the solidus and its fractions are earlier in date, it is with the creation of the follis that a history of Byzantine coinage can most conveniently be begun.

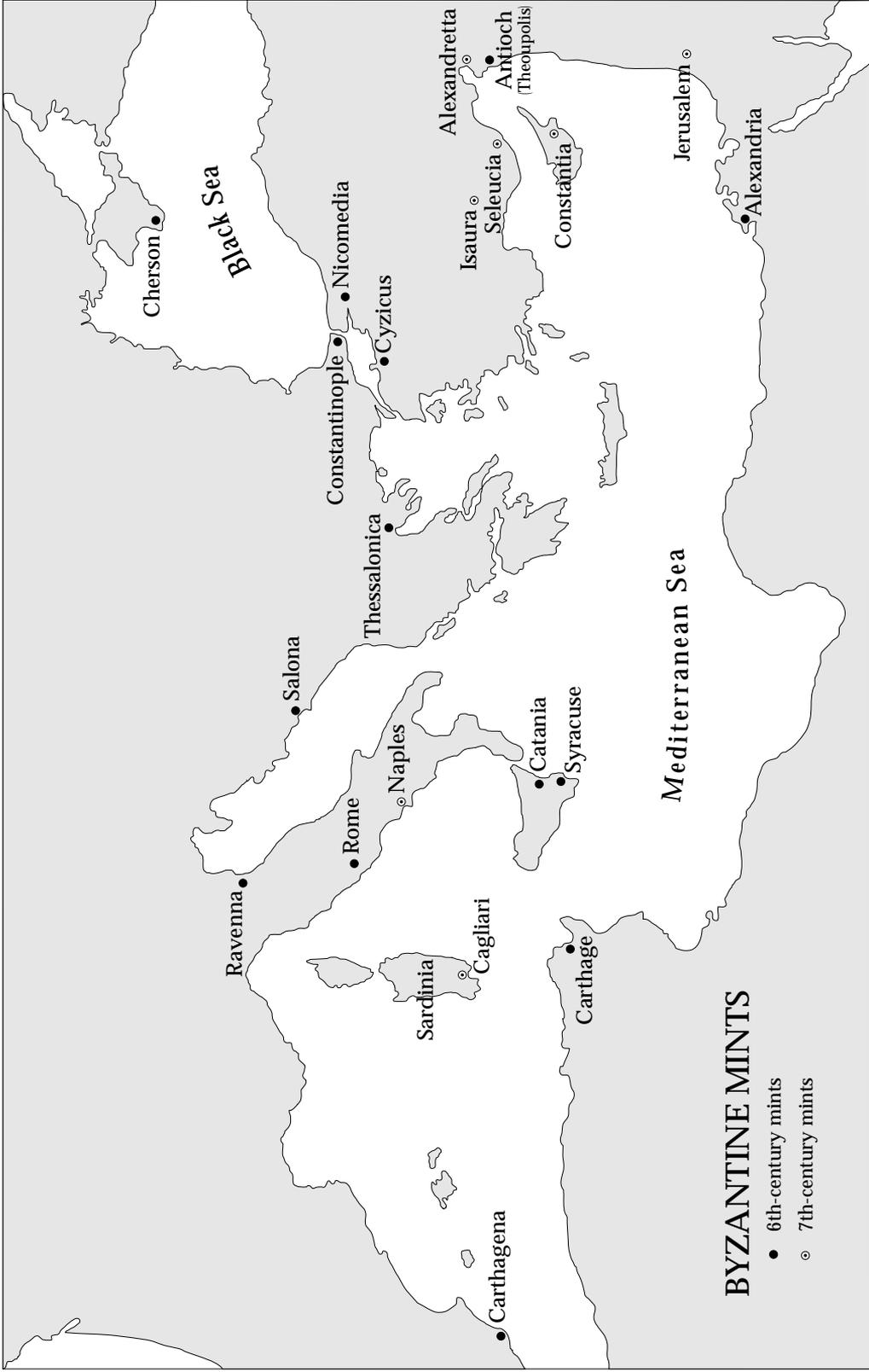
This history can be roughly divided into five periods. The first, extending from Anastasius I (491–518) to the mid-eighth century, is characterized by the use of three denominations of gold coins (Figs. 4, 6, 7) and four (sometimes five) of copper (Figs. 29–31, 33, 34), with, from 615 onward, one denomination of silver as well (Fig. 19). This wide range of coins was made possible by the use of three metals, and in this respect it is comparable to modern coinage. The second period, from the eighth to the late eleventh century, saw the simplification of this pattern to only three denominations, one in each metal: the nomisma (Fig. 11), a silver coin known as a miliaresion (Fig. 20), and the follis (Fig. 38).

The third period, dating from the monetary reform carried out by the emperor Alexius I Comnenus (1081–1118) in 1092 and lasting to roughly the end of the thirteenth century, is characterized by the use of several denominations of debased metal (called *trachea* by contemporaries) that were strikingly different from normal coins in being concave instead of flat (Fig. 15). The highest denomination was a coin of slightly base gold known as a *hyperpyron* (Fig. 16), which replaced the old *nomisma* of pure gold. A coin of much baser gold (Fig. 17) revived the functions of the long-defunct *tremissis*, while small change was provided by *trachea* of very base silver (Fig. 25), which eventually became copper, and by two denominations of small flat coins that were copper (Fig. 40), one briefly becoming lead. The fourth period, lasting from soon after 1300 to the mid-fourteenth century, saw the introduction of a silver coin, the *basilicon* (Fig. 26), modeled on the silver ducat of Venice, and a small copper coin known as an *assarion* (Fig. 41). Finally, the fifth period, lasting from the middle of the fourteenth century until the fall of the empire in 1453, saw the complete disappearance of gold coins and a return to ones of pure silver (Figs. 27, 28),

the main denomination of which was larger and heavier than any previously used in the empire.

The transformation of the coinage thus outlined reflects, and is partly a consequence of, contemporaneous financial and economic conditions in the empire. The first of the five periods was one of relatively flourishing public finances and monetary economy in the Roman tradition, a situation that continued up to the Persian and Arab invasions in the seventh century. The second period was one of a general contraction of monetary public resources and private exchanges, lasting to the mid-tenth century. The third, from the late tenth to the early thirteenth century, initially saw an expansion in the population and resources of the empire, with its gold coinage retaining much of its old international prestige, despite a phase of serious debasement in the mid-eleventh century. This prestige survived the disaster of 1204, but from that date onward the empire was only a shadow of its former self, despite the recovery of Constantinople by the Greeks in 1261. Gold coinage continued to be struck in the fourth period, but the derivative nature of its silver adjunct, the basilicon, reflected the predominant role of Western powers in an area that had once been the exclusive preserve of Byzantium. In the fifth and final period, the disappearance of gold derived not only, as we shall see, from a return to debasement caused by strained finances, but also from the differences in gold/silver ratios, which entailed a return to gold in Italy and elsewhere after centuries of virtual silver monometallism in western Europe.

The system used to reckon the weight and value of the various denominations of Byzantine coinage was adopted from the Roman Empire and remained the same throughout Byzantium's existence. The gold solidus (4.55 grams) was the basic unit of the coinage, all other coins being valued in relationship to it. The solidus weighed $1/72$ of a Roman pound, or 24 carats. The carat itself (0.189 grams) was too small a weight to be minted in gold, but it formed a weight unit employed in determining the value of silver coins in relationship to the solidus. The principal silver coin of the late fourth century is in fact conventionally known as a *siliqua* (the Latin word for "carat"), since that is the



1 Location of Byzantine mints in the sixth and seventh centuries.

value numismatists believe it to have had. The miliaresion of the middle Byzantine period was a double carat, valued therefore at 1/12 of the solidus. The relationship of the copper coinage to the gold (i.e., of the follis to the solidus) was subject to considerable variation. Under Justinian I (527–565), the ratio was at one time 180:1, at another 210:1; in the middle Byzantine period, gold was proportionately more valuable, with 288 folles needed to equal a single solidus. For most periods, however, it is not possible to determine the ratio of exchange so precisely. The tables on pp. 43–45 give a rough approximation of the values in different periods, though within each of the periods there were often instability and changes, and thus the ratios cannot be interpreted too literally.

Under Anastasius I there were only four mints in the empire, which at that time had contracted to the lands around the eastern Mediterranean, but Justinian I's reconquest of the Balkans, North Africa, Italy, and part of Spain resulted in a significant increase in their number. The chief mints in the east were those of the capital, Constantinople, its neighbors Nicomedia and Cyzicus on the Asiatic side of the Hellespont, Antioch in Syria, Alexandria in Egypt, and Thessalonica in the Balkans (Fig. 1). The chief mints in the west were Carthage in North Africa and Ravenna on the Adriatic. They all shared in the minting of copper, but silver was rarely struck outside Ravenna and Carthage, and gold was normally limited to these mints and to Constantinople, whose output far exceeded that of the western mints. Formal mint marks, abbreviated from place names (e.g., CON for Constantinople, NIKO for Nicomedia), were limited to the copper coinage (Figs. 29, 35) and often omitted, especially from the lower denominations. Solidi struck in the capital had CONOB on them (Fig. 4), that is, the first syllable of *Constantinopolis* joined to OB, which was both the abbreviation of the word *obryzum* ("refined gold") and the Greek numeral 72. Gold coins struck at Ravenna and Carthage can only be differentiated when they display well-marked local characteristics—normally, a high, annular border at Ravenna (Fig. 2) and small, thick flans at Carthage (Fig. 3). Many mints were subdivided into *officinae*, or workshops, which were normally indicated by Greek numerals: *alpha* = 1; *beta* = 2, etc. (Fig. 32).



2 *Maurice (582–602). Gold solidus, obverse; 4.49 g. Struck at Ravenna. The reverse has a facing angel.*



3 *Heraclius with Heraclius Constantine. Gold solidus; 4.44 g. Struck at Carthage in 629/30.*

In the seventh century the number of mints was greatly reduced, initially as a result of an administrative reorganization in 629 but more permanently as a consequence of the loss of much of the Balkans to the Slavs, of half of Italy to the Lombards, and of Syria, Egypt, and eventually the whole of North Africa to the Arabs. Constantinople was left as the only surviving mint in the east, while provincial mints survived in the west for only as long as the provinces they served remained in Byzantine hands. The last survivor was Syracuse, the capital of Sicily, which was captured by the Arabs in 878. The use of mint marks was abandoned, and for much of the middle Byzantine period Constantinople was the only mint in the empire. The mint at Thessalonica was revived in the eleventh century and became of great importance in the last days of the empire, but its products are not specifically marked and can usually be identified only on the evidence of style and find spots.

