

*To Monsieur V. Tonnens,
with the author's kind regards,*

Philip Grierson

COMITE INTERNATIONAL DES SCIENCES HISTORIQUES
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Grierson

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RAPPORTS

MEDIEVAL NUMISMATICS

(from 1930 to 1952)

By

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Les discussions des Rapports auront lieu au cours des séances du matin des mardi 7, mercredi 8, jeudi 9 et vendredi 10 juillet 1953. MM. les Congressistes désirant faire des observations devront en remettre au secrétaire de séance un résumé, destiné à être publié avec la réponse du rapporteur, dans le volume des Actes après la clôture du Congrès.

Les Congressistes ne pouvant se rendre à Paris pourront envoyer leurs observations à M. le Secrétaire général du Congrès qui en donnera lecture en leur nom au cours des séances consacrées aux rapports.

Die Aussprachen über die Berichte (« Rapports ») werden an den Morgensitzungen des Dienstag, 7. Juli, Mittwoch, 8. Juli, Donnerstag, 9. Juli und des Freitag, 10. Juli, stattfinden. Die Kongress-Teilnehmer, die sich an der Diskussion beteiligen wollen, sind gebeten, dem in der Sitzung amtierenden Sekretar eine kurze Zusammenfassung ihres Votums zu übergeben; diese Diskussionsbeiträge und die Antwort des Verfassers des « Rapport » werden in dem nach dem Kongress erscheinenden 2. Band der Kongressakten veröffentlicht werden.

Diejenigen, welche sich für den Kongress angemeldet haben, aber verhindert sind, sich persönlich nach Paris zu begeben, können ihre Bemerkungen zu den « Rapports » vor dem Kongress an dessen Generalsekretär senden, der für deren Verlesung im Verlauf der entsprechenden Sitzung sorgen wird.

The discussions of the Reports will take place in the morning sessions of Tuesday - Friday, 7-10 July. Those wishing to take part in the discussion should provide the secretary of the session with a summary of their remarks, in a state suitable for publication. Those will be published, with the replies of the authors of the Reports, in the second volume of the Proceedings of the Congress.

Members of the Congress unable to come to Paris may send their observations to the Secretary General of the Congress, who will have them read in the appropriate sessions.

REPORT ON MEDIEVAL NUMISMATICS

By PHILIP GRIERSON

Seventeen years have elapsed since the last International Numismatic Congress was held at London in 1936. At that Congress, the place accorded to medieval numismatics was a very restricted one. Only seven papers, out of a total of sixty-eight, dealt specifically with the coinage of Western Europe in the Middle Ages, and there was no attempt at a general review of the development of medieval numismatics comparable to Sir George Macdonald's magisterial survey of the preceding half century of Greek studies. Today there are signs that its importance is better appreciated, and it is to be hoped that one of the results of our meetings at Paris will be a fuller recognition of the part which the study of coinage can play in deepening our knowledge of the history, and particularly of the economic history, of the Middle Ages.

When we look back over the years since the last Congress, our first feeling is almost inevitably one of dismay at the havoc wrought by the second World War in our field of study. We have to mourn the loss of a number of young numismatists who died with their work scarcely begun, as well as the inevitable deaths among older scholars whose achievements were already behind them. Some coin cabinets have been totally destroyed or carried away captive. Others have lost their records, either in whole or in part, or have had their habitations wrecked or converted to other uses. Stocks of books and periodicals have been destroyed on an unprecedented scale, and publishing



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has become increasingly difficult owing to the rise in the cost of printing. A rigid barrier has fallen across the continent of Europe, rendering difficult the intercourse of scholars and the exchange of their publications and impossible any free access to museums or private collections beyond an arbitrarily designated frontier.

These misfortunes have affected in varying degrees all branches of numismatics, but medieval numismatics has suffered out of proportion to the others. It is not merely a question of certain material and concrete injuries, such as the loss of the Berlin, Dresden and Gotha cabinets, which has almost indefinitely postponed the possibility of a large scale study of German coinage in the Middle Ages, or the inaccessibility of the Russian and of certain Balkan collections, which must render illusory any project for compiling a satisfactory corpus of Byzantine coins. It is rather that any interruption to international intercourse must inevitably accentuate the fault to which students of medieval numismatics are most prone, that of parochialism.

Medieval and modern coins are traditionally studied, as they are collected, on national lines, with little reference to the contemporary coinages of other countries. There exist notable exceptions to such a generalisation, but by and large it is true. It is a very great misfortune. There are inevitable lacunae in our evidence, and we can often fill the gaps in our knowledge of one coin series by the study of related ones. If our pursuit of numismatics is conducted on national lines, we largely deny ourselves this possibility, for the most illuminating comparisons are normally those with the contemporary coinages of other lands. Mints and the coins they produced did not exist in isolation. Moneyers and monetary techniques, like coins themselves, passed easily from one country to another, and the history of one series constantly throws light upon that of another. Medieval numismatics must be studied as a whole.

At the same time, it must not be studied in isolation. There

is a promising future for what may be called "comparative numismatics." The study of colonial coinages and of the monetary habits of communities less sophisticated in their approach to coinage than those of present-day Europe, may well throw light on problems of medieval times, and allow us to test the truth of generalisations which otherwise are accepted or rejected because they seem at first glance to be reasonable or unreasonable or because they fit in with or contradict the arguments of their authors. A contested point in the monetary history of the Dark Ages, for example, is the length of time during which the use of *minimi* and *minimissimi* persisted after the withdrawal of the Roman legions from Britain. One argument in favour of their long continuance is that "the habit of coinage, once engendered, and familiar after 500 years, takes long to die." (1) This is a generalisation which may or may not be true, but for which no proof is offered. The study of comparative numismatics should enable us to pronounce upon its validity, and perhaps would even support the conjecture that while certain functions of money have considerable survival value, others can disappear very readily with a change in economic circumstances.

In any case, the numismatist must never be content to confine himself to his own studies, and ignore the conclusions of other fields of research. A Belgian historian, writing recently on the origins of the linguistic frontier in northern Gaul, complained how "*les discussions ont souvent été, en réalité, des monologues ou, ce qui n'est pas moins désastreux, des dialogues entre spécialistes d'une même discipline, ignorant sereinement les résultats acquis dans d'autres secteurs de la recherche.*" (2) Academic isolationism is always a danger, and the wise numismatist will never lose touch with the allied disciplines of archeology and economic history.

But it is time to turn to a survey of recent work in the field of medieval numismatics. (3) It will be convenient to note first the publications on topics of general interest, and

then to deal in turn with the Byzantine Empire, Western Europe in the Dark Ages, and Feudal Europe and the later Middle Ages, the last section being treated on geographical lines. Important works on monetary history will be included, since this cannot—or at least should not—be separated from pure numismatics. An account as brief as this can obviously not mention every book and article of value, but enough will be given to show the main lines of advance. The paper will end with some general conclusions and a few concrete suggestions for future work.

GENERAL WORKS.

No general history or study of medieval coinage has been published in recent years, but A. Dopsch and W. Taeuber have both dealt at considerable length with the place of money in medieval economy, and H. Van Werveke has discussed the problem of how far actual coin was used in the 11th and 12th centuries, and what in a later period was its relationship to money of account. (4) Two articles of quite exceptional importance to numismatists are those of Marc Bloch on monetary conditions in the early Middle Ages and of Maurice Lombard on the relations between Christendom and the Islamic world from the monetary point of view. (5) The latter article unfortunately gives no references, and future research may not justify all its author's assertions, but its importance as a stimulus to thought and research cannot be exaggerated. Robert S. Lopez and Daniel C. Dennett attached considerable weight to the evidence of coinage in their criticisms of the theories of Pirenne on the continuity of economic life between Antiquity and the Middle Ages, and G. I. Bratianu has discussed some of the reasons for the revival of a gold coinage in Italy in the 13th century. (6)

The subject of medieval metrology has been somewhat neglected in recent years, but one may mention the four articles

collected in a short pamphlet by Benno Hilliger on the Carolingian pound, the **Cologne mark**, and the weight system of the earliest gold coinage of Italy. (7) A. E. Sayous has thrown new light on the origins of the bill of exchange in the Mediterranean world of the 13th century, a subject of interest to numismatists ever since Louis Blancard published a mass of relevant material from south French archives in 1884, while Allan Evans has endeavoured to explain the complications caused by the introduction of multiples of the denier in silver and gold into the monetary systems of the 14th century. (8) Monetary problems of the later middle ages have been discussed by E. Perroy and A. Gérard. (9) No numismatist can neglect J. U. Nef's study of the rise of European silver production at the close of the middle ages or F. Braudel's brilliant essay on the changes in the sources of precious metals at the beginning of the modern period. (10) The arguments of both papers would have been greatly strengthened if their authors had possessed a serious acquaintanceship with the coins of the period and a knowledge of how to use them as evidence.

On specifically numismatic subjects, there is much less of a general nature to record. A. Blanchet discussed the circumstances of medieval coin hoards in two lectures before the Collège de France in 1936. (11) His views may be compared with those put forward by Sture Bolin in his study of Roman coin finds in Germany (1926) and with the criticisms which these aroused. The value of A. Dieudonné's comments on the features of immobilised and degenerate types in feudal numismatics is not limited to the French material from which his evidence was drawn. (12) Medieval coins as works of art were the subject of two splendid publications by A. Suhle and K. Lange. (13) R. S. Lopez argued learnedly but not altogether convincingly that much of the organization of medieval moneyers derived from ancient times (14), and W. Jesse has examined the origins of the moneyers of Germany. (15) P. Le Gentilhomme's study of their organisation in the kingdom of

Arles unfortunately remains only a sketch, not provided with detailed references. (16)

R. Walther has provided numismatists with a clear if brief outline of the history of monetary technique in the Middle Ages and the early modern period. (17) M. Jungfleisch has argued that the use of privy marks represents an innovation of the Arabs. (18) Some new evidence has come to light regarding the technique used in the striking of bracteates (19), and a number of further specimens of medieval dies have been found, described and catalogued. (20) It has been shown that certain series of Italian and Balkan coins have regularly adjusted die-axes, the practice apparently deriving through Byzantium from the Ancient World. (21) T. Voltz has demonstrated, in the case of early groschen and dicken of Basel, the rather casual way in which dies were often used, so that weights and not dies—not even dies bearing specific dates—form the only criteria by which separate issues can be distinguished. (22) His conclusions have certainly a more general application than the very limited series from which his evidence is taken. It is very desirable that surviving medieval dies should be listed properly. Isolated specimens are not infrequently to be found in local museums and archives, and a systematic search for such objects would well repay the trouble involved. Old inventories of mint equipment and instructions to moneyers, like that of Ensheim published by Ludwig Berg in 1935 (23), are always of value to the student.

