INTRODUCTION

On collecting and studying Byzantine copper coins – some personal reflections.

The Foreword of November 1999 explains the fascination offered by this generally unlovely series.

There are a number of standard works and catalogues that are reasonably easily available. The public collections of The Dumbarton Oaks Center for Byzantine Studies, the British Museum, the Bibliothèque Nationale in Paris, and the Hermitage in St Petersburg may be studied to a greater or lesser extent from conventional catalogues or online. In the United Kingdom, the coin rooms of the Ashmolean and the Fitzwilliam (the latter built up around the gift of Charles Davies Sherborn in 1940¹), as well as the Barber Institute of Fine Arts (substantially the collection of Philip Whitting), have extensive holdings of Byzantine coppers. In addition to Hahn's corpus (see below), there are several good text books, including Sear's Byzantine Coins and their Values (second edition, 1987) and Philip Grierson's Byzantine Coins of 1982. More penetrating, and much underrated, is Whitting's Byzantine Coins (Barrie & Jenkins Limited, London, 1973).

As far as I am aware, only two catalogues of private collections have been published that encompass the copper coins issued before A.D. 1261. In 1981, George E. Bates produced such a catalogue, privately printed in Boston, Massachusetts. Andreas Urs Sommer's Die Münzen des Byzantinischen Reiches 491 – 1453 (Gottingen, 2003) is a fine work with good illustrations.

This present catalogue is a different animal again. There is simply no point in reproducing the historical background and extensive notes on iconography, etc., which may be studied in great detail, for example, in the catalogue of the Dumbarton Oaks collection.

But a lacuna exists that perhaps makes this publication worthwhile. The plates in the MIB series (see following pages) show single, or occasionally two or three, examples of each type. Sommer collects the Byzantine coinage generally and all his coins are illustrated but the copper coins are fewer in number (if superior in condition) compared to those here. Perhaps neither fully gets to grips with the wealth of detail that may be drawn from the vast coinage of, say, Maurice or Heraclius.

This is not a catalogue for the general numismatist. It is necessary to be reasonably familiar with the series to understand some of the shortcuts that, for reasons of economy, occur in the catalogue. Some may question the point of describing dozens of coins of the same type, for example the Antiochene folles of Maurice. For the enthusiast, the coins are fascinating for their rich detail and the intriguing variations they provide.

¹ See Norman, J. R., Squire, Memories of Charles Davies Sherborn, Harrap, London, 1944. Chapter IV gives an interesting account of Sherborn's collecting habits.

Scarcity - rare Byzantine coins are common.

A curious, but essentially true, way of saying that if one is fortunate enough to be able to examine a group of 100 Byzantine copper coins (unsorted by others) then three or four will almost certainly offer something of interest, perhaps an unpublished date or officina, some variety in portraiture or iconography, or just the feeling that something is not quite right. Similar scope for study may well exist for other areas of numismatics. But for someone beginning to collect this series, the opportunity to identify new types; to build interesting theories, continues to be offered.

The term - excessively rare is in increasing use in sale catalogues. To quote the bibliophile John Carter: Excessively - an adverb of enthusiasm, frequently and irritatingly misused. Rarity may be extreme, notorious, even legendary; but it cannot be excessive². The word rare is seldom used in this catalogue. Collecting Byzantine coins is much more popular now than was the case 20 years ago. Large amounts of material, much of it interesting, are available for sale on the internet. Dealers over use the term; coins are described as very rare when they are in fact very common. There is no reliable guide. Many of the gaps in the Dumbarton Oaks collection have been filled by new acquisitions (the abbreviation n. a.) since first publication. Sear's valuations are out of date and he tends to concertina the relative scarcity of coins. Many types are much more rare than he suggests. As well as very many common coins, there are many rare coins in this collection.

The credibility of mint marks on Byzantine copper coins.

The phrase - you cannot believe what they say – is a reasonably accurate précis of a sentiment that occurs more than once in MIBEC³. A substantial proportion of the coins in this catalogue may be described as unofficial, non-regular or anomalous – an appropriate tag is, in fact, a problem. These coins do not appear to be the products of the regular mints. Some say KYZ but were only produced after the mint of Cyzicus closed. Others claim to be struck in the regnal year of a dead Emperor. It is often impossible to know where one group of such coins ends and another begins⁴. About 250 coins of this kind appear towards the end of the catalogue together with some, often very tentative, suggestions as to their origins.