Gold Coinage

The typical sixth-century solidus is a coin $\frac{3}{4}$ of an inch (2 centimeters) in diameter, with a three-quarter or fully frontal bust of the reigning emperor, usually in armor, on its obverse. This representation makes no pretense to being a personal likeness (Fig. 4). The reverse initially showed a Victory or an archangel supporting a cross, but Justin II (565–578) preferred a seated figure



4 *Anastasius I. Gold solidus; 4.47 g.*



5 *Tiberius II. Gold solidus, reverse; 4.45 g. The obverse has a crowned, full-face bust of the emperor.*



6 *Anastasius I. Gold semissis, reverse; 1.90 g. The obverse has a profile bust of the emperor.*

of Constantinopolis (Fig. 60), while Tiberius II (578–582) chose a cross on steps (Fig. 5), which is believed to represent the great jeweled cross erected on Golgotha by Theodosius II (408–450). The semissis (Fig. 6) has a seated Victory inscribing a numeral on a shield. This numeral had originally referred to the “vows” repeated by the emperor at five-year intervals, but in the course of time it had become merely a formula. The tremissis (Fig. 7) has a Victory bearing a wreath and an orb surmounted by a cross. Both the semissis and tremissis have on the obverse the emperor’s bust, but shown in profile rather than facing.



7 *Anastasius I. Gold tremissis, reverse; 1.50 g. The obverse type is the same as that in Figure 6.*

The seventh century saw great changes in the iconography of these coins. Portraiture was introduced under Phocas (602–610; Fig. 53), and from Heraclius (610–641) onward coinage reflected changes both in the emperor’s appearance and in the arrangements he made for his succession. Thus, Constans II (641–668) and Justinian II (685–695; 705–711; Fig. 55) are shown as young boys on their earliest coins; Heraclius and Constans II (Fig. 8) acquire enormous beards and mustaches in the course of their issues. In order to assure the succession, emperors associated their sons with them as co-emperors, and the coinage was intended to advertise the dynasty; thus, Heraclius Constantine and later Heraclonas accompany their father Heraclius, and no fewer than three sons appear on the reverse under Constans II (Fig. 8). The reverse type is more



8 *Constans II with his sons. Gold solidus; 4.50 g. Struck after 663.*

frequently a cross whose form indicates the denomination, the solidus having a cross on steps (Fig. 5), the semissis a cross on a globe, and the tremissis a simple cross. When Justinian II placed a bust of Christ on his coins he removed himself to the reverse, where, on the gold, he is shown holding the type of cross appropriate to the denomination (Fig. 9; cover illustrations).



9 *Justinian II. Gold solidus; 4.42 g. Struck after 692.*

The portraiture of the seventh century was no more than a passing phase. Under the so-called Iconoclast emperors of the eighth century three changes occur. First, the treatment of the imperial bust becomes purely linear and every vestige of portraiture disappears, with older emperors being differentiated from their junior colleagues only by their larger sizes and by faint traces of a beard and mustache, whether or not they wore such in real life. Second, the traditional cross on the reverse is replaced by the effigy of another emperor, initially the emperor's son and intended successor, but subsequently one or more of his ancestors, with the emperor's son then being placed beside his father on the obverse (Fig. 10). Thus the coinage represented the whole dynastic lineage in order of birth. And, finally, the semissis and tremissis are eliminated. They were



10 *Leo IV with his sons and ancestors. Gold solidus; 4.42 g. The long inscription on the reverse reads "Leo the grandfather, Constantine the father," and on the obverse, "Leo the son and grandson, Constantine the young."*

last struck for regular use in the east under Leo III (717–741). Thereafter they were issued only in small quantities and for ceremonial distribution on particular occasions in the east down to the sole reign of Nicephorus I (802–803), though in the west, at the mint of Syracuse, they continued to be struck until the city's loss to the Arabs in 878.



11 *Michael III. Gold nomisma, obverse; 4.36 g. Struck between 843 and 856. The reverse has busts of Michael and his mother, the regent Theodora.*

Not until the mid-ninth century does a fresh series of changes occur. After image worship was restored in 843, Michael III's (842–867) guardians placed on his nomismata a bust of Christ copied from that of Justinian II's coins (Figs. 9, 11). Thereafter either a bust or a seated figure of Christ became a regular feature of the nomisma. Leo VI (886–912) struck some nomismata bearing a true portrait instead of an undifferentiated imperial figure, as did his son Constantine VII Porphyrogenitus (913–959; Fig. 12). Subsequently the use of portraiture became common, so that coins of many eleventh-century emperors can be recognized at once from the ruler's appearance.



12 *Constantine VII. Gold nomisma, reverse; 4.47 g. Struck in 945. The obverse has a bust of Christ Pantokrator. The inscription on the reverse is the first instance of the term autokrator appearing on a gold coin, and is intended to stress that Constantine is at last wielding power alone, after being delivered from his long subordination to Romanus I.*

Much more fundamental than these alterations in the external appearance of post-Iconoclastic coinage were changes in their weights and fineness (purity). The emperor Nicephorus II Phocas (963–969), apparently for fiscal reasons, struck a new class of nomismata slightly lighter in weight, which came to be called tetartera (literally, coins lacking a “quarter”), in contrast to those of full weight, which were named histamena. These light coins—the weight reduction was really much less than a quarter, but the term *tetarton* could have the same lack of precision that “quarter” can have in English, as in the “quarter” of a



13 *Basil II with Constantine VIII.*
Gold histamenon; 4.35 g.
Struck between 1001 and
1005.

city—were not at first differentiated in appearance from those of full weight, but under Basil II (976–1025) the histamena were made larger and thinner (Fig. 13), and the tetartera smaller and thicker (Fig. 14). Both, however, were still technically nomismata, and their differing values were sometimes taken into account by having payments expressed in nomismata settled half-and-half in each.



14 *Basil II with Constantine VIII.*
Gold tetarteron; 4.18 g.
Struck between 1005 and
1025.

A more serious change was the decline of the nomisma in fineness. For seven centuries, from its creation by Constantine I the Great until the fourth decade of the eleventh century, the nomisma as struck at Constantinople remained a coin of pure gold. Michael IV (1034–41), who had been a money-changer in early life and who was believed to have dabbled in counterfeiting, issued some of his nomismata in debased metal. During the middle years of the century the debasement continued at intervals, until in the decade following the disastrous Byzantine defeat at Manzikert (1071) the fineness of the nomisma declined to about 8 carats. Then, in the 1080s, when Alexius I was compelled to melt down imperial plate in order to pay his troops, the amount of gold in the nomisma fell to virtually nothing. This debasement was accompanied by the introduction, under Constantine IX (1042–55), of a concave fabric for the



15 *Constantine IX. Concave histamenon,*
shown in profile.



16 *Alexius I. Gold hyperpyron; 4.30 g. The inscription on the obverse reads "Christ, help," and continues on the reverse, "the Lord Alexius Comnenus."*

histamenon (Fig. 15)—by now a thin coin some 26 millimeters in diameter—apparently with the intention of making it stronger and less easily bent.

A monetary reform carried out by Alexius I in 1092 saw a return to nomismata of good-quality gold, although, due to the constraints of the recycling of earlier debased coins, the fineness was set at only 20 1/2 carats instead of the traditional 24 (Fig. 16). These new coins were called hyperpyra, that is, “super-refined,” which they no doubt were in comparison to their immediate predecessors; they were also all of the higher weight of the traditional nomisma. Accompanying them were coins between 6 and 7 carats fine, corresponding in value both to the old tremissis and to the histamenon of the 1070s, in which many values had been expressed. They seem not to have had a special name, but were often nicknamed according to their types, for example, *trikephala*, “three-headers,” or *hagiogeorgata*, “Saint Georges” (Fig. 17). The obverse types (i.e., those on the convex faces of the coins) are usually some representation of Christ or the Virgin, while the reverses normally show a standing emperor accompanied by Christ, the Virgin, or one of the saints.



17 *John II accompanied by St. George. Electrum trachy, reverse; 4.45 g. The obverse has a seated figure of Christ on a low throne.*

Although the hyperpyron survived the disaster of 1204, when Constantinople became the seat of the short-lived Latin Empire (1204–61), coins struck by the exiled “emperors of Nicaea” at Magnesia in Asia Minor were little by little debased, falling to 18 carats under John III (1222–54). Moreover, the



18 *Andronicus II. Gold hyperpyron; 4.13 g. The obverse shows the Virgin Blachernitissa inside the walls of Constantinople, and the reverse, the emperor kneeling before Christ in the position of proskynesis. The long, garbled inscription reads "Andronikos en Christo despotes ho Palaiologos," but other inscriptions are known with the full imperial title, "Andronikos en Christo to Theo pistos basileus kai autokrator Komnenos ho Palaiologos," individual words being abbreviated where necessary.*

former electrum coins that had accompanied them were by now of virtually pure silver. After Michael VIII Palaeologus (1259–82) recovered Constantinople in 1261, the hyperpyron was reduced to 15 carats, and then fell further to 12 carats during the long reign of his son Andronicus II (1282–1328). At the same time the striking of the coins became increasingly slovenly, and their weights very irregular (Fig. 18). These coins were evidently valued by weight, as gold coins have always been where large sums have been involved, rather than by number. The last hyperpyra of the traditional pattern, which effectively mark the end of Byzantine gold coinage, were struck by John V in association with John VI (1347–52). This suspension, coming a full century before the fall of Constantinople to the Turks, is at first sight paradoxical, since at that very time several countries in western Europe were beginning to mint gold on a substantial scale. Yet it may well have been the demand for gold in Latin Christendom that forced Byzantium to abandon it in favor of silver.

Silver Coinage

Silver coinage played only a secondary role in the monetary reforms of Diocletian and Constantine I, not because of any shortage of the metal but probably because the mint price was too low, and fluctuations in its value in relation to gold made it difficult to mint except on a token basis, which users would be unwilling to accept. Silver was instead treated as a substantially independent element in the monetary system, with sums expressed in terms of

silver-by-weight and settled with a mixture of coins, silver plate, and ingots, the purity of which was often guaranteed by the imposition of stamps by the mint. This prejudice against the use of silver for coinage lasted into the sixth century, for no revival of the metal accompanied the reforms of Anastasius I. Small silver coins were used in Italy and North Africa under the rule of the Ostrogoths (489–553) and Vandals (439–533), respectively, and the issue of these was continued after Justinian I's reconquest, but the only silver minted at Constantinople in the sixth century took the form of ceremonial issues that are very rare today.



19 *Heraclius with Heraclius Constantinus. Silver hexagram; 6.40 g.*

It was the emperor Heraclius who in 615 revived an effective silver coinage, drawing the metal for his abundant issues mostly from the secularization of church plate during the crisis of the Persian war. The new coins were known as hexagrams (Fig. 19), since they weighed 6 *grammata* (6.84 grams), a weight higher than any used for regular coinage during the entire period of the Roman Empire. Hexagrams continued to be struck on a substantial scale under Constantine II and Constantine IV (668–685), but their volume trailed off in the 680s, and by the end of the century the empire was back on the gold-copper basis that had been in effect under Anastasius I and Justinian I.

A new and more lasting return to silver was made in 720, when Leo III, in association with his son Constantine V (720–741), introduced a coin known as a miliaresion (Fig. 20). It was much thinner and broader than the hexagram,



20 *Leo III with Constantine V. Silver miliaresion; 1.99 g. The inscription reads "Leo and Constantine, emperors by [the grace of] God," and around the Constantinian cross on steps, "Jesus Christ is victorious."*

and drew its inspiration from the Islamic dirham, which was itself derived from the earlier Sasanian *drachma*. Like the Islamic coin, the miliaresion had no ruler representations, being ornamented instead with only a cross and the joint emperors' names and titles. For the first century of its existence there were no coins in the name of a single emperor, apparently because they represented ceremonial issues, struck for the public distributions that were customary when a co-emperor was appointed. Not until the reign of Theophilus (829–842) did silver coin become a regular part of the currency, struck by each ruler from his accession onward.