Three reference books of importance to medievalists have been published since 1930. F. von Schroetter's *Woerterbuch der Münzkunde* (Berlin-Leipzig, 1930) is an essential reference book for all numismatists, many of the medieval articles being particularly good. W. Jesse and R. Gaettens began the publication of a *Handbuch der Münzkunde von Mittel- und Nord-Europa* (Leipzig-Halle) in 1939. The articles which it contained, arranged in alphabetical order of mints and countries, are of outstanding merit. Unfortunately only two fascicules

(Aabenraa-Breslau) had been published before it was interrupted by the war, and there now seems little likelihood of its revival. Finally, F. Mateu y Llopis's *Glosario hispanico di numismatica* (Barcelona, 1946) is particularly useful for its identifications of the names of medieval coins, especially those mentioned in Spanish, French and Italian literary and documentary sources.

Certain international coinages have continued to attract the attention of scholars. S. E. Rigold has surveyed the influence of the English sterling on the continent in a general way. F. Mateu y Llopis has described its importance in the western Mediterranean region, and P. Berghaus, in an article of particular merit, has studied the chronology and precise area of its influence in Westphalia. (24) C. E. Blunt has called attention to the existence of Italian imitations of Anglo-Saxon coins in the Carolingian and Ottonian periods, and E. Majkowski has noted examples of similar imitations in eastern Europe. (25) The dependence of the design of the English groat on Low Country prototypes has been clearly demonstrated. (26) The continental influence of the sceatta is referred to elsewhere in this paper: the imitations of the noble in the Low Countries fall just outside its chronological framework. On the use of countermarked Bohemian and Saxon groschen in 15th century Germany, one may consult the supplement which Victor Katz published in 1930 (27) to his *Kontramarky na prazskych Grosych* (1927) and Hans Krusy's recent admirable study of the Hassel hoard. (28)

THE BYZANTINE EMPIRE.

If our knowledge of Byzantine numismatics must still mainly be based on the manual of Sabatier (1862) (29), Wroth's catalogue of the British Museum collection (1908), and the unfinished corpus of Tolstoi (1913-14), one mass of material of importance comparable even to these appeared in December 1930 in the form of an auction sale catalogue of Rodolfo Ratto. (30) Carefully compiled and lavishly illustrated, this catalogue is valuable

less for the rarities and unique pieces which it contains than for the way in which it enables the scholar to study the style of whole series of coins, since it will sometimes illustrate ten or fifteen specimens where the British Museum catalogue shows only one or two. It is an essential reference book for every Byzantine numismatist.

Four other works of a general character must be noticed. The late Hugh Goodacre's short handbook performs the useful function of picking up many stray coins which have been published since Wroth and Tolstoi were writing. C. Davies Sherborn listed all additions to the bronze series in the British Museum collection which had been made since the date of Wroth's catalogue, the majority of these being his own gift. Sawyer McA. Mosser produced an invaluable bibliography of Byzantine coin hoards, which is now becoming ripe for a second édition. V. Laurent published a bibliography of books and articles on Byzantine numismatics which appeared between 1939 and 1949. Its critical estimates of the value of the works it lists, particularly those published in eastern Europe and accessible only with difficulty to western scholars, make its consultation essential to the student. (31)

Much new material has been published, mainly in the form of detailed articles by collectors, and there have been innumerable short studies of finds or particular series. Those published between 1939 and 1949 are covered by Laurent's bibliography, just referred to, and it would be pointless to reproduce here the information that it contains. The most remarkable of those falling outside its limits of date are studies by D. Ricotti Prina on the coinage of Byzantine Sicily (32), and by T. Bertelé on the "Winged Emperor" coins (33), the latter being a foretaste of the major work on the coinage of the Palaeologids which we hope for from that author's pen. Others which it omits are those in which H. Goodacre (34), H. Longuet (35), and F. Stefan (36) have published new material and discussed a number of problems relating to various periods of Byzantine

coinage. O. Ulrich-Bansa has thrown new light on the coinage of Justin II (37), and P. Grierson has recovered a long series of dated solidi of Carthage and clarified some aspects of the coinage of Heraclius. (38) But the number of scattered articles on points of detail is too large for it to be possible to give here a detailed bibliography to supplement that of Laurent.

A novel feature, which is deserving of special comment, is the use now being made of Byzantine numismatics by economic historians. Valuable contributions in this field, hitherto practically neglected save by Andréades, have come from the pens of Gunnar Mickwitz, A. Segré, G. I. Bratianu, R. S. Lopez, and D. A. Zakythinos. (39) Byzantine coins have too long been studied in isolation from the texts, and by collectors and scholars who were interested in them from the political or iconographical and not from the economic point of view. This new development is part of the closer integration of history and numismatics which we find elsewhere. (40)

Progress in the immediate future is likely to consist mainly in detailed studies of individual mints and epochs, involving newly discovered material and sometimes using relatively unexploited techniques such as the study of dies. Whether it would be wise to look and plan further ahead is a matter for discussion. There can be no doubt that the compilation of a corpus of Byzantine coins, on the lines of Mattingly and Sydenham, would render a very great service to students, but, for reasons already stated, its undertaking at present would be a hazardous task. It is true that great masses of material in the museums and private collections of western Europe, and particularly in those of Italy, are still only imperfectly known, but for the moment it seems wiser to publish notes and studies preparatory to a corpus rather than to plan the compilation of a corpus itself.

WESTERN EUROPE IN THE DARK AGES.

The writings of Henri Pirenne and Alfons Dopsch in the 'twenties and 'thirties, with the novel views they put forward regarding the date and character of the transition from the Ancient World to the Middle Ages, have given a new urgency to the study of the coinage of the barbarian kingdoms set up on the ruins of the Roman Empire in the west. But despite the amount of valuable work that has been done, many questions of fundamental importance still remain unanswered, very often because they have not been asked. In particular, the continuance of gold coinage in the west to nearly the end of the seventh and in some cases into the eighth century has diverted the attention of scholars from the problem of how, in the virtual absence of any silver or copper coinage during this period, any form of small scale exchange could be carried on at all. (41)

Some idea of the general monetary background to the period can be gained from the articles of Bloch and Lombard referred to above (p. 58). On more specifically numismatic questions, there is a short and rather general article by Pierre Le Gentilhomme, together with the masterly series of lectures which the same scholar gave before the Collège de France in 1942. (42) This last is a broad survey of the coinage of the barbarian kingdoms of the west from the beginning of the Germanic invasions down to the revolution which placed the Carolingians on the Frankish throne in the middle of the eighth century. Its merits are outstanding. It completely supersedes the similar survey which C. F. Keary made in 1878-79 and which is often quoted by historians as if it were still authoritative today. (43)

Little has been published on the coinage of the smaller and shorter-lived Germanic kingdoms. So far as the Ostrogoths are concerned, the careful study of F. F. Kraus (44) provided historians with new material but did not seriously modify accepted views. On the Vandals there is little to report, though

Marcel Troussel has recently published some new material from North Africa. (45) There is nothing to record for the Lombards, though at least one important hoard has come to light, and one hopes that it may be published before it is broken up. (46) The coinage of the Suevi has been made the subject of an excellent monograph by Wilhelm Reinhart. (47)

For the Merovingians, there have been two important finds of new material, a mid-6th century hoard from Monnoren in Lorraine and a mid-7th century hoard from Sutton Hoo in England. Neither of these has yet been satisfactorily published, though scholars have a general idea of what they contain. (48) Some important earlier hoards were re-examined by Pierre Le Gentilhomme (49), and Joachim Werner and P. C. J. A. Boeles surveyed a host of scattered finds in Austrasia and Frisia. (50) Two great masses of material hitherto available to scholars only in the drawings in Belfort's *Description* came on the market, and were admirably illustrated in sale catalogues before being dispersed: the Fürstenberg collection in December 1932 (51), and a collection of uncertain—said to be Spanish—origin, evidently put together early in the present century, in December 1949. (52)

Amongst secondary articles, a notable study of the origins of Merovingian coinage came from the pen of Wilhelm Reinhart (53), but there still exists a vast amount of unexamined material and the major work here has yet to be done. Several useful articles have dealt with Merovingian coinage in the Rhineland (54), and various general problems relating to the work and status of moneyers have been discussed and illustrated by Henri Longuet, A. Dieudonné and Horst-Ulbo Bauer. (55) The early death of Pierre Le Gentilhomme is a veritable disaster for early medieval numismatics. He had the gift of seeing a problem in its broad outlines, without any bias in favour of a traditional approach or solution, and had begun to study two fundamental problems of Merovingian numismatics: the "natural" geographical classification of Merovingian coins, as

distinct from the ecclesiastical or feudal framework in which they have often been studied, and their chronology. In both he had made substantial progress. (56) Fortunately other scholars have subsequently taken up the same questions as interested him. A technique which has already enjoyed great success in ancient numismatics, the study of dies and die relationships, bids fair to be a useful aid to research.

In early Anglo-Saxon numismatics, the outstanding event of recent years was the acquisition of the Crondall hoard by the Ashmolean Museum and its publication by C. H. V. Sutherland. (57) His admirable book is a milestone in the progress of our knowledge. As a piece of descriptive numismatics, dealing with barbarous coins whose style and lettering almost defy precise analysis, it ranks among the finest works in the field. It gives a general survey of Anglo-Saxon gold coinage, not only the part of it included in the Crondall hoard, and proposes for it a chronology which, if it has not passed entirely without criticism, must form the basis for all future research.