This, then, is the catalogue of a private collection of Byzantine copper coins. The collection, far from comprehensive, reflects both personal preferences and the opportunities available over more than three decades. Private collecting is built on the criteria set by the individual. Against other criteria the collection may appear unbalanced, or even an accumulation. No apologies are offered.

² Carter, J., A B C for Book Collectors, Hart-Davis, London, 1952, p. 77.

³ For example, on page 33 of MIBEC Hahn references additional proof of the fact that the Byzantine mint signature cannot always be trusted.

⁴ The most cohesive group, although not without its difficulties, consists of Pottier's Syrian mint coins.

Use of the catalogue.

Major terms and abbreviations used.

For reasons that are either obvious, or become clear in the catalogue itself, references to coins in the Dumbarton Oaks collection and to those in the corpus prepared by Dr Hahn (in the case of one volume jointly with Dr Metlich) are used throughout. The former is referred to as D. O., occasionally as DOC. Hahn's corpus currently consists of six overlapping volumes (by virtue of the fact that three are in English and three in German) which are individually listed in the bibliography. They are abbreviated as MIB (volumes 1, 2, or 3), MIBE and MIBEC, although MIB is also used generically. Other important abbreviations are BMC for the British Museum collection and B. N. for the collection in the Bibliothèque Nationale in Paris.

Hahn and MIB.

Students of Byzantine coins owe a huge debt of gratitude to Dr Wolfgang Hahn. A contribution of the highest importance relates to dating by regnal and indictional years⁵.

Nevertheless, MIB is not always easy to use, particularly for non-German speakers⁶. The meaning given in the English translation is not always precise, particularly in respect of Dr Hahn's attributions to mints and it is sometimes difficult to establish a clear audit trail for coins that are described in the German versions of MIB as well as in MIBE or MIBEC. In referring to entries in this catalogue, it may be assumed that all MIB references are to coins in the German versions and that the attributions, etc., have descended unchanged (except where indicated) into MIBE/MIBEC. Where references to the latter are given this does not, of course, imply that the relevant coins are not described in MIB. A number of new coins appear in MIBE and MIBEC.

Dr Hahn's further update of MIBE⁷ appeared too late for its references to be included in this catalogue.

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Fegnal years were reckoned from the date of accession to the Imperial title although in the case of Justinian I this began only in year 12. Indictional dates were also used at certain mints including Carthage. The indiction was a reoccurring cycle of 15 years beginning on 1 September of year one and continuing until 31 August of year 15. The indiction represented the intervals at which tax schedules were, in principle at least, revised. Hahn believes that at some mints there was also a *lustral rule* used to fix the points at which new copper coins were issued. The lustrum was a period of five years between censuses. Although it is not clear whether the relationship between censuses and indictions was always a formal one administratively, Hahn suggests that some indictional cycles were divided up into lustral periods. See Hahn, MIBE, pp. 8 and 67-69. For a critique of Hahn's theories, see Metcalf D. M., New Light on the Byzantine Coinage System, Numismatic Circular lxxxii (1974), pp. 14-15. Metcalf says *Dr Hahn's strikingly original insight is that the designs and secret-marks of the coins were changed at regular intervals corresponding with the fifteen-year indictional system of dating, or (in the case of the copper folles) at shorter intervals, namely the five-year subdivisions of the indictions, which are termed lustra.*

⁶ This is, of course, a personal opinion.

⁷ Hahn, W., and Metlich, M. A., Money of the Incipient Byzantine Empire, (Anastasius I - Justinian I, 491–565), University of Vienna, 2013.

The catalogue structure and format.

The wide variety of coin types described (a term encompassing iconography and reverse design including the presence, or absence, of dates, officina letters and mint signatures) militates against a wholly uniform approach to structure and format. Until the reign of Leo III (717-741) references to the Dumbarton Oaks (D. O.) and Moneta Imperii Byzantini (MIB) catalogues are used in tandem. Both cataloguing systems have their advantages and disadvantages. MIB is more comprehensive and there are significant lacunae in the D. O. catalogue, even though it represents the most comprehensive public collection, including in respect of a number of the relatively common mints.