21 *Michael I. Silver miliaresion, obverse; 2.01 g. The reverse is the same as that in Figure 20. The inscription reads "Michael and Theophylact, by [the grace of] God emperors of the Romans."*

The weight of the miliaresion was modified several times over the next two hundred years, but virtually no change was made in its design, and only one significant change occurred in its wording. Michael I (811–813) added the word *Romaion* ("of the Romans"; Fig. 21) to the simple *basileis* ("emperors") of his predecessors in order to distinguish the "Roman" Empire of Byzantium from that ruled by Charlemagne, who had assumed the imperial title at Rome in 800. In the tenth century, with the Macedonian Renaissance, attempts were made to render the coin more attractive. Initially a bust of Christ, and subsequently one of the emperor (Fig. 22), was inserted at the intersection of the arms of the cross that formed the reverse type. The cross itself was made more elaborate, and on one anonymous issue of the tenth century the icon of the Virgin



22 *Romanus I with his sons and Constantine VII. Silver miliaresion, obverse; 2.78 g. On the obverse the usual cross on steps includes a central medallion portrait of the emperor, instead of the image of Christ introduced in the same position by the emperor Alexander (912–913). The reverse has an inscription in the field giving the names of Constantine VII and of Romanus I and his two sons, Stephen and Constantine.*



2:1

- 23 *Basil II. Anonymous silver miliaresion, obverse; 2.83 g. Probably struck in 989. The inscription on the obverse reads "O Virgin, aid the emperors," and continues on the reverse, "Mother of God, full of glory, he who putteth his trust in thee will never fail in his undertakings."*

Nikopoios, which was believed to have given victory to Basil II at the battle of Abydos in 989, took the place of the cross (Fig. 23). In the eleventh century, fractions of the miliaresion began to be struck, and a variety of types—standing figures of the Virgin (Fig. 24) and the emperor, the bust of the Virgin or of Christ, or a seated figure of Christ—began to appear.



- 24 *Constantine X (1059–67). Silver two-thirds miliaresion, obverse; 1.32 g. The reverse has an inscription in the field reading "Mother of God, aid Constantine Ducas, emperor." Constantine X was the first Byzantine emperor to put his family name on all his issues; his predecessors Constantine IX Monomachus and Isaac I Comnenus had put theirs only on the silver coins.*

The silver miliaresion shared the fate of the gold nomisma in the 1080s, and was not replaced in the reform of 1092. Instead there appeared a concave coin (Fig. 25) of low-grade billon (about 7 percent silver) that was initially worth a quarter of the old miliaresion, being reckoned 48 to the hyperpyron.



- 25 *Manuel I. Billon trachy, obverse; 3.44 g. The reverse has a standing figure of the emperor being blessed by the Virgin.*

The government seems to have felt no obligation to maintain the quality of this relatively poor billon trachy; by the end of Andronicus I's reign (1183–85) its fineness had fallen to about 2 percent silver, and it was reckoned at 120 to the hyperpyron. Analyses of thirteenth-century specimens show that by that time it had become a copper coin, although the retention of a concave fabric indicates the continued pretense of a slight silver content—a pretense that allowed its overvaluation against the gold coinage.



26 *Andronicus II with Michael IX (1294–1320). Silver basilicon; 2.12 g. The inscription on the obverse reads "Lord, help," and continues on the reverse, "emperors (autokratores) of the Romans."*

The fourteenth century saw a return to silver on a massive scale. Soon after 1300, Andronicus II introduced the so-called basilicon (sc., "imperial" coin; Fig. 26), whose types copied those of the silver ducat (sc., coin "of the doge") of Venice and which was of a comparably high purity. Since it was of pure silver, it was made flat and not concave, and as 1/12 of the hyperpyron it corresponded to the old miliaresion and thus fitted easily into the system of account (see table V, p. 45). In the 1330s and 1340s, however, its weight was significantly reduced—much of Europe was then suffering from an acute silver shortage—and after the mid-century it was no longer struck. Instead there appeared a new silver coin known as a stavraton (Fig. 27), so called for the cross (*stavros* in Greek) that had been a prominent feature of a Neapolitan or Provençal double *gigliato*, which apparently provided the model for its issue. Since the stavraton was taking over the functions previously fulfilled by the now-abandoned gold coinage,



27 *John V. Silver stavraton; 8.60 g. The inscription starts on the inner circle and reads "John Palaeologus, lord (despotes) by the grace of God, emperor of the Romans."*



28 *Manuel II. Silver half-stavrata; 3.53 g. The inscription reads "Manuel, in Christ [our] God, faithful emperor."*

it had to be made heavier than any silver coin previously used in Byzantium, and indeed heavier than any silver coin used in Europe at that time, but even so, at an initial weight between 8 and 9 grams, it had the value of only half the hyperpyron. Fractions of a half (Fig. 28) and an eighth were also struck, but no quarters, since this role was filled by the silver ducats of Venice. The stavraton and its fractions were struck up to the last years of the empire, but the complete series of the last emperor, Constantine XI (1449–53), has been known only since 1990, when a hoard containing ninety specimens appeared on the market. It had long been recognized that such coins were referred to in contemporary narratives of the siege of Constantinople, but their existence had been doubted for a long time, for until 1974, when two half-stavrata were published, not a single coin of Constantine XI appeared to have survived.

Copper Coinage

The introduction of the large copper follis, worth 40 nummi, had been the great innovation of Anastasius I in 498. The coin was marked with the Greek letter **M** (Fig. 29), which as a numeral stood for “40,” and it was initially accompanied by only two fractions, a half-follis marked with **K** (= 20; Fig. 30)



29 *Anastasius I. Copper follis, small series; 9.34 g. **M** is a Greek numeral letter indicating the value of 40 nummi, and **CON** is the mint mark of Constantinople.*



30 *Anastasius I. Copper half-follis (K = 20 nummi), small series, reverse; 3.31 g. The obverse has a profile bust like that in Figure 29.*



31 *Anastasius I. Copper decanummium (I = 10 nummi), small series, reverse; 2.05 g. The obverse type is the same as those in Figures 29 and 30.*

and a decanummium marked with I (= 10; Fig. 31). In 512 the weights of these coins were doubled (Fig. 32), and a further denomination of 5 nummi, marked with E (Fig. 33), was added; moreover, the minting of nummi (Fig. 34), apparently suspended in 498, was resumed. With three denominations of gold (Figs. 4, 6, 7) and five of copper (Figs. 30–34), the empire was furnished with a wide range of coins appropriate for the proper functioning of its economy. True, silver coins, which would have bridged the rather large gap between the follis and the tremissis, were not issued, presumably because of the fluctuations in that metal's value against gold.



32 *Anastasius I. Copper follis, large series; 18.60 g. The **B** beneath the **M** is the officina mark.*

Justinian I, in his twelfth year (538/9), further increased the weight of the follis to about 25 grams. Moreover, he improved its appearance and altered its iconography by substituting a facing bust for the traditional profile portrait on the obverse and by adding a date on the reverse (Fig. 35), thus applying to coins



33 *Anastasius I. Copper pentanummium (E = 5 nummi), large series; 2.40 g.*



34 *Anastasius I. Copper nummus, reverse; 0.83 g. The obverse has a profile bust like that in Figure 29. The reverse shows the monogram of the emperor. Another issue has the letter **A** standing for "I."*



35 *Justinian I. Copper follis; 23.54 g. Minted at Nicomedia in year 12 (= 538/9).*

the provisions of his Novel 47 (537) for the dating of all official documents by regnal years. This coin, however, was too heavy for convenience, and the weight was reduced to about 22 grams in 541/2. Further reductions took place at intervals over the remainder of the century, so that ultimately the minting of nummi had to be abandoned, and a new unit of 30 nummi, marked with Λ or XXX, was inserted into the system. Yet even to the end of the century the follis remained a handsome, massive coin whose weight and size must have given its users solid assurance of its value.

The seventh century saw the decline of the follis. The designs of the coins, which show changing combinations of rulers, remain of interest, but their weights were repeatedly reduced and their execution became increasingly slovenly. Folles of Constans II average only about 3 grams, in contrast to the 25 grams of a century earlier, and while their iconography is quite varied, their fabric is abominable (Fig. 36). They were by then so small that the half-follis could not easily be minted and lower denominations virtually disappeared. The empire was at that time in desperate political straits, with its richest provinces, Egypt and Syria, lost forever to the Arabs and much of the Balkans occupied by the Slavs. These circumstances only aggravated the decline of the purchasing power of the subsidiary coinage that had begun already in the second half of the sixth



36 *Constans II. Copper follis; 5.10 g. Minted in year 2 (= 642/3). On the obverse there can be seen traces of the Constantinian inscription "en touto nika," the first example of a complete Greek legend on Byzantine coins.*

century, and it is not surprising that the copper coins of this period were the worst struck in the entire Byzantine series.

The later years of the seventh century saw sporadic attempts at improvement, often with initial issues of heavy coins at imperial accessions; but none of these efforts proved permanent. Under the Isaurian emperors (717–797) copper coinage began to undergo the same process of simplification as had the gold. Decanummia and pentanummia were last struck in the middle years of the reign of Constantine V (741–775), and half-folles with the value mark K under Leo IV (775–780); the half-folles of Constantine VI (780–797) were half the size of his folles but of the same design, despite the obvious inappropriateness of the numeral M. Dating had been abandoned earlier in the century, with a meaningless XXX NNN having substituted for the ANNO and a numeral (Fig. 37). As for the *officina* marks, the letter A was uniformly retained to fill the vacant space beneath the M. Since nummi had long since ceased to be minted, the concept of “40” was meaningless, and Theophilus finally abandoned the M in favor of an inscription in several lines that filled the field.



37 *Leo V (813–820). Copper follis, reverse; 4.36 g. The obverse has facing busts of Leo V and his son Constantine.*

Under Theophilus' father, Michael II (820–829), the weight of the follis was increased to about 8 grams; this broad, heavy piece was to become the characteristic copper coin of the middle Byzantine period. The normal design, from the reign of Theophilus onward, consisted of an imperial figure or figures on one side, and an inscription giving the emperor's name and title, and perhaps



38 *Leo VI. Copper follis; 7.69 g. The emperor is shown with his brother and co-emperor Alexander.*



39 *Anonymous follis, Class A.2, var. 48 (period of Basil II); 17.93 g. The reverse inscription reads "Jesus Christ, king of those who rule."*

some laudatory epithet like *eusebes*, "pious," or *pistos*, "faithful," on the other (Fig. 38). Under the emperor John I Tzimiskes (969–976) a bust of Christ was substituted for the imperial figure, and the inscription "Jesus Christ, king of those who rule," for the imperial name and title. Thus was initiated the series of so-called anonymous folles (Fig. 39), which were to continue, with a variety of designs, until 1092.