The gold coinage does not exhaust the interest of early Anglo-Saxon numismatics. Excavations of late Roman and Romano-British sites have brought to light considerable masses of copper *minimi* and *minimissimi* whose chronology is the subject of lively discussion, the end of which we cannot as yet discern. (58) Interest in the *sceattas* was revived through a series of articles published by N. T. Belaiew (59), and important contributions to our knowledge have been made by P. Le Gentilhomme, C. H. V. Sutherland, and P. V. Hill (60), the last of these having now made their study peculiarly his own. It seems likely that the application of the frequency table to the metrology of the *sceattas*, and rather more attention than is usually devoted to the written texts, might provide promising lines of advance in the future.

In the field of Visigothic coins the progress in our knowledge has been astonishing. F. Mateu y Llopis published the catalogue of the Visigothic coins in the Archeological Museum at Madrid

in 1936 (61), and he and a group of other scholars—the most notable names being Wilhelm Reinhart, Pio Beltran and A. Elias Garcia—have produced an abundance of regional and critical studies of great value. Reinhart's work is deserving of special mention, for he has particularly addressed himself to the difficult and ungrateful task of imposing order on the anonymous pseudo-imperial coinage issued prior to the monetary reform of Leovigild. (62) His solutions are in some cases only provisional, as he himself has fully recognized, but he has provided other scholars with a mass of fresh material and much pertinent and illuminating comment. Finally, in the autumn of 1952, there was published George C. Miles' massive study of the coinage of the Visigoths of Spain. (63) Though based primarily on the collection of the Hispanic Society of America, deposited with the American Numismatic Society at New York, it sets out to be a corpus of Visigothic coins from the reign of Leovigild onwards, and is a wonderful achievement of numismatic scholarship. Reliable, penetrating and comprehensive, it supersedes the old work of Heiss, which has held the field for eighty years, as well as a great part of the more recent literature. It ranks as one of the most considerable publications in the field of medieval numismatics during the last two decades. (64)

There has been only one important find of Carolingian coins in recent years, that of Zelzate in Flanders. It has been carefully and independently studied by Jean Dhondt, in conjunction with A. Van de Walle, and by Paul Naster. (65) The article of the latter dealing with it is of particular importance, for he applied the method of the frequency table to the determination of the weight of the Carolingian denier, and showed beyond a shadow of doubt that its theoretical weight was just over 1.7 g., considerably less than the 2.1 g. postulated by Prou. Older hoards have been re-examined and interpreted by other scholars. (66) Various aspects of the monetary reforms of the Carolingians have been studied by Segrè and by Sture Bolin. (67) The latter has argued that the changes in the west can be

correlated with the evolution of Muhammedan coinage in the 8th and 9th centuries and with fluctuations in the relative value of the precious metals. The argument is interesting but not wholly convincing, and the matter is not one on which the last word has been said. (68) The gold solidi of Louis the Pious and their Frisian imitations have been studied by P. Grierson. (69)

The field of Carolingian numismatics is one in which an enormous amount of work remains to be done. The chronological classification of the coins and their assignment to particular sovereigns still remains hopelessly obscure, and can only be resolved by an intensive study of epigraphy and coin dies on the same lines as that by which the chronology of the coinage of the first three Edwards in England was established. Another essential piece of investigation is that of the *Christiana Religio* coinage of Louis the Pious from the point of view of style, in the hope of rendering its geographical classification less arbitrary and uncertain than it is at present. (70)

FEUDAL EUROPE AND THE LATER MIDDLE AGES.

A survey of recent work on later medieval numismatics must inevitably begin with Germany, both because the German kingdom was the major constituent element in the Holy Roman Empire and because German studies are in many respects more advanced than those of other countries in this particular field. The volume of research is much more considerable (71), and even if the best work does not excel that of other scholars elsewhere, the average level of German publications in the medieval field is certainly higher. Accounts of finds are almost invariably excellent, and the great monographs on individual states or mints are masterpieces of their kind. In one particular branch of numismatics, that of regional studies in which the evidence of coins, hoards and documents is fused into a single whole, German

scholarship is preeminent. Walter Haevernick's study of the influence of the Cologne penny (1930) had its precursors in Wilhelm Jesse's book on the *Wendische Münzverein* (1928) and more remotely in Julius Cahn's on the *Rappenmünzbund* (1901) and the monetary history of the region around Lake Constance (1911), but it has been left for Haevernick and his pupils to develop a line of approach which brings out more clearly than any other the essential relationship between numismatics and economic history and the value of coinage as a source of evidence.

It is only in the field of general works that there is little to report, for the vastness and complexity of German medieval coinage is sufficient to deter the most courageous scholar from attempting to present a picture of it as a whole. Suhle's small handbook is no more than an elementary sketch, with excellent illustrations, and Gebhart's, which is deliberately intended for collectors, is of value to the scholar mainly for the bibliographical information it contains. (72) Particular problems of general interest have been discussed in articles and monographs—the *Münzer-Hausgenossen* by Jesse, the silver bars and marks by Loehr, the right of coinage by Loening, the financial advantages of this right to the emperor in the late 13th and early 14th centuries by Troe (73)—but the great bulk of the literature follows a severely regional pattern, with Lower Saxony, Westphalia, and the Rhineland taking the lead and the other parts of the country well behind.

A valuable sketch of the numismatic history of Lower Saxony comes from the pen of W. Jesse; its bibliography, which includes lists of the more important finds and of relevant sale catalogues, is particularly good. (74) On the origins, we owe to Vera Jammer a monograph that is a model of its kind. (75) Concise and clear, analysing all the available documents and nearly 500 separate coin finds, illustrating the evolution of the various coin types by admirably arranged sketches and tables and the nature of the more significant finds by elaborately

coloured maps, it represents a striking contribution to the methodology of numismatics as well as to our knowledge of Saxon coinage. On the same period, Marian Gumovski's *Corpus nummorum Poloniae* (vol. i) contains the best plates available of Sachsenpfennige, K. Sieburg must be consulted on the Otto-Adelaide pennies, and Richard Gaetgens' splendid description and plates of the Ludwiscze find (c. 1060) allows us to amplify and correct many of Dannenberg's attributions and dates. The find of Bibow (Mecklenburg) is important for the coinage of the lower Elbe region at the same period. (76)

For the second half of the twelfth century, we have had short accounts of the bracteates of Henry the Lion and of the coinage of his contemporary Wichmann of Seeburg, archbishop of Magdeburg, while Julius Cahn republished the Freckleben find with splendid plates in 1931. (77) Two very important 13th century finds have been described, that of Bokel (c. 1200) by Ortwin Meier and that of Hildesheim (c. 1260) by Wilhelm Jesse; the very large Goedenstorf find (end of 13th century) is of rather less interest. (78) From the very end of the medieval period there have been the finds of Westerbörstel, important mainly for Mecklenburg, described by Berghaus, and Bortfeld, described by Jesse. (79) Besides these accounts of finds, Heinrich Buck has written extensively on the coinage of Hanover, while Jesse has discussed the early coinage of Bremen and written a short sketch of that of Goslar. (80) For East Friesland, we have an extremely interesting article by K. Kennepohl and an account of the 14th century find of Schoo by Arthur Suhle. (81)

An excellent but all-too-brief outline of the monetary history of Westphalia (82) was contributed by Busso Peus to the collective work, *Der Raum Westfalen*, in 1947. The earliest period is partly covered by Haevernick's book on the influence of the Cologne penny, which is referred to below, while the earliest coinage of Münster, the most important mint in the area, has been studied by Peus. (83) For the later Middle Ages we have valuable regional studies by Peter Berghaus (84), one of the most

accomplished of Haevernick's pupils, together with accounts of the important coin finds of Friesoythe (c. 1235), Oberveischede (c. 1378) and Borstel (c. 1393). (85) Finally, the last two decades have seen the publication of Kennepohl's monograph on the coinage of Osnabrück and Stange's on that of the counts of Ravensberg. (86) The former of these is a monumental work of over 400 quarto pages and 43 plates, splendidly produced, in the same tradition and of the same format as the series inaugurated by Noss in Cologne and Düsseldorf. It ranks with these as one of the outstanding monographs of medieval and modern numismatics.

Two major works on the coinage of the Lower Rhineland were completed in 1931 and 1935. The first date was that of the publication of the fourth and last volume of Alfred Noss' corpus of the coins of Jülich, Cleves, Berg and Moers. (87) The second saw the publication of Walter Haevernick's corpus of the coins of Cologne up to 1304 (88), this being Volume I of a series covering the coinage of the archbishops and of the city which had been planned as far back as 1901, and of which the other three volumes had been published by Noss in 1913, 1925 and 1926. These two magnificent series, sponsored by the cities of Düsseldorf and Cologne respectively, superbly printed and lavishly illustrated, carried out in the highest traditions of German numismatic scholarship, are achievements which must be the envy of scholars living in communities less enlightened or less fortunately placed.