A detailed explanation of why the catalogue structure is set out in the way it is would require an essay in itself. With any catalogue the challenge must be to ensure clarity and avoid unnecessary repetition, establishing a format that is easy on the eye and an order for the coins that is logical and readable. The best use of the space on the page is a further factor.

In this period none of the Emperors before the reign of Heraclius were succeeded by their sons. By contrast, the great grandson of Heraclius, Justinian II, was twice Emperor during the late seventh and early eighth centuries. The coinage of Heraclius and his heirs reflected the importance of the dynasty and of hereditary succession. Although something of a simplification, it can be said that a dynastic or family coinage began with the reign of Heraclius and extended into those of his successors. Essentially, the adoption of the heirs to the throne onto the coinage together with the consequential changes in design make logical the system used by D. O. to designate the issues by class. This compares with the slight (although frequent) changes in iconography that characterised previous reigns (particularly that of Maurice) that is best described using the numbering system in MIB.

Thus MIB is the major reference point up to and including the reign of Phocas and DOC thereafter. At present, the MIB series comes to an end early in the reign of Leo III (717-741).

In very general terms, the DOC class number or the MIB number form a high level descriptor. This is accompanied by a note on the period during which coins of that type were known to be issued. (On occasions, unpublished coins in this collection enable the period to be extended or new dates to be inserted.) There is also a reference to the obverse legend which is normally set out in full (see below). The general iconographical details and design features of the type follow with the obverse and reverse either described together or separated according to the length of the overall description needed. After this, the obverse and reverse images are inserted alongside text boxes. At the most basic, the latter contain the unique catalogue number for the coin (chapter number followed by specimen number, for example 28.1 for the first coin of Leo III catalogued in chapter 28), the major catalogue references⁸, weight (in grams; gms) and die axis (for example 180 – equivalent to six

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⁸ Where the MIB reference forms the high level descriptor, the DOC reference is given in the text box and viceversa. Other references also occur, of course.

o'clock), and the accession number, again unique, used to reference information on the date and source of acquisition.

This system has to deal with cases where the collection contains only a single example of a type (or only a single specimen is known) as well as those where numerous examples of common coins are listed. For the former, the date(s) of issue (which will tend to be short-lived in the case of a rare type) tend to be included in the high level descriptor. For the latter, a specific date of issue (regnal or indictional year) is set out in the text box. Similar considerations apply to the treatment of officina letters; i.e., if only one officina is known then its letter (for example an A - rather than the phrase officina letter) will appear in the descriptor. The general principle adopted is that where the date of issue or the officina letter are unique to the coin (that is only one year or one officina is known) the information is included in the descriptor. Where the catalogue contains more than one example of the coin - with different dates and workshops - the text boxes are used. But it is doubtful whether there is absolute consistency.

Example of a high level descriptor (a western issue of Justinian I apparently struck in only one year and with only one officina known):

Armoured bust facing. M, regnal year 30 (XXX) to right, Δ beneath, CON below.

Example of a text box (for a common Constantinople follis of Maurice where the MIB reference and the regnal year have already been given in the high level descriptor):

11.23. Officina A. D. O. - . 12.24 gms. 220. 1626.12.

Asterisks (*) against catalogue numbers mean that a note on the coin is given at the end of the chapter. To prevent the text boxes being littered with asterisks (an endeavour probably not always achieved) only one asterisk may be used for the first coin in a group (for example of die-linked specimens). The note itself will make clear which other coins are being referred to. Endnotes provide provenances in many cases – generally those dealers, auction houses, etc., that can be expected to maintain comprehensive records. Apologies are extended to dealers who do keep such records but whose names are not included in the catalogue.

The forms of description used.

Obverse legends.

Legends are recorded that are consistent with the MIB reference. Individual variations are not generally given but are covered by the descriptions: or similar; often abbreviated;

usually blundered; illegible, etc. Specific legends are set out in some cases, for example, where there is only one coin of a particular MIB type, or there is a departure from the norm, or for some other reason of interest. Individual letters that cannot be read are sometimes included by means of the numismatic convention utilising parentheses, but generally only where this helps to determine the MIB reference. Obverse legends for the non-regular coinage are not generally given.

Portraits and iconography.

The descriptions are mainly anonymous, i.e., the ruler is not usually named, although occasionally the word *Emperor* is used. One general exception is the so-called family coinage of Leo III and his successors where it is helpful to name a particular, sometimes long dead, ruler.