The last issues of anonymous folles in the 1080s were poorly struck coins weighing generally no more than 6 grams. In 1092 Alexius I abolished the denomination and replaced it with a small copper coin that, unlike all the higher denominations, was flat instead of concave. Since it was about the same size as the former gold tetarteron, resembled it in general appearance, and was possibly worth a quarter of the final follis of the 1080s, it was in turn called a tetarteron or tetarton. Tetartera were struck in profusion during the twelfth century at Constantinople and Thessalonica, with a great variety of designs: busts or standing figures of the emperors, representations of Christ, the Virgin (Fig. 40), and saints, and imperial or other monograms. There are sometimes half-tetartera, and one issue of Alexius I was, most unusually, of lead, which allowed for a larger coin than a copper one would have been. In the thirteenth century the denomination became appreciably rarer, no doubt because of the declining value of the billon trachy, which by then had itself degenerated into a copper coin.



40 *John II. Copper tetarteron; 4.66 g.*



41 *Andronicus II. Copper assarion; 1.82 g. The reverse type is inspired by the western denier tournois, and its inscription reads "Autokratores Romaion" (cf. Fig. 26).*

In the late thirteenth century the tetarteron-like copper coins disappeared, to be replaced by thinner and slightly broader coins that were known by the old Roman name of assaria (Fig. 41). Under Andronicus II and Andronicus III (1328–41) their designs were probably changed annually, and are consequently extraordinarily varied, but the slovenly striking and poor preservation of most specimens make their details difficult to reconstruct. Paucity of hoard evidence also leaves their precise dating uncertain. When the heavy silver stavraton was introduced in 1367, the assaria were replaced by two copper denominations, one called a tournesion (*tornese* in Italian), since some of the coins were modeled on the *denier tournois* of Frankish Greece, and the other called a follaro, a tiny piece less than 1 gram in weight, which had only its name in common with the old follis (Fig. 42).



42 *Manuel II. Copper follaro; 0.56 g.*

TYPES and Inscriptions

Coin types are distinguished from pieces of unstruck metal by their designs—numismatists call these “types”—and by their inscriptions. Types and inscriptions have basically two functions: (1) to identify coins to users (and thereby to distinguish them from other coins with which they might be confused), and (2) to disseminate propaganda. Coins are issued by the authority of the state, which alone has the power to transmute pieces of metal of appropriate weight and fineness into objects accepted by law as representing specific denominations. Since coins circulate widely through the population, they can be used to provide an image of the ruler and express government policies, often specifically with regard to the succession. Inscriptions can perform such functions more precisely than types, but in societies of limited literacy they have the disadvantage of being less widely understood.

Coin types are too varied to be categorized in any very exact fashion. Most of those current in Byzantium fall into one of three groups: ruler representations, religious images, and “functional” types consisting mainly of marks of value. Pictorial types in the literal sense, such as objects or images taken from nature or representations of public buildings and events, play almost no role at all, making Byzantine coinage in this respect much less interesting than that of ancient Greece and Rome. As for pictorial types of symbolic content, those related to the army (e.g., the emperor slaying a fallen enemy or dragging a captive by the hair) are still common on fourth-century coins, but appear less frequently in the fifth century and are virtually unknown later. It is also quite ex-



43 *Romanus IV (1068–71). Gold histamenon, reverse; 4.41 g. The obverse has standing figures of Michael VII and his two brothers.*



44 *John V. Small copper coin, reverse; 1.58 g. Minted at Thessalonica in late 14th century (ca. 1365–76). The obverse has a standing figure of the emperor beside what appears to be a shrine.*

ceptional to find an imperial marriage (Fig. 43) or a narrative religious scene, although the martyrdom of St. Demetrius does figure on a small copper coin of the late fourteenth century (Fig. 44). Marks of value, in the form of a large Greek or Latin numeral, are confined to the copper and only used for about three and a half centuries, from their introduction by Anastasius I in 498 to their disappearance in the ninth century.

Ruler Representations

Roman imperial portraiture, almost always taking the form of profile heads or busts, is vigorous, naturalistic, diversified, and in high relief; it represents one of the outstanding achievements of numismatic art (Fig. 45). On Byzantine coins, facing figures are substituted for those in profile, and charac-



45 *Diocletian. Light gold aureus, obverse; 3.65 g. The reverse has a standing figure of Jupiter.*



46 *Licinius. Gold aureus, obverse; 5.28 g. Struck at Nicomedia. The reverse has a seated figure of Jupiter.*

terized likenesses virtually disappear. The differing personalities of individual emperors are swallowed up in the majesty of the office they hold.

This transition began in the fourth century. Licinius (307–324) experimented with a facing bust on some of his coins, but within the conventions of classical portraiture and with results that can only be described as ludicrous (Fig. 46). Constantius II (337–361) introduced a three-quarter facing bust on

his later *solidi*, and although this practice was discontinued by his more traditional-minded successors, profile busts of late-fourth-century emperors are virtually characterless and interchangeable. In 395 Arcadius (383–408) reintroduced the three-quarter facing bust for his *solidus* (Fig. 47). This arrangement dominated the coinage of the east throughout the fifth century, though profile busts remained normal in the west and were retained in the east for coins of empresses, for the lower denominations of gold, and for the whole of the silver and copper coinage. Justinian I in 539 made the imperial bust on the *solidus* completely frontal and extended its use to the higher denominations of copper (Fig. 35). In 720 the imperial effigy was dropped entirely from the silver and replaced by an inscription in several lines that gave the emperor's name and title (Fig. 20).



47 *Arcadius. Gold solidus, obverse. Minted after 395; 4.44 g. The reverse has a seated figure of Constantinopolis.*

Down to the eleventh century the usual imperial type was a facing bust, but thereafter a standing figure, in company with Christ or one of the saints, was more common (Fig. 17). The change was neither unheralded nor complete, however: standing figures had occurred earlier, as on much of the coinage of Heraclius, and busts came again into fashion in the last century of the empire. Seated figures are rare, and are usually reserved for coins showing pairs of emperors. Rarer still are coins showing the emperor on horseback, as on some coins of John V (1341–91) and Manuel II (1391–1425), or prostrating himself before Christ, as on hyperpyra of Andronicus II (Fig. 18).

The reason for showing several emperors together on the same coin was essentially propagandistic: the ruler wished to familiarize the public with the name and effigy of his intended successor. In the fourth century it had been possible for coins to be struck in the name of a junior emperor only, but in the sixth century, when a succession of emperors were childless and joint rule was exceptional, the practice was to show the two emperors seated or standing side

by side, as on solidi from the four-month joint reign of Justin I and his nephew Justinian I (1 April–1 August 527; Fig. 48). This practice was continued in the seventh century, Heraclius appearing first in association with his eldest son, Heraclius Constantine (613–632), and later with his second son, Heraclonas, as well (632–641), and Constans II appearing first with his eldest son, Constantine IV, and subsequently with the latter's brothers, Tiberius and Heraclius (Fig. 8). From the eighth to the tenth century the normal pattern was for coins to show two emperors, but co-rulership went out of fashion in the eleventh century and was common again only in the fourteenth.



48 *Justin I with Justinian I. Gold solidus, obverse; 4.40 g. The reverse has a facing angel.*

Groups of co-emperors were arranged on the coins according to a fairly strict protocol. When there were only two figures, the senior was placed on the left (from the spectator's point of view; Fig. 19); when there were three, the senior was in the center, the next senior on the right, and the junior on the left (Fig. 8). The relationship of the senior and the junior was usually emphasized by a size differentiation—this would be natural, for the junior would normally start as a child—and by seemingly insignificant details of design. For example, if the two emperors hold the staff of a long cross or standard, the senior's hand will normally be above that of his colleague (Fig. 13). Very occasionally, if a senior emperor wished to show special honor to his junior colleague (e.g., on the occasion of the latter's coronation), he might accord him the more distinguished position. It was in any case entirely at the senior emperor's discretion whether to place his co-ruler's image on the coins at all. Many emperors did not do so, or limited the appearance of a colleague to ceremonial coins issued to celebrate his coronation.

There are two groups of "colleagues" who do not fall into the category of potential successors. The first consists of empresses. Some, like Irene (797–802) and Theodora (1055–56), ruled in their own right and minted their own coins

(Fig. 49). Others appeared on coins as regents during the minorities of their sons (e.g., Zoe for Constantine VII), or because they were the effective sovereigns (e.g., Sophia during the reign of her insane husband Justin II), or simply because they had given birth to an heir apparent and their consorts wished to show them honor (e.g., Martina during some years of Heraclius' reign). But neither Sophia nor Martina was ever shown on the most important coinage, that of gold, and Martina's unpopularity caused her to be dropped from Heraclius' later coins. Her unpopularity indeed ultimately resulted in a reaction against the presence of *augustae* on the coins at all.



49 *Theodora. Gold tetarteron, reverse; 3.87 g. The obverse has a bust of Christ.*

The second group of “colleagues” on coins consists of ancestors, and their presence was limited to some reigns of the Isaurian and Amorion dynasties in the eighth and ninth centuries (Fig. 10). Constantine V began by placing the bust of his father, Leo III, on the reverse of his coins. This action may have occurred partly because users had become accustomed during preceding decades to seeing two emperors on the coins, and partly because Constantine’s family may have been influenced by the Islamic practice of adding patronymics to their personal names. But the practice of representing ancestors on the coinage carried with it the inevitable problem of overcrowding, to say nothing of the difficulty of integrating effigies and marks of value in the case of the copper. It is consequently not surprising that the custom was dropped in the 780s and revived only once later, under Anna of Savoy, during the minority of her son John (Fig. 50).



50 *John V. Hyperpyron of badly debased gold; 4.00 g. The obverse shows a standing figure of Anna and a smaller one of John V; the reverse shows Andronicus III (deceased) kneeling before Christ.*

Imperial costume varied over the centuries. From the fourth to the early seventh century the emperor was fairly consistently shown in military dress, since such dress was inherent to the office of imperator (Fig. 4). In the seventh century it became less common, and under the Isaurians military types disappeared completely, and were absent for the next three hundred years. In the eleventh century such types were revived, but the emperor was now normally shown standing armed with a sword (Fig. 51), whereas in earlier times he had regularly been armed with a spear. The two forms of civilian dress preferred between the seventh and the eleventh centuries were the chlamys (Fig. 8), a long purple cloak fastened at the right shoulder by a fibula and decorated with a panel known as a tablion, and the loros, the traditional consular dress. The loros evolved into an elaborate jeweled scarf and eventually into a robe with a long train that was brought around the right side of the body and hung down over the emperor's extended left forearm (Fig. 9; rear cover). It was worn by the emperor during the religious ceremonies of Easter Sunday, for the long scarf wrapped around the emperor like a winding sheet was thought to associate him with the dead and resurrected Christ.



51 *Isaac I (1057-59). Gold histamenon, reverse; 4.37 g. The obverse has a seated figure of Christ.*

Imperial insignia included the globus cruciger, an orb surmounted by a cross signifying the heavenly basis of imperial rule, and the mappa, a handkerchief used to signal the start of the games. The latter was originally a consular emblem but in time was amalgamated with a scroll, becoming a small cylindrical object with jeweled ends known as an akakia (Fig. 56). Another consular



52 *Tiberius II. Copper follis, obverse; 17.18 g. The reverse has a mark of value and a date, year 5. Because Tiberius' regnal years are dated from his association as Caesar in December 574, year 5 of his reign was in 579.*

emblem was the scipio, an ivory scepter surmounted by an eagle, which was often borne by emperors on coins of the fourth to the sixth century (Fig. 52), but which disappeared with Philippicus (711–713). From the fifth century onward, long-shafted scepters often take the form of a cross, either plain or decorated, or of a labarum (Fig. 16), a scepter with a rectangular head elaborately ornamented or inscribed with a Christogram—usually reduced to the letter X or a quincunx—which derived from the Roman legionary standard. The imperial crown, when not shown in the form of a simple diadem, is characterized by pendilia hanging down on either side (Fig. 12). The crowns of empresses usually have longer pendilia and are distinguished from the crowns of their consorts by the presence of a circlet of sharply pointed triangular plaques or pinnacles (Fig. 49).