Apart from these two works, the most important one dealing with the numismatics of the Lower Rhineland is Haevernick's study of the influence of the Cologne penny in the 12th and 13th centuries. (89) The meticulous use of the evidence of finds and the skilful way in which the testimonies of documents and finds are blended together to produce a coherent picture, have made it a model for later work. There is little otherwise to record. There have been few finds, perhaps the most interesting being that of Arnhem (90), described by Enno van Gelder, and

two from Trier described by Lückger. (91) Three medieval finds are included in the six described recently by Wilhelmine Hagen and Margildis Schlüter. (92) In a recent article S. Sydow has studied the palaeography of the legends on the coins of Cologne. (93)

Moving south towards Franconia, the Upper Rhineland, and Swabia, we have to record three further works by Haevernick: a short study on the coinage of the Taunus area, an essay on the heller in the middle Rhineland, and a substantial monograph on the coinage of the Wetterau in the period before the groschen. (94) This last was intended to be the first volume of a series entitled *Das Hessische Münzwesen*, but it is the only one that has so far appeared. Wilhelm Diepenbach has written an excellent sketch of the Rheinische Münzverein. (95) Friedrich Wielandt, amidst a mass of smaller studies on particular coin finds and on various aspects of the monetary history of Baden, has produced a substantial monograph on the coinage of the margraves of Baden up to the end of the Middle Ages and a regional study of high quality on the area served by the Breisgauer pfennig. (96) Studies by other scholars have dealt with the coinage of Überlingen and Ulm and with that of the abbey of Kempten. (97)

For central and north-eastern Germany there is less that is outstanding to record, in part because of the rich productivity of such scholars as Bahrfeldt, Buchenau, Friedensburg and von Schroetter in preceding decades. W. Schwinkowski's projected monograph on the coinage of Meissen remains only a splendid fragment, with nothing published beyond the plates of the bracteates. (98) A recent article of Gerhard Krug (99) goes far towards clearing up the chronology and attributions of the Meissner groschen, so long a wilderness in which even the experienced numismatist found himself hopelessly at a loss. R. Gaettens studied the bracteates of the counts of Lüchow in relation to those of Magdeburg and Brandenburg. (100) In Pomerania, East Prussia, and Silesia there have been notable

accounts of coin finds (101), but no monographs which can compare in importance with those of western Germany.

The activity of German numismatists is so great that the spectator feels himself at times almost overwhelmed by the quantity and quality of the work that is being done, but the fragmentary state of Germany in the later Middle Ages has left scholars with a vast amount still to do. We are deeply indebted to the authors of great monographs such as those on Cologne and Jülich, but it is as well to remember that we still lack anything on the coins of the counts palatine of the Rhine, and that we have nothing except a small handbook published in 1820 on the archiepiscopal mint of Trier for the first three centuries of its existence. Almost everywhere there are huge and sometimes scarcely explicable lacunae which must be filled before it is possible to gain a really satisfactory picture of the monetary and numismatic history of medieval Germany.

In France, interest in recent years has been concentrated on the royal coinage, while that of the feudatories has been somewhat neglected. Three major collections of material have been published: A. Dieudonné's second part of the catalogue of the Capetian series in the Bibliothèque Nationale, running from the creation of the gros by St. Louis to the end of the Middle Ages, the sale catalogue of the first part of the Marcheville collection, and H. Rolland's catalogue of the Motte collection (102). Their interest, however, great as it is, is eclipsed by the appearance of the first volume of Jean Lafaurie's manual of French royal coinage from Hugh Capet to Louis XII. (103) This is a work of the highest scholarship, based on an intimate knowledge of the coins, the documents—where they exist—regarding their issue, and the secondary literature. It forms a detailed and reliable guide to the royal issues over this long period, and the excellent printing and the superb quality of the plates make the volume a pleasure to handle and use. Its existence must bring nearer the day when some courageous

scholar will undertake the task, hitherto not attempted, of writing a history of, as distinct from a guide to, the coinage of medieval France.

On matters of detail, there is less of fundamental importance to record. A. Dieudonné discussed the various meanings of the term *denier* in French texts of the later Middle Ages. (104) The activities of two provincial mints in the 14th and 15th centuries were examined by Pierre Prieur. (105) The find of St. Aubin, important for the classification of royal coins of the 15th century in the name of *Karolus rex*, was described by P. Chenu. (106) J. Bailhache, in a valuable series of articles, related the history of the *Chambre* and *Cour des Monnaies*. (107) An article of E. Perroy, already cited, on monetary difficulties in the 14th century, is mainly concerned with France, and G. L. Lesage has dealt specifically with the same subject at a rather later period. (108) E. Stampe and G. Hubrecht have discussed the important question of how debts and payments were legally affected by the frequent debasements of the coinage in these centuries. (109)

In the field of French feudal coinage, the main publication was A. Dieudonné's *Monnaies féodales françaises* (1936), this being the fourth and last volume of his and A. Blanchet's *Manuel de numismatique française*. Its value is essentially that of a work of reference, the bibliographical notes introducing each section being particularly useful, enabling the student to track down quickly anything published since the days of Poey d'Avant and Caron. The same author described recent acquisitions of feudal coins by the Bibliothèque Nationale in the *Revue numismatique* (1935, 1936). His article on the evolution of feudal coinage has been noticed already. (110) An important series of studies by Jacques Lhéritier has been devoted to the monetary history of Lorraine. (111)

It is to be hoped that the present comparative neglect of French feudal coinage is only a passing phase. It is true that the brief selection of articles just enumerated does not exhaust

the list of publications on the subject, and that it would be easy to extend it by including short accounts of finds, descriptions of particular series or individual rarities, and so on. But what is required is something more: a readiness to undertake large-scale research in a field which at first glance may seem unprofitable and unrewarding. For the earlier period, that essentially of the immobilized type or monogram, we need regional surveys, based above all on finds but helped out by the study of types and of the all-too-rare documents, which will allow us to establish the chronology of the issues and the area in which they circulated. The study above all of chronology is essential to future progress. That the dating of an immobilised type does not necessarily present insoluble problems has been shown with striking success elsewhere, and some at least of the methods used are applicable to the earlier feudal coinage of France. As far as the later coinage goes, the riches of the departmental archives of France have scarcely begun to be tapped. Dom Morin, for example, made only slender use of the nine volumes of material on the medieval coinage of Dauphiné which he found in the archives of the department of the Isère (112), and this is only one example of a whole class of material which still awaits exploitation. If the requisite interest in it can be aroused, French feudal coinage may well prove one of the most profitable fields of numismatic study during the second half of this century.

In the field of medieval Italian numismatics, the most spectacular achievement of the last two decades has naturally been the progress of the *Corpus Nummorum Italicorum*. Eight volumes, of which six are largely concerned with medieval material (113), were published between 1930 and 1940. The merits and the defects of this great work are too well known for it to be necessary to enlarge upon them here. The wealth of material which it places at the disposal of the student more than compensates for the unsatisfactory method—or lack of method—of listing varieties of type and legend. (114) All

numismatists will regret the fact that there seems to be now no prospect of its ever being completed, though the plan of the work envisaged at least four further volumes. Two of these, on medieval Sicily and on certain Crusader States in the Near East, would have been of particular interest to the medievalist. The loss of the latter is especially unfortunate, since the late king of Italy had built up a collection of coins of these states which was unequalled in the world.

Apart from the volumes of the *Corpus*, there has been little from Italy of notable importance in the sphere of pure numismatics. A monograph by G. Castellani on the early coinage of Ancona and a substantial study by Luigi dell'Erba on the monetary history of the kingdom of Naples from the time of the Angevins onwards are both worthy of mention. (115) There have been a number of isolated papers by G. Gerola on the coins of Verona and Trento and by dell'Erba, N. Borelli, R. Capelli and others on points of interest connected with south Italian mints, mainly in the Lombard and Norman periods. Two notable articles on the florin, by H. E. Ives and A. Carson Simpson, come from America, and show how the careful observation of detail can bear fruit in the classification of a series on which Orsini is still generally supposed to have said the last word. (116) But the volume of Italian production in the field of descriptive numismatics is disappointing. Partly it is a consequence of the superior attraction which the study of Roman coins must always have for Italian numismatists. Partly also it is due to the great irregularity in the publication of the *Rivista Italiana di Numismatica* since 1924 and to the winding up of the *Atti e Memorie* of the Istituto Italiano di Numismatica—never in any case much interested in medieval numismatics—in 1935. The revival of the regular publication of the *Rivista* is greatly to be desired.

The broader aspects of monetary history, on the other hand, have been much more satisfactorily dealt with. Prince P. Ginori Conti published an important series of Florentine mint docu-

ments of the early 14th century (117), and a new edition of Pegolotti and F. Borlandi's edition of the almost contemporary *Libro di Mercatantie* have provided students with a mass of valuable material on 14th century coinages and rates of exchange. (118) A most important volume of documents on Venetian monetary history has been edited by R. Cessi. (119) The writings of such economic historians as A. Saponi and G. Luzzatto have consistently devoted much attention to questions of money and coinage; there is one article of particular importance from the pen of the latter. (120) Finally, Carlo Cipolla has provided economic historians with copious information on the rates of exchange between the various currencies of the peninsula during the later Middle Ages. His book is based on a remarkable range of bibliographical information and is informed by an understanding of economic theory rare amongst economic historians and almost unknown amongst numismatists. (121)

The coinage of the Iberian peninsula in the Middle Ages is usually studied in three separate compartments: the Visigothic kingdom, the Moorish States, and the Christian principalities. The coinage of the Visigoths has been discussed above, and that of the Moorish States falls within the province of another Report. For the Christian principalities, the standard works of reference are those of Heiss for Spain, save in so far as his Catalonian section was superseded by Botet y Siso early in the present century, and of Teixeira de Aragao for Portugal. Despite the many defects of both books, they still hold the field today (122), though a monograph by F. Mateu y Llopis has now done for Valencia much of what Botet y Siso did for Barcelona. (123)

Apart from a valuable study by Earl Hamilton on monetary conditions in Navarre and the lands of the Crown of Aragon in the later Middle Ages (124), the vast bulk of what has been written in the field of Spanish numismatics comes from the untiring pen of Felipe Mateu y Llopis. His two most considerable works are the *Glosario Hispanico di Numismatica*, which

has been noticed above (p. 61), and *La Moneda Española* (Barcelona, 1946), an excellent sketch of the history of Spanish coinage from the earliest times up to the present. His catalogue of the coin weights in the National Archeological Museum of Madrid is a useful work which should not be overlooked (125), and he has in preparation a bibliography of Spanish numismatics to replace the now obsolete work of Juan de Dios de la Rada (1886).