The iconography of the coins, that is descriptions of the size (full length; half length, etc.) and posture of the figures shown, the Imperial dress worn, and the insignia held, can be found in the important secondary references, such as DOC. Here, they are in general brief – for reasons of economy and avoidance of unnecessary repetition⁹. Thus, the descriptions of the Emperors and their families are given as a form of shorthand, the most common of which include the terms - profile bust right; armoured bust facing; enthroned figures facing; standing figure (or two or three standing figures) wearing crown with cross and chlamys and holding globus cruciger, and so on. This approach is briefly expanded in the section on iconographical descriptions towards the end of this opening part of the catalogue.

Reverse descriptions.

These are self-evident from the catalogue entries. The symbols used to designate the denomination of the coins are well known and do not have to be covered in detail here. The word ANNO mostly occurs to the left of the denomination mark (as the coin is viewed) and is only included (as part of the upper tier description) where this is not the case - notably on Class 4 coppers of Heraclius. The regnal year is almost always to the right of the denomination. The position of the officina is described as *beneath*, and the mint mark as *below* (and not *in exergue or below the exergual line*, as is often found in catalogues).

Mint marks.

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Mint marks (sometimes "mint signatures") are, for the regular mints, given in the Inscription Numismatic font¹⁰. "Pseudo-mint marks" (that is, for example, the marks that appear on coins of the Syrian mint) are sometimes hard to reproduce accurately. There is little point in doing so in instances where the mint mark is comprehensively blundered since its precise form will be apparent from the image itself.

⁹ An item of cataloguing detail: I have tried to limit iconographical descriptions (nearly always the obverse) to two lines. If the reverse description could be incorporated into three lines this has been done. Otherwise, for easy reading, the two sets of descriptions are broken by a narrow gap. No description, whether for the obverse or reverse, should exceed three lines. There are no doubt some exceptions.

¹⁰ For the lower denominations at Antioch, where an abbreviation of *polis* was deemed to be sufficient, this is represented as **R**.

Presentation of dates and officina letters.

Regnal years (and, occasionally, indictional years) on coins are generally referred to as the date arrangement. These are expressed in English as, for example, Regnal year 2 (583/4). The Latin and Greek forms of the date arrangement are not generally given, except where they reflect some interesting variation or uncertainty, often the case with the military mints. The officina letters may also be seen on the plates but there can sometimes be confusion between A and Δ – in any case the text box entries state the officina letter for the coin. On occasions, particularly where there is more than one form of arrangement for a particular date, I have both combined and abbreviated the date and officina data, for example GI; A.

The general rules for coins from the regular mints tend to be abandoned in the case of non-regular coins. Where the date arrangement can be provided accurately (i.e., in the shape of the digits), I have done so. In almost all cases there is no accompanying reference to the implied date since what is given on the coin is either an invention or misleading.

Overstriking.

Coins are only described as *overstruck* in the notes where the undertype can be identified.

The plates.

The plates were produced by means of professional scanning in the form of 1200 DPI colour TIFs. These were then manipulated through adjustment of brightness and contrast to produce the optimum practicable image – a process that appears, for the most part, to have worked well enough. Where the coins are both small in size and in poor condition there are issues of legibility and, in retrospect, more enlargements might have been provided. In practice, a similar result may be achieved using a magnifying glass under bright light.

Errors.

Mistakes are possible, and even likely, in this catalogue. Almost all the information has been transcribed from earlier editions. The process of doing so uncovered a number of errors and others may have slipped through unnoticed. The time and resources available did not permit a root and branch re-examination of the 2000 odd coins in the trays. Readers may amuse themselves seeking out mistakes but (it is hoped) these will not include misidentification of the coins themselves. Any serious errors will be the subject of an errata slip.

Iconographical descriptions.

The catalogue does not describe the Imperial figures that are shown on the coins (mainly on their obverse) in complete detail. To do so, when the descriptions are set out in full in the major catalogues, would be repetitious and unnecessary. Instead, certain forms of shorthand have been adopted, for example, *Enthroned figures facing* for the major portrait type on coins of Justin II and Sophia and *Standing figure wearing military dress* for the Class 5 coins of Heraclius.