Characterized portraiture is completely absent on coins of the fifth and sixth centuries. It was revived by Phocas, who is shown on his coins with the shaggy locks and untidy beard that are familiar from a bronze weight in the British Museum (Figs. 53, 54). Heraclius in later life and his grandson Constans II (Fig. 8) are remarkable for their vast beards. A strong element of portraiture



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53 *Phocas. Gold solidus, obverse; 4.38 g. The reverse has a facing angel.*



54 *Bronze steelyard weight of the emperor Phocas. British Museum.*



55 *Justinian II. Gold solidus, obverse; 4.49 g. The reverse has a cross on steps.*



56 *Leontius. Gold solidus, obverse; 4.31 g. The reverse has a cross on steps.*

exists in coins of the late seventh century, when the imperial mint had the services of a die-sinker of talent who rendered admirably the wispy mustache of Constantine IV, the youthful features of Justinian II (Fig. 55), and the fat, bearded face of Leontius (695–698; Fig. 56). Portraiture was again absent during the Isaurian and Amorion periods, when faces were depicted in a purely linear manner (Fig. 10). Under the Macedonians the same tradition remained dominant, but there are occasional issues showing what are clearly intended to be personal likenesses of Leo VI, Romanus I (920–944), Constantine VII (Fig. 12), and Romanus II (959–963). Larger and much more impressive versions of these occur on imperial seals and ivories (Fig. 57).



57 *Constantine VII. Upper part of the left wing of an ivory triptych. Dumbarton Oaks.*

Personalized elements continue to appear on some eleventh-century coins, as, for example, on those of Constantine VIII (Fig. 58), whose beard, growing in profusion on the cheeks and combed forward to conceal the absence of hair

on the chin, corresponds closely to Psellus' description of the beard of Constantine's brother, Basil II. But personal elements are often absent. The rare *histamenon* of Zoe and Theodora (1042; Fig. 59) gives neither empress any recognizable features, although we know from Psellus that the two sisters differed as much in personal appearance as they did in character and disposition. In the twelfth century Andronicus I's coins show him with a long forked beard, a feature noted in the written sources; such beards subsequently became fashionable and are found on the coins of a number of his successors. The effigies of the last Palaeologan emperors can only be regarded as grotesque (Figs. 27, 28).



58 *Constantine VIII. Gold histamenon, reverse; 4.41 g. The obverse has a seated figure of Christ.*

2:1



59 *Zoe and Theodora. Gold histamenon, reverse; 4.41 g. The obverse has a bust of the Virgin.*

2:1

Religious Types

Coins of the early Roman Empire had displayed a rich variety of religious types, with well-known pagan deities being supplemented by allegorical representations of provinces or towns (e.g., Britannia) or personifications announcing objectives of imperial policy (e.g., Concordia). With the adoption of Christianity in the fourth century all of these disappeared, with the exceptions of Roma and Constantinopolis, whose allegorical character was self-evident, and Victory, who formed the focus of too many hopes and aspirations to be lightly abandoned. Roma, usually represented as a seated, helmeted figure, and Con-

stantinopolis, distinguished from Roma by having her foot on the prow of a ship, which symbolized Constantine's naval victory over Licinius in the Hellespont, were frequent coin types during the fourth and fifth centuries, but then disappeared. When Constantinopolis appeared for the last time, on solidi of Justin II (Fig. 60), she was already so unfamiliar that some users thought her to represent the goddess Venus. Victory had slightly greater staying power. Ubiquitous on coins of the fourth and fifth centuries, she lasted through the sixth and made her last appearance, in a very subordinate role surmounting an orb, on coins struck by Heraclius after his defeat of the Persians in 629.



60 *Justin II. Gold solidus, reverse; 4.33 g. The obverse has a facing bust of the emperor.*

In view of the major role played by religion in Byzantine life, one would expect pagan types to have been quickly replaced by Christian ones after the conversion of Constantine I. This was not the case, since Christian iconography was slow to assert itself in the fourth century and emperors had to take account of public opinion, and particularly of the sentiments of the army, which was probably much less Christian than our written sources suggest. It is true that Christian symbols such as the Christogram and the cross already figure on coins of the fourth century, but they normally do so in a subordinate capacity. The cross as a major element in coin design became prominent only in the fifth century, and the common use of representations of Christ on coins did not begin until the ninth. Coin types of the Virgin became frequent only in the eleventh century, while those of other saints did not become common until the twelfth.

The most obvious and satisfactory religious devices to be represented on coins were the monogram of Christ (i.e., the Christogram, which conveyed an Orthodox, anti-Arian claim) and the cross. They were simple to design and did not offend Christians concerned with the propriety of representing Christ in



61 *Constantine I. Silver medallion, obverse; 6.36 g. Struck in 315 after Constantine's victory over Maxentius at the Milvian Bridge (312). The reverse has a figure of the emperor addressing soldiers.*

person. At first these devices were used very discreetly, the Christogram as a decoration on the helmet of Constantine I (Fig. 61), and either a Christogram or a cross as an issue mark in the field. The fifth century, however, was a time of decisive changes in Byzantine art, and, unsurprisingly, Christianization was reflected in the coinage: a cross in a wreath became one of the main types of the tremissis, while a Victory holding a long cross was the chief solidus type in the east from 420 onward. Justin I (518–527) transformed the profile female Victory, with a high girdle beneath her breasts (Fig. 4), into a facing angel of indeterminate sex, while Tiberius II dispensed with the angel, making a cross potent on steps the reverse type of his solidus (Fig. 5). It was to occupy this position throughout the seventh century. In 720 Leo III transferred the cross to his newly constituted silver coin, the miliaresion (Fig. 20), since he preferred to use a bust of his son and colleague Constantine V as the reverse type on his gold. The cross remained characteristic of the miliaresion until the eleventh century, when it began to be displaced by representations of the Virgin or Christ. History repeated itself, however, for as the cross was gradually removed from the silver, room was found for it on the copper, where it became fairly common between the eleventh and the thirteenth centuries.

The earliest and most important figurative religious representations on Byzantine coins are those of Christ. Two quite different busts of Christ were introduced in succession by Justinian II (685–695; 705–711)—the first a majestic bearded face, which seems ultimately to derive from that of the Phidian Zeus, stressing his divine nature (Fig. 9); the other a youthful head with a mop of closely curled hair, a portrait type that referred to his human nature and was considered to be more “true,” which is believed to have originated in Syria (Fig. 62). The second variant never appeared again, though a bust of the infant Jesus



62 *Justinian II. Gold solidus, obverse; 4.27 g. The reverse has a bust of the emperor.*



63 *Manuel I. Gold hyperpyron, obverse; 4.28 g. The reverse has a standing figure of the emperor.*

(Christ Emmanuel) was introduced by Manuel I (1143–80; Fig. 63) as a play on his name and was used by many of his successors, but the first, in cruder form, was revived under Michael III a century and a half later (Fig. 11). Basil I (867–886) replaced it in 867 with an image of Christ enthroned (Fig. 64), and thenceforward representations of Christ are a regular feature of the coinage. Some of the types derive from well-known icons of the capital. The earliest seated Christ probably reproduced the figure in the conch of the apse above the imperial throne in the Chrysotriklinos of the Great Palace, initially set up under Justin II and restored between 856 and 866, while the bust of Christ Pantocrator (Fig. 13) had first been used in the post-Iconoclastic period to decorate the summit of the dome in Byzantine churches (Fig. 65). Within each type, and especially in the Pantocrator bust and the icons of Christ enthroned, one can follow closely the evolution of artistic fashions and concepts.



64 *Basil I. Gold solidus, obverse; 4.46 g. The reverse has facing busts of Basil I and his eldest son, Constantine.*



65 (left) Church of the Dormition, Daphne. Bust of Christ Pantocrator; dome mosaic. Ca. 1100.



2:1
(see Fig. 13)

Second in importance to the representations of Christ are those of the Virgin, which, after occasional appearances in the tenth century (Fig. 23), proliferate on coinage from the 1030s onward. The emperor Romanus III (1028–34) had a particular devotion to the Virgin, founding in Constantinople the monastery of St. Mary Peribleptos and bringing to light an old icon of the Theotokos Nikopoios (literally, “the Mother of God who brings victory”) in the church of the Blachernae. The Virgin is represented on coins in various manners: as a bust or standing figure with hands raised in the traditional gesture of prayer (Blachernitissa; Fig. 24), later represented inside the walls of Constantinople the “God-Guarded City” (Fig. 18); as a bust holding a medallion of Christ (Nikopoios; Fig. 23); as a standing figure holding in her arms the infant Jesus (Hodegetria; Fig. 66); and as a seated figure, usually with a medallion of Christ



66 Romanus III. Silver miliaresion, obverse; 2.44 g (damaged). The reverse has a standing figure of the emperor. The inscription starts on the obverse and reads “O Virgin all-glorious, he who places his hope in thee will prosper in all that he does.”

2:1



67 *Ivory icon of the Virgin Hodegetria. Utrecht, Archebiscopal Museum. Mid-10th century.*

on her lap. Her costume is always the same: a long-sleeved tunic and a veil (the maphorion), which covers her head and falls to the level of her ankles. At her forehead and shoulders the maphorion is decorated with four pellets in the form of a cross (Fig. 23). Like the depictions of Christ, some of these representations of the Virgin correspond to well-known icons: the Hodegetria, for example, reputedly painted by St. Luke, was preserved in the church of that name near Seraglio Point in Constantinople (Fig. 67, ivory version).

Saints first appear on coins in the tenth and eleventh centuries, but become common as coin types only from the twelfth century onward. For the most part they are military in character and include Sts. Michael, Demetrius (Fig. 44), George (Fig. 17), and Theodore, as well as the sanctified emperor Constantine. In the thirteenth century additional saints appeared, notably Nicholas and Tryphon, but they never attained the same degree of popularity, any more than did representations of seraphim and cherubim, which appeared in the Nicene period and under the Palaeologans. Usually there is no clue to the rationale

behind the choice of a particular saint. However, St. Demetrius was particularly venerated at Thessalonica, and St. Tryphon at Nicaea, while some emperors showed a predilection for the saints after whom they were named. St. Michael is shown presenting the emperor to Christ on hyperpyra of Michael VIII; an assarion of Andronicus II has as its obverse type the obscure St. Andronicus; and two rare coins of John V depict St. John the Baptist, known in Greek as *Prodromos* (“the Forerunner”).