The secondary literature on Spanish coinage is considerable, but unfortunately very scattered, for up to 1952 no periodical specifically devoted to numismatics existed in Spain. Mateu y Llopis has published a valuable series of articles in successive numbers of *Ampurias* on coin finds, and he is the author of a crowd of other studies too numerous to be mentioned here. The best of them are those dealing with broad topics of economic or monetary history (126); those concerned with particular series are often full of misprints and errors of detail, since not all Spanish provincial presses can maintain the standards of printing of Madrid and Barcelona, and the quality of the plates often leaves a great deal to be desired. It would not be profitable to review here the numerous articles of other scholars, since a summary guide to them can be found in the bibliographical appendix to Mateu y Llopis' *La Moneda Española*, but one of C. Sanchez-Albornoz on the early coinage of Leon and Castile and the way in which the crown retained control of it (127), and two of P. Batalha Reis and P. Beltran on early gold coins of Portugal and Castile (128), may be noted as being of particular interest. Batalha Reis is also the author of a large and discursive work on general numismatics, with particular reference to Portugal, which is accompanied by a large number of very useful plates. (129)

The last two decades have been exceptionally fruitful ones in English numismatics. G. C. Brooke's *English Coins* was published in 1932, and at once established its position as an indispensable work of reference: a third edition, revised by

C. A. Whitton, came out in 1950. Admirably arranged and illustrated, it compresses an extraordinary amount of information into the space at the author's disposal. Sir Charles Oman's *The Coinage of England* (Oxford, 1931) has never commended itself greatly to numismatists, who have persistently refused to recognize its very real merits. Its plates are indeed of an obsolete kind and many details are either inaccurate or absent, but it does not set out to be a handbook of English coins. Its aim is to give a history of English coinage, and this it succeeds in doing in a manner that is both intelligible and intelligent. Finally, A. E. Feaveryear's *The Pound Sterling* (Oxford, 1931) has provided English scholars with one of the best short histories of a monetary system of which any nation can boast.

On the later Anglo-Saxon period, many isolated coins have been published by such scholars as Philip Nelson and P. V. Hill, an account of the Iona hoard has been given by R. B. K. Stevenson (130), and the description of the great Chester hoard is, one may hope, not far off. A remoter prospect is that of the cataloguing of the treasures which have accumulated at Stockholm since the time of Hildebrand; meanwhile, Anglo-Saxon coins are being regularly published by Scandinavian scholars in accounts of hoards found in their countries. Two English specimens of the very rare class of "gold pennies" of the feudal period, which were struck for special ceremonial purposes, usually the payment of some form of church *census*, have been described and discussed by D. F. Allen and C. E. Blunt. (131) Overlapping the Anglo-Saxon, Norman and Plantagenet periods, there have been a long series of monographs on individual mints: Wells on Northampton, Southampton, Stamford and Peterborough, Shortt on the mints of Wiltshire, Stevens Cox on Ilchester, Carson on Thetford, Turner on Colchester, King on Steyning. (132)

The major publication on 12th century coinage is D. F. Allen's catalogue of the "Tealby" pennies of Henry II in the British Museum. (133) It is a worthy successor to the great

catalogues of Keary and Brooke, and like recent catalogues of other coin series in the Museum it is more in the nature of a corpus than a mere inventory of coins in the Museum's cabinets. This splendid volume throws other publications on the coinage of the reigns of Henry II and his sons and grandson into the shade, but one may mention Well's and Askew's studies of the mints of Shrewsbury and Newcastle, Grierson's demonstration that the *oboli* and *denarii de musc'* which occur in records of the time are gold coins of the Almohades, and Wells' articles on the royal profits from the mints and on the beginning of the Long Cross coinage. (134)

On the period of the three Edwards, the Boyton find allowed some advances on the Fox brothers' classification of the earlier pennies, L. A. Lawrence completed his great monograph on the reformed coinage (1351-77) of Edward III, and C. E. Blunt studied the activities of the mint of Berwick-on-Tweed. (135) The same author also discussed the early coinage of Henry IV before the weight reduction of 1412 (136), while G. C. Brooke's examination of the privy marks on the coinage of Henry V, in the light of the Horsted Keynes find of 1929, threw much new light on the way in which privy marks were used and what they meant (137). Very close attention has been devoted to the coinage of the 15th century (138), and substantial monographs have been published by C. A. Whitton on the coinage of Henry VI (1422-61) (139) and by C. E. Blunt and C. A. Whitton on the coinage of Edward IV (1461-70) and the second reign of Henry VI (1470-71). (140) There is still controversy over the coinage of the unhappy Edward V (1483), and E. J. Winstanley has studied the angels and groats of Richard III. (141) With the reign of Richard's successor, Henry VII, we pass beyond the medieval period.

This brief enumeration of the more noteworthy amongst recent articles on medieval English coinage should make clear wherein lies the peculiar strength of English numismatics. In the detailed study and analysis of privy marks, in the differentia-

tion of letter forms, in the identification and even the reconstruction of the history of individual dies—their wearing down, repair, and modification—English scholars have pushed their studies to a higher point than has been attained elsewhere. But they have sometimes been seduced by their own achievements into considering the description of such minutiae as an end in itself. The effectiveness or ineffectiveness of the coinage in fulfilling the economic needs of the community for which it was produced has been too often forgotten, and in the midst of this array of scholarly monographs on mints and issues and reigns one could wish for an occasional regional study, with proper use of finds and documents, showing in a given area and over a given period how well or ill the supply of coinage accorded with the needs of daily life.

If the numismatic literature of England is abundant, that of Scotland and Ireland is the reverse. This is not without some justification in the case of Scotland, since Burns and Cochran-Patrick have between them provided the student with the essential basis for his work. But there is still no general work on Irish numismatics later in date than 1839, and the student has to pursue the scattered articles of Aquilla Smith, Assheton Pownall, Bernard Roth, Henry Symonds and Alexander Parsons through volumes of the *Numismatic Chronicle* and the *British Numismatic Journal*. Of articles published in the last two decades, only two need be noted here, those in which William O'Sullivan studied the types and classification of the Hiberno-Danish coinage and Derek Allen described the curious bracteates in which this coinage petered out on the eve of the Anglo-Norman invasion. (142)

The only recent addition made to the standard reference works on the coinage of the medieval principalities of Belgium is the *Complément* published in 1934 by E. Bernays and J. Van-
nérus to their *Histoire numismatique du comté puis duché de*

Luxembourg (1910). Such new material as has otherwise seen the light has come in the form of the publication of small finds, individual coins, and so forth. Victor Tourneur has studied the somewhat meagre productions of the mint of Nivelles between the 9th and 13th centuries, and has also discussed the nature of the concessions by which the towns of Flanders and Brabant struck money in the 12th and 13th centuries. (143) Paul Naster has studied a small find of deniers of Alost, and emphasised the fact that the classification of this and other municipal coinages must depend on the more careful analysis of hoards than has been customary in the past. (144) In 1938, V. Tourneur devoted an admirable series of four lectures before the Collège de France to an examination of the policy pursued by the kings of France in the 13th century regarding the rights of coinage enjoyed by the counts of Flanders. (145)

If there is little to record in the purely numismatic field, the reverse is true in that of monetary history, where a rich harvest is still being gleaned from the study of the documents. Hans van Werveke has particularly occupied himself with the reign of Louis de Male, bringing to light new archival material unknown to Gaillard, greatly extending our knowledge regarding the size of the various emissions, and discussing both the causes and consequences of monetary changes of the 14th and 15th centuries. (146) Henri Laurent devoted an important monograph to the monetary relations between Flanders and Brabant during the reign of Philip the Bold, mainly as illustrating certain pressing monetary problems of the later Middle Ages. (147) Gottfried Pusch examined the monetary policy of the dukes in the late 15th and early 16th centuries. (148)

There is less that can be said about the northern Netherlands. The only important general studies in the medieval field have been those of C. Scholten on the coinage of Friesland. (149) The find of Geel supplied some valuable material for the revision of the accepted classification of the 13th century coinage of the counts of Holland (150); that of Arnhem, on the other hand,

was mainly interesting from the point of view of the coinage of the Lower Rhineland. (151) It must be admitted that the volume of Dutch production in the field of medieval numismatics has in recent years been disappointing. (152) It is surely time that some scholar undertook the major task of rewriting the constituent parts of Van der Chijs, which has almost attained its century and of which only the one Belgian section (Brabant) has been superseded by a comprehensive work by a later scholar.

A short history of Scandinavian coinage in the Middle Ages and up to the end of the sixteenth century, by B. Thordeman, H. Holst and G. Galster, was published in 1936. (153) Its bibliographies are particularly useful, and are carried on in the *Nordisk Numismatisk Arsskrift*, published jointly by the numismatic societies of the four Scandinavian countries since 1936. This excellent periodical, together with *Fornvannen*, now publishes most of the articles dealing with Scandinavian coinage, these usually taking the form either of monographs on particular mints, such as Ribe, or on important finds, such as that of Vejstrup (Fünen). (154)

Scholars who are not specialists in Scandinavian coinage are naturally most interested in the coin finds of the Viking period and of the 10th and 11th centuries and their interpretation, on which a rich literature is now in existence. Noebbe's account of the Krinkberg find has been noticed already. (155) Hans Holst has given scholars an excellent description of the Hon find from Norway. (156) Useful statistics regarding coin finds of Viking times in Sweden have been provided by Erik Person, and Stenberger and Skovmand have done the same on a more considerable scale for Gotland and Denmark. (157) Galster, Rasmusson, Bolin, and others have studied individual finds and discussed their wider significance. (158) In a splendid volume of over 400 pages and nearly 80 plates, Helmer Salmo has catalogued and illustrated all known finds of German coins in Finland. (159) But the many hoards of German and English

coins which have been accumulating for years in the Statens Historiska Museum at Stockholm have still to be properly listed, and it is satisfactory to learn that, through the initiative of N. L. Rasmusson, the keeper of the Royal Cabinet, arrangements have now been made for this essential piece of work to be done by competent German and English scholars. (160)

The territories that today form Austria and Switzerland were in the Middle Ages part of the German kingdom. Vienna has been a centre of numismatic studies almost uninterruptedly from the days of Eckel, but since the death in 1932 of Arnold Luschin von Ebengreuth, the Altmeister of modern Austrian numismatics, less work has been done in the field of medieval numismatics than was the case earlier in the century. To say this is in no way to belittle the recent activities of the Vienna school; its contributions to our knowledge of Roman and of modern coinage have been of exceptional importance, and it has realised more fully than has been done elsewhere the oft-forgotten truths that metallic coinage and money are not interchangeable terms and that the study of the first of these does not exhaust the duties of the numismatist. Even within the medieval field some work of importance has been done: interest in the Friesacher penny is far from being exhausted (161), despite the activity of Luschin, and we have had a detailed study of the monetary reform of Archduke Sigismund of Tyrol, who in creating the guldengroschen, in due course to become the thaler, inaugurated the era of modern coinage north of the Alps. (162) Besides these works, G. Braun von Stumm has studied the early history of the mint of Innsbruck under the dukes of Andechs-Meran (163), and A. Loehr has sketched, unfortunately only briefly and without either references or bibliography, the general monetary history of Austria. (164)

From Switzerland there have come a number of valuable monographs on the coins or the monetary history of particular mints: Zürich, Neuchâtel, Solothurn, Lindau. (165) The first

of these is a model of its kind, but it is to be regretted that it is not longer, and that its author did not provide his readers with a fuller description of the coinage of the city, instead of leaving them still dependent on that given by Heinrich Meyer in the middle of the last century. The two latter include full descriptions of the coinage.