The figurative type comprises three elements, that is, posture (facing bust, standing, seated on throne, etc.); dress (such as the consular robe or a military uniform); and the items of Imperial regalia shown (which are normally held by the figures themselves), for example, a globus cruciger or a sceptre. The indefinite article is usually omitted; hence *holding globus cruciger*.

The descriptions are elaborated and summarised here. A chronological overview is combined with descriptions of the major portrait types - covering probably well over 90 per cent of the coins in the catalogue - more or less in the order of their introduction.

The catalogue entries are not entirely consistent in terms of the descriptions used. For reasons of economy some descriptions will be shorter than others (particularly where a longer description has already been given) and it is assumed that the reader is, or will become, familiar with the commoner combination of elements of dress and insignia. Major examples of such are - figures shown as facing bust (or in half length) wearing consular robes and holding the mappa and eagle-tipped sceptre associated with that office; the civilian chlamys together with the globus cruciger on the majority of the two and three standing figure issues of Heraclius; the armoured bust and spear held across the chest, or behind the head, on coins of Constantine IV, Theodosius III, etc. The descriptions also tend to be commensurate with the degree of detail that is apparent on the images of the coins themselves.

The abbreviated descriptions that follow in this section do not set out to be comprehensive – some minor iconographical types will only be referred to in the catalogue itself.

The currency reform of Anastasius I (491-518) introduced a heavier coinage than the minims issued previously. The iconography of the heavy coins is typified by the *profile bust right* design. This occurs on the reformed coinage as a figure shown broadly half-length wearing a diadem and a cuirass beneath a robe. It predominated on the coinage until the beginning of the second decade of the rule of Justinian I (527-565) when the coinage was again reformed and is, therefore, sometimes termed a *pre-reform coinage*. It is also commonly found on the later smaller fractions (10 and 5 nummi) where space restrictions made more elaborate portraiture difficult.

A design of *two busts facing* was used at Antioch during the brief period of the joint reign of Justin I and Justinian I in 527. The figures are portrayed in a simple format with both wearing crowns. The design reappears at a later date on coins of the revolt of the Heraclii on which the figures are portrayed in the dress of consuls.

A radical change occurred with a second reform ordered by Justinian I in 538/9 when the armoured facing bust first appeared; this remained the most important portrait type for a long period. The Emperor is portrayed wearing a helmet with plume and a cuirass. He holds a globus cruciger in his right hand and on his left shoulder there is a shield with the image of a cavalryman. Employed at all the eastern mints and, less commonly, in the west, the design continued to be used extensively throughout the remainder of the reigns of the sixth century and into the reign of Constantine IV in the late seventh century.

At Antioch, an important pre-reform issue shows Justinian *enthroned facing* wearing an elaborate costume including distinctive slippers.

The two enthroned figures coinage of Justin II (565-578) was the first from this period to feature the Empress. Justin and the Empress Sophia are seated on a double, lyre-backed, throne with prominent stops to the arm rests. Justin holds a globus cruciger and Sophia a cruciform sceptre. Both are normally crowned and nimbate. This design reoccurs briefly on some half folles of Tiberius II and Maurice (the period from 578 to 602) issued by the Thessalonica mint; some such designs incorporate a large cross held jointly. The Carthage mint struck, in addition, a two facing busts type.

Tiberius II and Maurice issued coins in huge numbers, particularly at Antioch, that show the Emperor in consular dress (consular bust facing or, sometimes, bust facing wearing consular dress) holding a mappa (or, less commonly, a globus cruciger) and an eagle-tipped sceptre. The consular robes have a distinctive criss-cross banded pattern.

Phocas (602-610) broke somewhat with tradition to show himself standing alongside the Empress Leontia (as *two standing figures*) as well as a facing bust in consular robes. The former design revived the brief family coinage of Maurice at the Cherson mint and shows the couple dressed similarly in Imperial robes with Phocas holding a globus cruciger and Leontia a cruciform sceptre.

Coins of the Heraclian revolt of 608-610 emphasise the position of the elder Heraclius as a former consul. Coins show both a single *consular bust* (at Carthage) and *two consular busts facing* (the claimants side by side) at Alexandria; the revival of an iconographical type used during the joint reign of 527.

The coinage of Heraclius (610-641) follows a distinctive and reasonably consistent pattern across the major mints. His later issues are the first family coinage of any significance. His first issue, however, shows a single *armoured facing bust* (the helmet often bears a cross within the plume) which is followed by *two standing figures* (Heraclius and Heraclius Constantine) crowned and shown clothed in a form of civil dress – the *chlamys*. The chlamys is very commonly combined with the globus cruciger held by the figures in their right hands.