68 *Alexius I. Debased trachy nomisma, reverse; 3.65 g. Struck at Thessalonica in 1081–92. The obverse has a bust of Christ.*

Often Christ, the Virgin, or a saint is shown directly associated with the emperor. The Virgin may bless him or hold jointly with him a long cross or labarum; military saints do the same (Fig. 17), or hand him a sword or other symbol of power (Fig. 68). When the Virgin is shown touching the emperor’s head (Fig. 69), she is often regarded as crowning him, but the gesture is no more than one of benediction; the emperor owes his crown to Christ, and sometimes a Hand of God or a suspended crown is shown above his head (Fig. 13). The depiction of the Virgin or a saint in company with the emperor raised a delicate question of protocol, for one would expect the holy figure to be accorded the position of honor, on the spectator’s left. The Virgin does indeed



69 *Romanus III. Gold histamenon, reverse; 4.42 g. The obverse has a seated figure of Christ. The emperor wears the loros in its simplified form.*

occupy this position on the earliest coin on which this situation arose, a nomisma of Nicephorus II Phocas. Subsequently, however, the emperor is normally shown on the left, partly to do him honor and partly because it was thereby easier to show the heavenly personage using his or her right hand to touch the emperor's crown or to hold some symbol. In the latter case, superiority is shown by the positioning of the saint's hand above that of the emperor (Fig. 17).

Inscriptions

A feature of coin inscriptions in many periods is their extreme conservatism, most notably in their employment of traditional formulae and of languages no longer in common use. In Byzantium this conservatism is manifest in the long delay before Latin (language and script) was entirely replaced by Greek, although denomination marks were usually in Greek right from the start. The earliest Greek inscription to appear on the coins is the phrase *en touto nika* ("in this [sign] conquer") used on the earliest folles of Constans II; these were the words that accompanied the Christogram in Constantine's vision before the battle of the Milvian Bridge. Only in the mid-eleventh century was the replacement of Latin characters by Greek completed, and then only after a long period during which they were used indiscriminately, with C having the value of "K" in one place and of "S" in another.

The distinctive imperial titulature on early Byzantine coinage took shape in the mid-fourth century, with DN (*Dominus noster*, "Our Lord") preceding the emperor's name, and PF (*pious felix*, "pious, fortunate") or PP (*perpetuus*, "eternal") AVG[ustus] following it (Fig. 4). By the end of the seventh century the letters DN and PFAVG had ceased to be generally intelligible. In the early eighth century the first formula was dropped and the second replaced by PAMVLT (*per annos multos*, "for many years"), an imperial acclamation that was, significantly, still used in Latin during court ceremonies. The Latin term

augustus did not survive the eighth century, being replaced on coins by a variety of equivalent Greek terms, such as *despotes*, *basileus* (Fig. 20), or *autokrator*. Epithets such as *doulos Christou* (“servant of Christ”) and *eusebes* (“pious”) were sometimes added, or the phrase *en Christo, en Theo* (“in Christ, in God”), the latter being the equivalent of the western formula *Dei Gratia* (“by the grace of God”).



70 *Michael VI (1056–57). Silver two-thirds miliaresion, reverse; 1.65 g. The obverse has a bust of the Virgin. The inscription reads ‘Mother of God, help Michael, orthodox emperor.’*

One epithet of particular interest is *orthodoxos* (Fig. 70). It was used by two rulers of the mid-eleventh century, who thereby intended to assert the “orthodoxy” of eastern sovereigns during the conflict with Rome that resulted in the schism of 1054. Yet another epithet is *porphyrogenitus* (“purple-born”), which signified that an emperor had been born in the porphyry-lined chamber in the palace, i.e., after his father’s accession to power. It is used on a coin of Constantine VII (Fig. 71), who had an interest in asserting the legitimacy of his birth against those who denied the validity of his father Leo VI’s fourth marriage; it was used again under John II Comnenus (1118–43), the first emperor for over a century who had come to the throne by hereditary succession. Beginning in the eleventh century, family names, which had progressively come into use from the eighth century onward, were added to personal ones in coin inscriptions (Fig. 24). A notable feature of imperial inscriptions from the reign of Alexius I onward is the frequency with which they are arranged in vertical columns (Fig. 16), like those accompanying figures in church mosaics, instead of following the circumference of the coin as was customary earlier.



71 *Constantine VII. Silver miliaresion, obverse; 3.20 g. The inscription reads ‘Constantine porphyrogenitus and Romanus, in Christ, faithful emperors of the Romans.’ The reverse has an elaborate cross on steps.*

Reverse inscriptions were also initially in Latin, and usually between the fourth and the seventh centuries they supplemented the Victory or the cross that formed the type by including some reference to Victory, such as *Victoria Augustorum*, “the Victory of the emperors” (Fig. 7). In the fourth and the early fifth centuries the number of associated emperors was indicated by the number of Gs in AVG[GG], but in the second half of the fifth century this became standardized to three Gs and later to two, even if there was only a single emperor (Figs. 4, 5). In the Isaurian period, with the replacement of the cross by a second imperial figure, the latter’s name and sometimes his relationship to the reigning emperor are given. Leo IV’s nomismata, for example, have a long inscription identifying on the reverse “Leo the grandfather, Constantine the father,” and on the obverse, “Leo the son and grandson, Constantine the young” (Fig. 10). The religious types from the ninth century onward are accompanied by appropriate inscriptions, at first partly in Latin (e.g., *IHS XPS REX REGNANTIVM* [“Jesus Christ, king of those who rule”]), but later wholly in Greek.

Occasionally there are long inscriptions reading from one side of the coin to the other. The miliaresion of Romanus III, for example, shows a standing Virgin Hodegetria (literally, “the one who leads the way”) with the following metrical text: “O Virgin all-glorious, he who places his hope in thee will prosper in all that he does” (Fig. 66). The double circle of inscriptions on the reverse sides of the stavrata of John V (Fig. 27) and of his successors made possible a long sequence of imperial titles, though the lettering is by that time so bad that the inscriptions are never wholly legible. Indeed, it is with coins like these last ones that we find ourselves in the twilight of Byzantium’s long and distinguished numismatic tradition, a decline manifested in figural representations as well. Few greater contrasts can be imagined than that between the deplorable effigy of John VIII (1425–48) on his coinage (Fig. 72) and the



72 *John VIII. Silver stavraton; 6.21 g. The inscription should read, starting on the inner circle, “Lord (despotes) John Palaeologus, by the grace of God emperor of the Romans.”*

splendid medal of the same emperor made by Pisanello when John VIII journeyed to Italy in 1438 for the councils of Ferrara and Florence in a vain search for aid against the Turks (Fig. 73). Byzantium was dying, and its tradition of numismatic excellence, received centuries earlier from the Romans, was passing back to the West—to a dawning Renaissance.



73 *John VIII. Bronze medal by Pisanello (ca. 1395–1455). British Museum. The inscription, with Greek accents carefully indicated, reads “John Palaeologus, emperor and autocrat of the Romans.”*

The Byzantine Monetary System

The gold and silver coins are of pure metal unless otherwise indicated.

I. The Sixth to the Seventh Century (from 498)

Metal	Denomination	Weight/Purity	Exchange Ratio
Gold	Solidus nomisma	4.55 g	1
	Semissis	2.27 g	2
	Tremissis	1.50 g	3
Silver	Hexagram (from 615)	6.72 g	12
Copper	Follis		288
	Half-follis		576
	Decanummium		1152
	Pentanummium		2304
	Nummus		11520

II. The Eighth to the Eleventh Century

Metal	Denomination	Weight/Purity	Exchange Ratio
Gold *	Solidus nomisma	4.55 g; purity falling to 70% Au, eventually 11% Au	1
Silver **	Miliaresion	ca. 2.27 to 3 g	12
Copper	Follis	ca. 14 g, falling to 3 g	288

* From the late 10th century, light nomismata of 22 carats (tetartera), weighing 4.13 g, were also struck. The full-weight nomismata were called histamena.

**In the 11th century, fractions of 2/3 and 1/3 miliaresion were also struck.

III. The Period of the Gold Hyperpyron (12th–Early 14th Century)

Metal	Denomination	Weight/Purity	Exchange Ratio
Gold	Hyperpyron nomisma (concave)	4.55 g; 85% Au, eventually ca. 60% Au	1
Electrum	Nomisma trachyaspron (concave)	4.55 g; 30 to 10% Au, eventually pure Ag	3 (eventually 12)
Billon	Aspron trachy (stamenon) (concave)	4.55 g; 6 to 2% Ag, eventually pure Cu	48 (eventually 288 to 384)
Copper	Tetarteron (flat)	ca. 4 g	864 (eventually 768?)
	Half-tetarteron (flat)	ca. 2 g	1728(?)

IV. The Period of the Basilicon and the Assarion

Metal	Denomination	Weight/Purity	Exchange Ratio
Gold	Hyperpyron nomisma (concave)	60 to 50% Au	1
Silver	Basilicon (flat)	ca. 2 g	12
Billon	Tournesion (concave)	ca. 1 g; ca. 25% Ag	96
Copper	Trachy (concave)	ca. 0.75 g	384
	Assarion (flat)	ca. 3 to 4 g	768

V. The Period of Silver Hyperpyron/Stavraton (1367–1453)

Metal	Denomination	Weight/Purity	Exchange Ratio
Money of account	Notional gold hyperpyron		1
Silver (ca. 95% Ag)	Stavraton	ca. 8.50 g, eventually ca. 7.40 g	2
	Half-stavraton	ca. 4.40 g, eventually ca. 3.70 g	4
	Doucatopoulon (<i>duchatelo</i> /aspron)	ca. 1.10 g	16
Copper	Tournesion	ca. 2.40 g	192
	Follaro	ca. 0.80 g	576(?)

Byzantine Emperors

Emperors and Co-emperors	Dates
Anastasius I	491–518
Justin I	518–527
with Justinian I	527 (April–August)
Justinian I	527–565
Justin II	565–578
with Tiberius II	578 (August)
Tiberius II	578–582
Maurice	582–602
Phocas	602–610
 <i>Heraclian Dynasty</i>	
Heraclius	610–641
with Heraclius Constantine	613–641
and with Heraclonas	632–641
Heraclius Constantine and Heraclonas	641 (February–May)
Heraclonas	641 (May–September)
Constans II	641–668
with Constantine IV	654–668
and with Heraclius and Tiberius	659–668

Constantine IV Pogonatus	668–685
with Heraclius and Tiberius	668–681
Justinian II, first reign	685–695
Leontius	695–698
Tiberius III Apsimar	698–705
Justinian II, restored, with Tiberius	705–711
Philippicus (Bardanes)	711–713
Anastasius II Artemius	713–715
Theodosius III	715–717
<i>Isaurian Dynasty</i>	
Leo III the Isaurian	717–741
with Constantine V	720–741
Constantine V Copronymus	741–775
with Leo IV	751–775
Artavasdus (usurper)	742–743
Leo IV the Khazar	775–780
with Constantine VI	776–780
Constantine VI	780–797
Irene	797–802
Nicephorus I	802–811
with Stauracius	803–811
Stauracius	811
Michael I Rangabe, with Theophylact	811–813
Leo V the Armenian, with Constantine	813–820

Amorian Dynasty

Michael II the Amorian	820–829
with Theophilus	821–829
Theophilus	829–842
with Constantine	830(?)
with Michael III	840–842
Michael III	842–867
with Basil I	866–867