The standard reference book on Bohemian coinage prior to the introduction of the Prager groschen in 1300 is the two volumes of Eduard Fiala's *Ceské denary* (Prague, 1895-98). It is a work of extraordinary thoroughness, with admirable plates, but copies have become exceedingly rare and the attributions which it proposes have not always stood the test of time. Kristian Turnwald's *Ceské a moravské denary a brakteaty* (Prague, 1949) therefore fills a long-felt want. It reproduces the 36 plates from Fiala's book, adds eight fresh ones of material discovered since, and provides an entirely new text in which Fiala's mistaken attributions—they are not in fact so very numerous—are put right. Although it does not supersede Fiala's book, which remains essential for its analyses of finds and lengthy descriptions of varieties, it replaces it for all purposes other than that of detailed research. Unfortunately for western scholars, it is, like Fiala's book, written in Czech, and is not provided with a summary or key in any more familiar language.

The volume of specialized work which has been done on medieval Bohemian coinage is very large indeed, and is almost invariably of high quality. The four most important studies of the denarial and bracteate period which have been published in recent years are one of Gustav Skalsky on the beginnings of Bohemian coinage (166), another of Victor Katz on the chronology of the pennies of Boleslav I and Boleslav II (167), and two of Skalsky on the bracteates of the 13th century (168), but these are only a few amongst many. The *Numismatický casopis ceskoslovenský* and two other less important numismatic periodicals are filled with notices of finds and with studies of

varying importance by Skalsky, Katz, J. Jecny, J. Schranil, J. Smolik, K. Chaura, K. Turnwald, K. Castelin, Emmanuela Nohejlova-Pratova, and many more. The longer articles, at least up to the second World War, were regularly provided with summaries in German or French.

There is still no standard work on Bohemian coinage from the introduction of the Prager groschen onwards. The coins themselves are most easily identified from Fiala's catalogue of the Donebauer collection (1889-90), and many interesting articles on particular points have been published, such as those of Castelin on gold coinage of and in Bohemia in the 14th century (169), of E. Nohejlova on the Moravian mint of Margrave Jobst (170), of Katz on countermarked Prager groschen (171), of Teisinger and Castelin on various aspects of the coinage of Vladislav II. (172) But when one considers the importance throughout central Europe of the Prager groschen, backed as it was by the great silver production of the Bohemian mines, it is a matter for regret that no comprehensive study of Bohemian coinage in the later Middle Ages has so far been produced.

For the Slavonic countries of eastern and south-eastern Europe, and for Hungary and Rumania, there is less to report. In Poland, the veteran numismatist Marian Gumovski edited the first volume of a *Corpus Nummorum Poloniae* (173), but its contents only extend over the tenth and eleventh centuries and consist largely of German Sachsenpfennige, and no further volumes have appeared. In Bulgaria, N. A. Mouchmov published a supplement (174) of additional material to his earlier book on Bulgarian coins (1924). N. Bauer completed his analysis of Russian hoards of the 11th and 12th centuries containing coins from western Europe, besides writing a monograph on Russian bar money of the Middle Ages. (175) Gregor Cremosnik sketched the development of Serbian coinage up to the reign of Miliutin in a monograph published by the Royal Serbian Academy in 1933. But this, like so many of the articles scat-

tered through the numismatic periodicals of these countries—the *Wiadomości numismatyczno-archeologiczne* (Cracow), *Numizmatikai Kozlony* (Budapest), *Numismaticar* (Belgrade), *Numismatika* (Zagreb), *Cronica numismatica si archeologica* (Bucharest)—is in a tongue that few western scholars understand, and is not even provided with a summary in one of the major languages of Europe. Linguistic difficulties may be as potent as political barriers in hindering the advance of scholarship, and with the growth of national feeling have become a more serious impediment than they were half a century or a century ago.

On the Christian states of the Near East there is likewise little to record. A series of Syrian hoards have to some extent clarified the chronology of the coins of the various Bohemonds of Antioch, besides providing us with other information (176), and the Caparelli hoard has shown the extent to which Venetian soldini provided the small change of the Frankish states in Greece in the mid 14th century. (177) J. Karst has given us a mass of information on the coinage of Georgia (178), which even if ill-digested is useful, since Langlois is difficult and Brosset virtually impossible for most scholars to consult. K. J. Basmadjian's *Numismatique générale de l'Arménie* (Venice, 1936) appears to be excellent, but is unfortunately entirely in Armenian, without even a summary in French or Italian, so students interested in the coinage of the Rupenian kings must still rely on the possibly erroneous attributions of Langlois.

CONCLUSION.

This rather discursive report has strayed over a number of topics, and many suggestions and comments on the present position of medieval numismatics have been made in the course of it. It will be as well to end with certain propositions of a more general kind. They are frankly concerned with the broader implications of numismatics in the general scheme of the sciences,

and arise largely out of discussions with economic historians regarding their needs.

(1) The forms of publication that are normally most useful are monographs on individual mints, reigns or series, accounts of hoards, and museum catalogues. The monograph has for the historian the great advantage of being interpretative as well as descriptive, and it will have done the important preliminary work, impossible save to the experienced numismatist, of exploring sale catalogues and searching for individual coins through the reports of numismatic societies. For any of these publications to be fully satisfactory, however, three conditions are essential :

- (a) The dating of the coins must be fixed as precisely as possible, and the grounds for it clearly explained, so that a scholar using the work can exercise his own judgment regarding the criteria employed. Classification by types or legends, as is normal in collectors' handbooks, is for the historian quite useless.
- (b) Weights must always be given, and should be coupled with an assessment of the state of conservation of the coins weighed. Estimates of condition are necessarily largely subjective, and not susceptible of exact measurement, but it is essential to give the person using the data provided some indication of whether the weights refer to fresh or worn coins.
- (c) Some attempt likewise must be made to estimate the fineness of coins. This is a matter which is usually neglected. Where documentary evidence is available, as in the later Middle Ages, it may not present any particular difficulty, but in many series, analyses, if only by the rough and ready method of the touchstone, are essential. We shall not even begin to understand the history of the Byzantine hyperperon from the reign of Alexius I Comnenus onwards until adequate information regarding the fineness of individual

issues is available. The same is true of the silver and billon coinage in western Europe in the 11th and 12th centuries, though here some scattered evidence already exists in the form of analyses of isolated series. (179)

(2) If the monograph is useful mainly as a work of reference, there is another type of book which is in some ways even more desirable, but is much more difficult of execution. This is the general history of the coinage of a country or a large region in its full economic setting: *Münzgeschichte* combined with *Geldgeschichte*. It is a kind of work which numismatists tend to avoid, from a feeling that it lies outside their competence and indeed outside their proper field of study. The latter at least is not true. Numismatics, if it is to be anything more than inspired antiquarianism, involves something other than the accurate observation and recording of detail. Coins are produced for economic ends, not as pieces of metal on which types and mint marks are inscribed for purposes comprehensible only to initiates. Without seeing them in their economic setting they cannot be fully understood. Economic historians and numismatists alike must welcome all attempts made by scholars to bridge the gap between two subjects which in the past have often stood too far apart.

(3) There is finally the greatest need of all, and beyond doubt the one most difficult of fulfilment. Medieval numismatics presents to many the appearance of a labyrinth in which even years of experience can do no more than make one reasonably familiar with a very small section. There is an urgent need for a *Historia Numorum Medii Aevi*—a new Engel and Serrure.

The first general work on medieval numismatics was Joachim Lelewel's *Numismatique du moyen âge considérée sous le rapport de type*, published in 1835. The second was Arthur Engel and Raymond Serrure's *Traité de numismatique du moyen âge*, of which the first volume appeared in 1891 and the third and last in 1905. This monumental work still holds the field, but has

long been out of print. The rare copies that appear from time to time on the market command high prices, and the number of numismatists fortunate enough to have it on their shelves is very small. The need for such a general guide to the wide and diverse field of medieval numismatics is a very real one: a guide fully up-to-date and paying more attention to certain problems important to the general historian—notably those of metrology—than Engel and Serrure did. How the compilation of such a work could best be achieved, whether by a single author or pair of authors, or as a cooperative undertaking under an editor or editorial committee, is a matter for discussion, but there can be no doubt that its services to the progress of medieval numismatics would be overwhelming. It is pertinent to quote Sir George Macdonald's tribute to the influence of Head's *Historia Numorum*: "When the book appeared, its effect was immediate. To students of ancient history it opened up a new view of what coins had to teach . . . To specialists it served as a clue by the help of which they could thread their way through a labyrinth of multifarious issues at a minimum cost of time and trouble. What it meant to beginners I can perhaps testify better than most, for it is no exaggeration to confess that without it the compilation of the Hunter Catalogue could never have been undertaken."

It is only reasonable to suppose that the appearance of a medieval equivalent to this great work might be productive of equally happy results.