The later coins of Classes 3 and 4 are of *three standing figures* (each holding a globus cruciger) on which a female figure - either the Emperor's daughter Eudocia or his niece Martina - appears.

The fifth issue portrays Heraclius in *military dress* standing beside the Imperial heir and holding what may be the True Cross recovered at the end of the Persian war. The senior Emperor is helmeted and wears a cuirass together with pteruges and boots. This design continued to be used extensively during the reigns of Constans II and Constantine IV (the period from 641 to 685). The junior members of the family of Heraclius and his successors often continue to be distinguished on *two and three standing figure* coins by wearing civil dress, normally the chlamys, and holding a globus cruciger.

The last coinage of Heraclius (Class 6) reverts to a *three standing figures* type and the large cross is retained – held by the central figure of the Emperor himself.

The mint of Alexandria employed designs involving single and double busts and three standing figures.

Somewhat atypical designs predominate at the temporary mints established to support the military operations of Heraclius, notably at Seleucia Isauriae (two standing figures and two facing busts), Isaura (two facing busts) and Cyprus (three standing figures). The mint of Neapolis (probably Nablus in Palestine) broadly copies the design of the Class 5 coinage.

The western mints do not depart significantly from the designs adopted in the East although the mint of Ravenna is notable for its careful presentation of Imperial dress, most notably in the case of the Empress Martina where she is portrayed as part of the *three facing busts* design.

The reign of Constans II (641-668) inaugurated a period in which the mints of Constantinople and Syracuse changed the design of the coins on a frequent basis, with both civil dress (typically the chlamys) and military uniform shown. His son, Constantine IV (668-685) favoured military dress and a martial pose - armoured bust in three-quarter profile holding spear behind head - reflecting the pressures faced by the Empire from its hostile neighbours. The pace of change in the style of the coins again accelerated under both Justinian II (particularly at Syracuse) and his short-lived successors with new types issued on what sometimes must have been a monthly basis. These brief coinages are normally described in a little more detail than normal in the catalogue text.

Between the first deposition of Justinian II in 695 and the succession of Leo III in 717 there were a number of brief reigns although the designs used are fairly standard. The two facing busts type, on which Justinian and his son Tiberius hold a patriarchal cross on globe inscribed PAX, and the standing figure issue of Philippicus on which he holds a trident, are unusual.

The rule of Leo III (717-741) and the next three generations of the iconoclast Emperors were typified by a family coinage – perhaps a propagandising aspect of their religious policy – with up to five figures shown, sometimes with two or three enthroned together. Leo's first coinage is of martial character – the *armoured bust in three-quarter profile* type reflecting the difficult military conditions facing Byzantium at the start of the reign.

The senior figures portrayed on the iconoclast coinage typically wear the consular *loros* (with its distinctive lozenge-shaped pattern) and the junior ones the *chlamys*. The *mappa*, originally an item of consular regalia, and particularly the *akakia* (a similar, although later, item of Imperial regalia) appear more and more often as part of the iconography. The dress of the Empress Irene (797-802) is naturally distinctive and includes a crown with pinnacles.

The practice of distinguishing the senior Emperor by his dress continued through the reigns of a number of the succeeding, often short-lived, Emperors (generally iconoclast in religious sentiment) down to that of Theophilus (829-842). On coins of both Michael II (820-829) and his son Theophilus the relationship between the loros and the chlamys as a means of signifying the senior Emperor is actually reversed, however (and thus - in the first case - Michael wears a chlamys). The famous IMPERAT — REX issue of Michael III (842-867), together with his co-Emperor Basil, is notable for its unusual iconography - both figures wear the loros - as well as for its legends.

Thereafter, the design on the coinage of the family of Basil I (often termed the Macedonian Emperors) during the 100 years or so after 867, with purely epigraphic reverses in four or five lines, is a distinctive departure from tradition.

The Anonymous Coinage, virtually restricted to religious imagery, is, of course, a case by itself. The typological descriptions given in this catalogue are intentionally brief.

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¹¹ This excludes the contents of chapters 39 and 40.

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¹³ Apologies to other correspondents carelessly omitted.