Macedonian Dynasty

Basil I the Macedonian	867–886
with Constantine	867/8–879
and with Leo VI	870–886
and with Alexander	879–886
Leo VI the Wise	886–912
with Alexander and Constantine VII	908–912
Alexander, with Constantine VII	912–913
Constantine VII Porphyrogenitus	913–959
with Zoe	913–919
with Romanus I Lecapenus	920–944
and with Christopher Lecapenus	921–931
and with Stephen and Constantine Lecapenus	924–945
with Romanus II	945–959
Romanus II	959–963
with Basil II	960–963
and with Constantine VIII	962–963
Nicephorus II Phocas	963–969
John I Tzimisces	969–976
Basil II Bulgaroctonos, with Constantine VIII	976–1025

Constantine VIII	1025–28
Romanus III Argyrus	1028–34
Michael IV the Paphlagonian	1034–41
Zoe, with Michael V Calaphates	1041–42
Zoe and Theodora	1042
Constantine IX Monomachus	1042–55
Theodora	1055–56

Michael VI Stratioticus	1056–57
Isaac I Comnenus	1057–59
Constantine X Ducas	1059–67
Romanus IV Diogenes	1068–71
Michael VII Ducas	1071–78
Nicephorus III Botaniates	1078–81

Comnenian Dynasty

Alexius I	1081–1118
with John II	1092–1118
John II	1118–43
Manuel I	1143–80
Alexius II	1180–83
Andronicus I	1183–85

Angelid Dynasty

Isaac II, first reign	1185–95
Alexius III	1195–1203
Isaac II, restored, with Alexius IV	1203–4
Alexius IV	1204
Alexius V Ducas Murzuphlus (usurper)	1204

Lascarids of Nicaea

Theodore I	1204–22
John III Ducas Vatatzes	1222–54
Theodore II	1254–58
John IV	1258–61

Palaeologan Dynasty

Michael VIII	1259–82
with Andronicus II	1272–82
Andronicus II	1282–1328
with Michael IX	1294–1320
and with Andronicus III	1317–28
Andronicus III	1328–41 (intermittently)
John V	1341–91
with John VI Cantacuzene	1347–54
with Matthew Cantacuzene	1353–57
Andronicus IV (usurper)	1376–79
John VII (usurper)	1390
Manuel II	1391–1425
with John VII (regent)	1399–1403
with John VIII	1421–25
John VIII	1425–48
Constantine XI	1449–53

Glossary

assarion	A contemporary Greek term for the type of flat copper coin introduced under Andronicus II. The word is used in the New Testament, in the verse “Are not two sparrows sold for a farthing?” (Luke 12:16).
<i>autokrator</i> (lit. “sole ruler”)	The imperial title employed especially in the late Byzantine period.
<i>basileus</i> (fem. <i>basilissa</i>)	A classical Greek word for “king” and “queen.” Used in Greek literary sources for the emperor and the empress throughout the Byzantine period, and frequently on coins from the eighth century onward.
basilicon	A small silver coin introduced by Andronicus II, modeled on the Venetian silver ducat (q.v.) and called, by analogy with the latter, an “imperial.”
billon	A term used in western mints from the thirteenth century onward for a silver-copper alloy containing less than 50 percent silver. The equivalent Byzantine term is unknown.

Blachernitissa	An icon of the Virgin <i>orans</i> in the church of the Virgin at Blachernae, in the northwestern part of Constantinople, which was regarded as one of the <i>pal-ladia</i> of the city.
carat (<i>keration</i> , Lat. <i>siliqua</i> [q.v.])	A measure of weight in the Mediterranean world based on the carob seed (<i>Ceratonia siliqua</i>) and weighing 1/1728 of the Roman pound, or 0.189 g. Since the solidus (q.v.) weighed 24 carats, the secondary meaning of carat is 1/24 of pure gold, commonly used today as a measure of the fineness (q.v.) of gold.
chlamys	The imperial purple mantle, fastened by a fibula at the right shoulder and decorated with a tablion (q.v.).
Christ Emmanuel	A term used by art historians for representations of the infant Jesus.
Christ Pantocrator (lit. "all-ruler")	A term applied to a particular bust of Christ, showing him clasping a Gospel Book and raising his right hand in benediction.
Christogram	The monogram of IXP, for Ἰησοῦς Χριστός, usually in the form of ✠ but sometimes appearing as † .
cross potent	A cross with a bar at the end of each arm.
decanummium	A copper coin worth 10 nummi (q.v.).
<i>denier tournois</i>	Initially the <i>denier</i> (penny) of base silver struck by the abbots of St. Martin of Tours. Subsequently a coin of

the same type struck by the kings of France and in several Frankish states in Greece after the Fourth Crusade.

despotes (fem. *despoīna*;
lit. “master”)

The Greek equivalent of *Dominus*, which had been part of the imperial title in late Roman and early Byzantine times.

dirham (from Gr. *drachma*)

The standard Islamic silver coin, initially weighing ca. 3 g.

ducat

A term applied to two types of coin of the duchy (*ducatus*) of Venice, whence the name. In the thirteenth and early fourteenth centuries it implies the silver grosso, a coin first struck in 1201 and weighing 2.2 g, imitated a century later in Constantinople under the name of basilicon (q.v.). Subsequently, and normally today, it means the gold ducat (*ducatus aureus*), created in 1284/5 and weighing 3.56 g.

electrum

A term originally referring to a natural alloy of gold and silver found in Asia Minor. Now applied to any alloy of gold in which the proportion of silver or copper is large enough to affect the color.

fineness

The purity of the precious metal content of a coin measured in percentages, thousandths, or carats (q.v.).

follis

A Latin word originally meaning “purse,” but used in the Byzantine period for the largest denomination of copper coin, initially worth 40 nummi (q.v.).

<i>gigliato</i>	A silver coin called after the four large fleurs-de-lis in the angles of the cross on its reverse. First struck by Charles II of Anjou in 1302/3 in Naples, it was subsequently issued by his successors in Provence, and widely used and imitated in the eastern Mediterranean.
<i>gramma</i>	A Greek term for the scruple, a Roman weight of 1.137 g.
hexagram	A silver coin of the seventh century introduced by Heraclius in 615 and weighing 6 <i>grammata</i> (6.82 g), hence its name.
histamenon (lit. “standard”)	A term applied initially to the gold nomisma (q.v.) of full weight, in contrast to the substandard tetarteron (q.v.) introduced by Nicephorus II.
Hodegetria (lit. “the one who leads the way”)	An epithet given to an icon of the Virgin believed to have been painted by St. Luke.
hyperpyron (Lat. <i>perperunx</i> , lit. “highly refined”)	A term initially applied to the gold coin of standard weight, but only 20 1/2 carats (q.v.) fine, introduced by Alexius I in 1092. By extension, a money of account based on this coin. After the gold hyperpyron, by then much debased, ceased to be struck in the mid-fourteenth century, the name was transferred to a large silver coin that replaced it, though the latter had only half the former’s value.

Iconoclasm	A religious movement that involved the destruction of religious images and was official government policy over the years 726–787 and 815–843.
labarum	The Roman standard that Constantine the Great christianized with the Christogram (q.v.).
loros	The elaborately decorated consular robe. In the Byzantine period it had the form of a long jeweled scarf wound round the body, so that one end hung down in front and the other hung over the wearer's left arm. In the late ninth century the scarf began to be replaced by a simplified loros that was put on over the head.
maphorion	The veil worn by the Virgin.
miliaresion (from Lat. <i>miliarensis</i>)	A term for the basic silver coin, reckoned 12 to the solidus (q.v.), from the hexagram (q.v.) onward, though generally limited by numismatists to the coins of thin, broad fabric introduced by Leo III and characteristic of the eighth to the eleventh century.
nomisma	A term meaning "coin," more especially the gold solidus (q.v.). In the late tenth century it was split into two separate denominations, a heavier histamenon (q.v.) and a lighter tetarteron (q.v.). From 1092 onward, the heavier coin was generally termed a hyperpyron (q.v.), while the lighter coin ceased to be struck.

nummus (Gr. <i>nommion</i>)	A Latin term originally meaning “coin,” but in the early Byzantine period normally applied to the smallest copper coin, 1/40 of the follis (q.v.), which served as the base of the accounting system.
<i>obryzum</i> (<i>aurum</i> , Gr. <i>obryzon</i>)	A technical Greek and Latin term for refined gold.
obverse	The side of a coin that bears the more important device, usually the head of a sovereign or, on Byzantine coins at the end of the seventh century and later, after the Restoration of Images in 843, a representation of Christ.
<i>officina</i>	A subdivision of a late Roman or Byzantine mint.
pendilia	Pendants hanging down at each side of the imperial crown.
pentanummium	A bronze or copper coin worth 5 nummi (q.v.).
<i>porphyrogenitus</i>	An emperor’s son “born in the purple,” i.e., in the Porphyra, a porphyry-lined room in the Great Palace, and therefore after his father was already in power.
<i>proskynesis</i> (lit. “obeisance”)	An attitude of salutation or devotion, which can be full prostration, genuflexion, or a simple bow at the waist.
quincunx	An arrangement of five objects in a square, one at each corner and one in the middle.

<i>scyphate</i>	A term often improperly applied to Byzantine coins of concave fabric, since nineteenth-century scholars erroneously supposed that the word <i>scyphatus</i> , found in Italian documents of the eleventh and twelfth centuries, had this meaning.
semissis	A one-half solidus (q.v.), a gold coin weighing 2.25 g.
<i>siliqua</i> (pl. <i>siliquae</i>)	A Latin term for “carat” (q.v.). By extension, a money of account in the late Roman Empire worth 1/24 of the solidus (q.v.), since the latter weighed 24 <i>siliquae</i> . The term is customarily applied by numismatists to the commonest silver denomination of the late Roman Empire on the assumption that its value was 1 <i>siliqua</i> .
solidus	The standard Byzantine gold coin, introduced by Constantine I the Great and struck 72 to the Roman pound, thus weighing 24 carats (q.v.), or 4.55 g.
stamenon	Since the histamena (q.v.) of the mid-eleventh-century were concave, this shortened form was applied to the Byzantine billon (q.v.) and copper concave coins of the twelfth and thirteenth centuries.
stavraton (from Gr. <i>stavros</i> , “cross”)	A name used in the late fourteenth and early fifteenth centuries for silver hyperpyra (q.v.).
tablion	An elaborately decorated rectangle of cloth, sometimes bearing the emperor’s image, that bordered the chlamys (q.v.) at the level of the chest and served much the same purpose as the modern lapel.

tetarteron	A light-weight nomisma (q.v.) introduced by Nicephorus II and struck for a little over a century (ca. 965–1092). After 1092 the name was transferred to a small copper coin that in its small module and thick fabric resembled the gold tetartera of the mid-eleventh century.
token (adj.)	A term referring to the fiduciary nature of a coin whose legal value is higher than its metal one.
tournesion (Ital. <i>tornese</i>)	A coin of low-grade billon (q.v.) and sometimes copper, of various denominations, modeled on the <i>denier tournois</i> (q.v.) in the Palaeologan period.
trachy	A Greek term used for the concave coins struck between the eleventh and the fourteenth centuries, especially those of electrum (q.v.), billon (q.v.), or copper. The word meant basically “rough” or, as used in this context, “not flat,” i.e., concave. See also <i>scyphate</i> .
tremissis	A one-third solidus (q.v.), a coin weighing 1.52 g.
<i>trikephalon</i> (lit. “three-header”)	A name often applied to the one-third hyperpyron (q.v.) of the twelfth century and later, since the earliest regular issue had on it a total of three “heads”—those of the emperor, the Virgin, and Christ, the last in the form of a medallion held by the Virgin.
type	The main design on each face of a coin. By extension, a class of coins united by a common design.