- (1) C. H. V. Sutherland in *N. C.*, 6th series, IX (1949), 244.
- (2) J. Dhondt, "Note sur l'origine de la frontière linguistique," *L'Antiquité Classique*, XXI (1952), 107.
- (3) This paper is intended to cover publications since 1930 on the period c. 500-c. 1500 A.D.
- (4) A. Dopsch, *Naturalwirtschaft und Geldwirtschaft in der Weltgeschichte* (Vienna, 1930); W. Taeuber, *Geld und Kredit im Mittelalter* (Berlin, 1933); H. van Werveke, "Monnaies, lingots ou marchandises? Les instruments d'échange au XI^e et au XII^e siècle," *Annales d'histoire économique et sociale*, IV (1932), 452-68, and "Monnaie de compte et monnaie réelle," *Revue belge de philologie et d'histoire*, III (1934), 123-52.
- (5) M. Bloch, "Le problème de l'or au moyen âge," *Ann. d'hist. écon. et soc.*,

- V (1933), 1-34; M. Lombard, "L'or musulman du VII^e au XI^e siècle," *Annales: Economies, Sociétés, Civilisations*, II (1947), 143-69. See also the work of Sture Bolin cited below, n. 67.
- (6) R. S. Lopez, "Mohammad and Charlemagne: a revision," *Speculum*, XVIII (1943), 14-38; D. C. Dennett, "Pirenne and Muhammad," *Ibid.*, XXIII (1948), 165-90; G. I. Bratianu, "L'hyperpère byzantin et la monnaie d'or des républiques italiennes au XIII^e siècle," in his *Etudes byzantines d'histoire économique et sociale* (Paris, 1938), pp. 219-39.
- (7) *Gold- und Silbergewicht im Mittelalter* (Halle, 1932); the articles are reprinted from the *Blätter für Münzfreunde*, 1930 and 1931. There is also A. Dieudonné, "Les origines de la livre anglaise," *Mélanges F. Martroye* (Paris, 1941), pp. 307-18.
- (8) A. E. Sayous, "L'origine de la lettre de change: les procédés de crédit et de paiement dans les pays chrétiens de la Méditerranée occidentale entre le milieu du XII^e siècle et du XIII^e siècle," *Revue historique de droit français et étranger*, 4^e série, XII (1933), 60-112; A. Evans, "Some coinage systems of the 14th century," *Journal of Economic and Business History*, III (1931), 481-96. On this latter subject, see also the sections on money and coinage in A. P. Usher, *The early history of deposit banking in Mediterranean Europe*, Vol. I (Cambridge, Mass., 1943).
- (9) E. Perroy, "A l'origine d'une économie contractée: les crises du XIV^e siècle," *Annales: Economies, Sociétés, Civilisations*, IV (1949), 167-82; A. Gérard, "La guerre des monnaies," *Revue de Synthèse*, LX (1940-45), 83-101.
- (10) J. U. Nef, "Silver production in Central Europe, 1450-1618," *Journal of Political Economy*, XLIX (1941), 575-91; F. Braudel, "Monnaies et civilisations. De l'or du Soudan à l'argent d'Amérique," *Annales: Economies, Sociétés, Civilisations*, I (1946), 9-22, and in his book, *La Méditerranée et le monde méditerranéen à l'époque de Philippe II* (Paris, 1950), pp. 361-420.
- (11) "Les rapports entre les dépôts monétaires et les événements militaires, politiques et économiques. III, IV," *R. N.*, 4^e série, XXXIX (1936), 205-70. In two earlier lectures he had discussed ancient coin hoards.
- (12) "Les lois générales de la numismatique féodale," *R. N.*, 4^e série, XXXVI (1933), 155-70.
- (13) A. Suhle, *Münzbilder der Hohenstaufenzeit* (Leipzig, 1938); K. Lange, *Münzkunst des Mittelalters* (Leipzig, 1942). The former contains 40 and the latter 64 plates of coins, greatly enlarged. The similar but rather smaller work of E. Holzmair, *Münzkunst in Österreich* (Vienna, 1948), is mainly concerned with the more modern period. On the diffusion of the *Christus vincit* legend on later medieval coins, there is an excellent appendix in E. H. Kantorowicz, *Laudes Regiae. A study in liturgical acclamations and mediaeval ruler worship* (University of California Publications in History, Vol. 33, Berkeley, 1946).
- (14) "Continuità e adattamento nel medio evo: un millennio di storia delle associazioni di monetieri nell'Europa meridionale," in *Studi in onore di Gino Luzzatto* (Milan, 1949), pp. 74-117.
- (15) "Die deutschen Münzer-Hausgenossen," *N. Z.*, LXIII (1930), 47-92.
- (16) "L'institution des monnoyers du Serment d'Empire dans le royaume d'Arles et de Vienne et ses filiales en France de 1343 à 1541," in *Positions des Thèses* (Ecole des Chartes, 1931), pp. 141-55.
- (17) "Die Entwicklung der europäischen Münzpragetechnik von den Karolingern bis zum Gegenwart," *D. J. B. N.*, II (1939), 139-58.
- (18) "Les points secrets en numismatique: une innovation due aux Arabes (?)," *Bull. de l'Institut d'Egypte*, XXVIII (1946), 101-115.
- (19) E. Schnuhr, "Zur Technik der Hohlpfennigprägung des 15. und 16. Jahrhunderts," *H. B. N.*, IV (1950), 88-90; E. Waschinski, "Zur Technik der Brakteatenprägung um 1500," *Berliner Numismatische Zeitschrift*, VIII (1951), 227-9. It seems likely that the technique varied from place to place.

- Research in the museums and archives of Switzerland, where Hohlpfennige were still being struck into the 17th century, would probably bring more dies to light. There is an unpublished 12th century die (of Hildesheim?) in the Cabinet des Médailles in Paris. The origin of bracteates has been discussed by K. Gunther; see the citations and criticisms of W. Jesse, "Die Brakteaten Heinrichs des Loewen" (cited below, note 77).
- (20) E. G. D. F. Allen, "Dies in the Public Record Office," *B. N. J.*, XXIII (1938-41), 31-50; W. J. Andrew, "The die for Stephen's coinage in the Guildhall Museum," *Ibid.*, XXII (1934-37), 29-34; L. A. Lawrence, "On a silver standard for the coinage of Edward III," *N. C.*, 5th series, XI (1931), 197-200, with additional note by H. G. Stride, *Ibid.*, 6th series, III (1943), 49.
- (21) P. Grierson, "Pegged Venetian coin-dies," *N. C.*, 6th series, XII (1952), 99-105.
- (22) T. Voltz, "Die Basler Groschen und Dicken," in *Jahresbericht des Basler Historischen Museums*, 1949, pp. 27-35.
- (23) In *N. Z.*, LXVIII (1935), 95-104. The document dates from 1582, but earlier ones of the same type from other mints have been published from time to time.
- (24) S. E. Rigold, "The trail of the easterlings," *B. N. J.*, XXVI (1949-51), 31-55; F. Mateu y Llopis, *Les relacions del Principat de Catalunya i els Regnes de Valencia i Mallorca amb Anglaterra i el parallelisme monetari d'aquests països durant els segles XIII, XIV, i XV* (Obres d'investigació històrica, VII. Castellon de la Plana, 1934); P. Berghaus, "Die Perioden des Sterlings in Westfalen, dem Rheinland und den Niederlanden," *H. B. N.*, I (1947), 34-53.
- (25) C. E. Blunt, "Four Italian coins imitating Anglo-Saxon types," *B. N. J.*, XXV (1945-8), 282-5; E. Majkowski, "Coins struck by Boleslav the Mighty, Duke of Poland (992-1025), with busts and name of Aethelred II of England," *N. C.*, 5th series, XIV (1934), 168-82; C. E. Blunt, "On a coin of the 'temple' type [of Jaromir of Bohemia] bearing the name of Aethelred, King of England," *N. C.*, 6th series, III (1943), 101-2.
- (26) V. Tournier, "Le prétendu monnayage d'Edouard III en Brabant," *Trans. International Numismatic Congress*, London, 1936, pp. 334-40; D. F. Allen, "The design of Edward III's silver coinage," *B. N. J.*, XXV (1945-8), 125-9.
- (27) In *Numismatichy Casopis Ceskoslovensky*, VI (1930), 63-74.
- (28) H. Krusy, "Der Münzfund von Hassel bei Kappenberg," in *Jahrbuch des Vereins für Orts- und Heimatkunde in der Grafschaft Mark* (1952).
- (29) To this should be added Sabatier's unwieldy and often forgotten work, *Iconographie d'une collection choisie de cinq mille médailles romaines, byzantines et celtibériennes* (St. Petersburg, 1847 ff.), in which he published the contents of his own splendid collection. This collection was subsequently acquired by Count Stroganov, and after the Revolution was incorporated, like that of Count Tolstoi, in that of the Hermitage.—It may be noted that De Saulcy's great collection of Byzantine coins, on which he based his pioneering *Essai de classification des suites monétaires byzantines* (1836), was dispersed in the first of the sales of the Fürstenberg Collection (A. E. Cahn, Frankfurt, Versteigerungs-Katalog 75, 30 May 1932).
- (30) *Monnaies byzantines* (Lugano, 9 December 1930).
- (31) H. Goodacre, *A Handbook of the coinage of the Byzantine Empire*, Parts I-III (London, 1928-33); C. Davies Sherborn, "A list of Byzantine bronze coins not recorded by Wroth in his Catalogue of the Imperial Byzantine Coins in the British Museum, and now added to that collection," *N. C.*, 5th series, XIV (1934), 37-47; S. McA. Mosser, *A Bibliography of Byzantine Coin Hoards* (N. N. M., N^o. 67. New York, 1935); V. Laurent, "Bulletin de numismatique byzantine (1940-1949)," *Revue des Etudes byzantines*, IX (1951), 192-251.