The Dumbarton Oaks Coin Collection

The collection of Byzantine coins at Dumbarton Oaks is probably the largest, and certainly the most comprehensive, that exists. It was assembled, however, in quite a short space of time, essentially between 1947 and 1960. Relatively few coins go back to the time of the founders of Dumbarton Oaks as a scholarly institution, Mildred and Robert Woods Bliss, who in 1940 had transferred their Georgetown house and gardens, together with their collection of Byzantine art objects, the library, and a generous endowment, to the Trustees of Harvard University, to serve as a center of research and scholarship “in the Byzantine and mediaeval humanities.”

The first important group of coins in the collection, some 150 in number, came in 1947 as a gift of G. Howland Shaw (1893–1965), a friend of the Blisses who had been in the diplomatic service in the Near East, though his coins were quite overshadowed by his munificent gift of over 2,000 Byzantine seals. The real origins of the collection, however, came in 1948, with the purchase of the splendid coin cabinet of Hayford Peirce (1883–1946), another family friend. Peirce was not a professional scholar but a cultivated amateur, who had found coins useful in the preparation of the remarkable study, *Byzantine Art*, which he had published in association with another gifted amateur, Royall Tyler, in 1926. His collection, which had been put together in the 1920s and 1930s, amounted to over 4,300 coins, of which some 3,000 were Byzantine. It was bought from his widow in company with his books on Byzantine numismatics, made especially interesting by his copious marginal annotations. In

1948–49 the coins were identified, boxed, and labeled by James D. Breckenridge (1926–82), who had worked on Byzantine coins at Princeton University and with the American Numismatic Society and who was then at the start of a distinguished career in art history.

In 1950 Harvard University was bequeathed another collection of Byzantine coins, that of the art historian and archaeologist Thomas Whittemore (1871–1950), best known for his work of uncovering the mosaics of Hagia Sophia in the 1930s. In November 1953, John S. Thacher, the director of Dumbarton Oaks, invited the British scholar and collector Philip Grierson, who was in the United States as the guest of the American Numismatic Society, to visit the Dumbarton Oaks collection, and in 1954 he and Alfred R. Bellinger (1892–1978), professor of Latin at Yale University and one of the most distinguished American numismatists, returned to study both the Dumbarton Oaks and the Whittemore collections with a view to advising how the two could best be used for scholarly purposes. Under the conditions of Whittemore's will, his collection had to be kept in the Fogg Art Museum at Cambridge, Massachusetts, though duplicates from it could be deposited at Dumbarton Oaks on permanent loan. It was decided to limit the Dumbarton Oaks collection to Byzantine coins and to build it up as rapidly as possible into one of world-class quality and, once this goal had been achieved, to catalogue the two collections as a unit. Bellinger undertook to have the Whittemore coins put in order and to select the duplicates for transfer to Dumbarton Oaks. There the honorary post of advisor in Byzantine numismatics was created for Grierson, with the duty of expanding the collection and in due course, in collaboration with Bellinger, of undertaking its publication. This was to take the form of a series of catalogues, customarily abbreviated as *DOC*, running from the emergence of "Byzantine" coinage under Anastasius I (491–518) to the fall of the empire in 1453.

The building up of the collection was essentially achieved during the next decade. Three major coin cabinets were acquired, effectively in their entirety. The first and smallest consisted of the Byzantine series in Grierson's private

collection of medieval European coins. It was bought by Dumbarton Oaks in 1956 at an independent valuation, since Grierson felt that he ought to cease collecting Byzantine coins himself, in order to avoid a conflict of interest. The second and largest was an immense collection of some 10,000 coins belonging to the Italian diplomat and scholar Tommaso Bertelè (1892–1971), acquired in two sections in 1956 and 1960. The third was that of the Austrian collector Leo Schindler (1885–1957), bought from his widow in 1960. Each had its own particular merits. The 530 coins from the Grierson collection included 120 in gold, many of the fifth century and in very fine condition. The Bertelè collection contained a unique series of Palaeologan coins, virtually unrepresented in the main public collections—those of the British Museum, the Cabinet des médailles at Paris, and the Hermitage at St. Petersburg. The Schindler collection, amounting to nearly 2,500 coins, was particularly rich in copper coins of the sixth and seventh centuries, with an exceptionally good coverage of dates, mints, and *officinae*. In addition to these major acquisitions, many individual coins, and groups of coins, were acquired during this period from dealers and at coin auctions, mainly on the European mainland. The funds for virtually the whole of this extraordinary expansion were provided by the Blisses.

The sorting and labeling of these great numbers of coins, and the disposal of non-Byzantine material and the very large amount of duplicates that the acquisition of collections en bloc inevitably entailed, took up much of Grierson's time between 1956 and 1963. By the latter date the collection had assumed virtually its present form and size (ca. 12,000 coins), and work on the catalogue could begin. All of the Byzantine coins in the Whittemore collection were transferred temporarily from the Fogg Museum to Dumbarton Oaks to facilitate the task. *DOC 1*, published in 1966 and covering the years 491–602, was essentially the work of Bellinger; it followed the lines of Wroth's British Museum catalogue of 1908 while including many more coins—some 4,000 coins compared with 1,350 of the latter. *DOC 2* and 3, covering the periods 602–717 and 717–1081, respectively, and appearing in 1968 and 1973, were the

work of Grierson, though in both cases he had a preliminary draft of the catalogue proper by Bellinger from which to work. Each volume included details of coins in the British Museum and other published collections when these were not represented in the Dumbarton Oaks or the Whittemore collections. *DOC 2* and *3* also attempted a much deeper study of the coinage than *DOC 1*, discussing it in detail from every angle and tracing the changes in coin types and inscriptions over the centuries. Bellinger and Grierson were in due course joined by a third scholar, Michael F. Hendy, who had initially been brought in to identify and label the Comnenian and Palaeologan coins. He subsequently returned to study in depth the coinage of the twelfth and thirteenth centuries, on which in 1969 he produced an authoritative monograph, *Coinage and Money in the Byzantine Empire, 1081–1261*.

After 1973 there was a lull in major publications, not broken until the appearance in 1992 of the catalogue of the late Roman coins, from Arcadius and Honorius to the accession of Anastasius I. It was the joint work of Grierson and a much younger colleague, Melinda Mays, an expert in Celtic coins from Oxford University. The possible inclusion of the period 383–491 in *DOC 1* had been discussed in 1963, when the catalogue was initially planned, but it was then decided that it was too inadequately represented, with only some 600 coins, for its coverage to be justified. By 1990 this situation had been remedied through systematic purchases, and the 950 coins by then in the collection were now presented in sylloge form, all the coins being illustrated, with their summary descriptions facing each plate. The volume included a substantial introduction by Grierson of the same kind as those to *DOC 2* and *3*.

The volume on late Roman coins has something of the appearance of an afterthought, since it does not form part of the numbered sequence of volumes, but this is because its coins do not belong to what numismatists have come to regard as the “Byzantine” series. The long delay in the production of *DOC 4* and *5* seems more surprising, but it was in fact the appearance of *DOC 1–3* in such rapid succession that was abnormal. It had been largely made possible by

Bellinger, who had by then retired from Yale University, taking up residence at Dumbarton Oaks in 1963 and making it his home for three years in order to be able to work on the project full-time. This was not possible, however, for Hendy, who had undertaken to produce *DOC 4*, or for Grierson, who was responsible for *DOC 5*. Although they made slow progress with these, they in the meantime produced substantial volumes that were in some measure preparatory works for the former—Grierson, a large manual, *Byzantine Coins*, in 1982, and Hendy, an even more impressive volume entitled *Studies in the Byzantine Monetary Economy, c. 300–1450*, in 1985, both illustrated mainly with Dumbarton Oaks material.

Work on the main catalogue series got under way again in the 1990s, though progress was slow, partly because of the inherent difficulty of all late Byzantine coinage and partly because of other interests and obligations of the two authors concerned. Both Hendy's *DOC 4* and Grierson's *DOC 5* were finally published in early 1999. Their length meant that both had to appear in two parts, as indeed had *DOC 2* and *3* before them. Each volume includes the Whittemore coins of the period discussed, whether they are physically in the Fogg Art Museum, as most of them are, or amongst the thousand or so on loan to Dumbarton Oaks. These catalogues' publication brings to an end the impressive undertaking that contributed greatly to the remarkable progress that has taken place in Byzantine numismatic scholarship over the past half century.

Select Bibliography

Bellinger, Alfred R., and Philip Grierson, eds. *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection and in the Whittemore Collection*. 5 vols. Washington, D.C.: Dumbarton Oaks, 1968–99:

Vol. 1: Alfred R. Bellinger, *Anastasius I to Maurice, 491–602* (1966).

Vol. 2: Philip Grierson, *Phocas to Theodosius III, 602–717* (1968).

Vol. 3: Philip Grierson, *Leo III to Nicephorus III, 717–1081* (1973).

Vol. 4: Michael Hendy, *Alexius I to Michael VIII, 1081–1261* (1999).

Vol. 5: Philip Grierson, *Michael VIII to Constantine XI, 1258–1453* (1999).

Bendall, Simon. *A Private Collection of Palaeologan Coinage*. Wolverhampton: Privately printed by S. Bendall, 1988.

Bendall, Simon, and Peter J. Donald. *The Later Palaeologan Coinage, 1282–1453*. London: A. H. Baldwin and Sons, 1979.

Bertelè, Tommaso. *Numismatique byzantine: Suivie de deux études inédites sur les monnaies des Paléologues*. French trans. and ed. by Cécile Morrisson. Wetteren: Editions NR, 1978.

Grierson, Philip. *Byzantine Coins*. London: Methuen, 1982.

- Grierson, Philip, and Melinda Mays. *Catalogue of Late Roman Coins in the Dumbarton Oaks Collection and in the Whittemore Collection: From Arcadius and Honorius to the Accession of Anastasius*. Washington, D.C.: Dumbarton Oaks, 1992.
- Hahn, Wolfgang. *Moneta Imperii Byzantini*. 3 vols. Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1973–81. The work covers the years from 491 to 720.
- Hendy, Michael F. *The Economy, Fiscal Administration and Coinage of Byzantium*. Northampton: Variorum Reprints, 1989.
- . *Studies in the Byzantine Monetary Economy, c. 300–1450*. Cambridge: Cambridge University Press, 1985.
- Morrisson, Cécile. *Catalogue des monnaies byzantines de la Bibliothèque Nationale*. 2 vols. Paris: Bibliothèque Nationale, 1970.
- Sear, David R. *Byzantine Coins and Their Values*. 2nd ed., rev. and enl. London: Seaby, 1987.
- Whitting, Philip D. *Byzantine Coins*. London: Barrie and Jenkins, 1973.
- Wroth, Warwick. *Catalogue of the Imperial Byzantine Coins in the British Museum*. 2 vols. London: British Museum, 1908. Reprint, Chicago: Ares Publishers, 1970.