- (32) "La monetazione siciliana nell'epoca bizantina," *Numismatica*, XVI (1950), 26-60.
- (33) *L'Imperatore alato nella numismatica bizantina* (Rome, 1951).
- (34) "Notes on some rare Byzantine coins," *N. C.*, 5th series, XI (1931), 151-9.
- (35) "Le monnayage de Jean VI Cantacuzène," *R. N.*, 4^e série, XXXVI (1933), 135-48; "Notes de numismatique byzantine," *R. N.*, 5^e série, II (1938), 1-22.
- (36) "Der Münzfund von Maglern-Thoerl und die Frage der reduzierten Solidi," *N. Z.*, LXX (1937), 43-63.
- (37) "Note su alcune rare monete di rame dell'imperatore Giustino II," *Numismatica*, II (1936), 75-84.
- (38) "Dated solidi of Maurice, Phocas and Heraclius," *N. C.*, 6th series, X (1950), 49-70; "The consular coinage of 'Heraclius' and the revolt against Phocas of 608-10," *Ibid.*, 71-93; "The Isaurian coins of Heraclius," *Ibid.*, XI (1951), 56-67.
- (39) Mickwitz and Segrè have written mainly on the late Roman period, and their works need not be mentioned in detail here. The same is true of Bratianu, but see also above, note 6. For R. S. Lopez, various articles, especially "The dollar of the Middle Ages," *Journal of Economic History*, XI (1951), 209-34, and "La crise du besant au X^e siècle et la date du Livre du Préfet," in *Mélanges Henri Grégoire*, II (Brussels, 1951), 403-18. D. A. Zakythinos, "Crise monétaire et crise économique à Byzance du XIII^e au XV^e siècle" (Athens, 1948).
- (40) The use of the texts has aroused a new interest in the names of coins and the identification of those mentioned in the documents. To the references collected by V. Laurent may now be added his article, "Le Basilicon," *Byzantinische Zeitschrift*, XLV (1952), 50-58.
- (41) It is the particular merit of G. P. Bognetti, "Il problema monetario dell'economia longobarda e il 'panis' e la 'scutella' di cambio," *Archivio storico Lombardo*, N. S., IX (1944), 112-120, to have realized the existence of this problem and to have noted one example of a reversion to primitive currency.
- (42) "Le monnayage et la circulation monétaire dans les royaumes barbares en Occident (V^e-VII^e siècle)," *R. N.*, 5^e série, VII (1943), 45-112; VIII (1944), 13-59. The shorter outline was given as a lecture to the Ecole des Chartes in 1939; it is included in his *Mélanges de numismatique mérovingienne* (Paris, 1940).
- (43) Keary's article was written before the publication of the Cimiez hoard (1890) and the finding of that of Bais (1904), so that its account of Merovingian silver coinage is particularly wide of the mark.
- (44) *Die Münzen Odovacars und des Ostgotenreiches in Italien* (Halle, 1928).
- (45) "Les monnaies vandales d'Afrique. Découvertes de Bou-Lilate et du Hamma," *Recueil des Notices et Mémoires de la Société archéologique du département de Constantine*, LXVII (1950-51), 147-94.
- (46) The author of this paper saw the hoard in the hands of an Italian dealer in 1950. It was alleged to have been found in Sardinia.
- (47) "Die Münzen des Swebenreiches," *M. B. N. G.*, LV (1937), 151-90; more generally in his article, "El reino hispanico de los suevos y sus monedas," *Archivo Espanol de Arqueologia*, XV (1942), 308-28.
- (48) Reinhart's article cited below, note 53, contains a plate of the coins from Monnoren. On those from Sutton Hoo, see D. F. Allen in the *British Museum Quarterly*, XIII (1939), 126-8; the comments of P. Le Gentilhomme in *B. N. J.*, XXIII (1941), 395-8; and the summary account of John Allan and comments of R. L. S. Bruce-Mitford and P. Grierson in *Antiquity*, XXVI (1952), 76-86.
- (49) P. Le Gentilhomme, "Trouvaille de monnaies d'or des Mérovingiens et des Wisigoths faite à Bordeaux en 1803," *R. N.*, 4^e série, XXXIX (1936), 87-133, and "Les monnaies mérovingiennes de la trouvaille de Buis," *R. N.*, 5^e série,

- II (1938), 133-68. The second deals also with the hoard of La Baugisière. Both articles are reproduced in his *Mélanges* (above, note 42).
- (50) J. Werner, *Münzdatierte Austrasische Grabfunde* (Berlin, 1935), and the important review of this by F. Stefan in *N. Z.*, LXIX (1936), 98-105; P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, 2nd ed. (Hague, 1951), and his article "Merovingische munten van het type Dronrijp en de vondst van Nietap," in *Gedenkboek A. E. Van Giffen* (Meppel, 1947), 369-84.
- (51) A. E. Cahn (Frankfurt), *Versteigerungs-Katalog* 79, 14 December 1932. The coins were mainly from the former De Saulcy collection.
- (52) *Münzen- und Medaillen A. G. Basel*, Auktion VIII, 8 December 1949. A few pieces were held over to Auktion IX, 21 June 1951. The remainder of the collection was acquired privately by an English collector in 1952. Another remarkable Merovingian series, but less well catalogued and illustrated, was dispersed in the first and second of the sales of Lord Grantley's collection (London, Glendining, 29 November 1943 and 27 January 1944). A number of coins from it were acquired by the American Numismatic Society; see D. P. Dickie and R. D. Parrott, "Merovingian coins in the collection of the American Numismatic Society," *A. N. S. Museum Notes*, IV (1950), 91-96.
- (53) "Die früheste Münzprägung im Reiche der Merowinger," *D. J. B. N.*, II (1939), 37-56.
- (54) F. Wielandt, "Die Monetarmünzen der oberrheinischen Merowinger Münzstätten," *D. J. B. N.*, II (1939), 57-84; W. Diepenbach, "Die Münzprägungen am Mittelrhein im Zeitalter der Merowinger," *Mainzer Zeitschrift*, XLIV-XLV (1949-50), 141-52. These are only the two most important of a number of articles by the same authors.
- (55) H. Longuet, "Les triens mérovingiens au buste de face," *R. N.*, 4^e série, XXXIII (1930), 173-90, and "A propos du monnayage mérovingien," *R. N.*, 5^e série, III (1939), 43-64; A. Dieudonné, "Les monétaires mérovingiens," *Bibl. de l'Ecole des Chartes*, CIII (1942), 20-51; Horst-Ulbo Bauer, "Der Triens der Rauchomarus," *Schweizer Münzblätter*, II (1951), 96-102. The last is of wider interest than the title suggests.
- (56) See his articles cited in previous notes, together with his "Notes de numismatique mérovingienne," *R. N.*, 5^e série, I (1937), 71-83.
- (57) *Anglo-Saxon gold coinage in the light of the Crondall Hoard* (London, 1948). On the same subject, Sir Arthur Evans, "Notes on early Anglo-Saxon gold coins," *N. C.*, 6th series, II (1942), 19-41.
- (58) They are noticed in Mr. Carson's Report on Roman numismatics.
- (59) "Frisia and its relations with England and the Baltic littoral in the Dark Ages," *Journal of the British Archaeological Association*, N. S., XXXVIII (1931), 190-215; "On the 'Wodan Monster' or the 'Dragon' series of the Anglo-Saxon sceattas," *Seminarium Kondakovianum*, VII (Prague, 1935), 169-86 (abridged under the title "On the 'Dragon' series of the Anglo-Saxon sceattas," *Journ. Brit. Arch. Assoc.*, 3rd series, I (1937), 35-51); "The geographical distribution of hoards of Anglo-Saxon and Frisian coins of the 7th to 9th centuries (sceattas)," *Seminarium Kondakovianum*, VIII (1936), 193-219 (in Russian, with English summary). The first of the articles just cited is concerned only incidentally with coins.
- (60) P. Le Gentilhomme, "La circulation des sceattas dans la Gaule mérovingienne," *R. N.*, 5^e série, II (1938), 23-49 (English translation in *B. N. J.*, XXIV (1943-44), 195-210); C. H. V. Sutherland, "Anglo-Saxon sceattas in England: their origin, chronology, and distribution," *N. C.*, 6th series, II (1942), 42-70; P. V. Hill, "Saxon sceattas and their problems," *B. N. J.*, XXVI (1949-51), 129-54, and "The 'Standard' and 'London' series of Anglo-Saxon sceattas," *Ibid.*, 251-79.
- (61) *Catalogo de las monedas prehisgódas y visigódas del Gabinete Numismático del Museo Arqueológico Nacional* (Madrid, 1936).
- (62) "Die Münzen des tolosanischen Reiches der Westgoten," *D. J. B. N.*, I

- (1938), 107-35: "Nuevas aportaciones a la numismática visigoda," *Archivo Español de Arqueología*, XVIII (1945), 212-35. These deal specifically with the earlier coinage. Another article, "Die Münzen des westgotischen Reiches von Toledo," *D. J. B. N.*, III-IV (1940-41), 69-101, gives an admirably illustrated conspectus of the whole development of Visigothic coinage, though with the emphasis on the earlier part.
- (63) *The Coinage of the Visigoths of Spain: Leovigild to Achila II* (A. N. S., Hispanic Numismatic Series, No. 2. New York, 1952).
- (64) The bibliography of works on Visigothic coinage which it contains makes it unnecessary to notice recent publications here.
- (65) J. Dhondt and A. Van de Walle, "La trouvaille de monnaies carolingiennes de Zelzate," *Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent, Nieuwe reeks*, IV (1950), 3-21; P. Naster, "Trouvaille de monnaies carolingiennes à Zelzate (1949)," *R. B. N.*, XCVI (1950), 208-224.
- (66) F. Vercauteren, "L'interprétation économique d'une trouvaille de monnaies carolingiennes faite près d'Amiens en 1865," *Revue belge de philologie et d'histoire*, XIII (1934), 750-58; E. Noebbe, "Der karolingische Münzschatz vom Krinkberg," *Festschrift zur Hundertjahrfeier des Museums vorgeschichtlicher Altertümer in Kiel* (1936), 136-60; H. Roosens, "Trouvaille de monnaies carolingiennes à Muizen-lez-Malines (1906)," *R.B.N.*, XCVI (1950), 203-8.
- (67) A. Segrè, "La circolazione monetaria del regno dei Franchi," *Rivista storica italiana*, XLVIII (1931), 465-98; S. Bolin, "Muhammed, Karl de Store och Rurik," *Scandia*, XII (1939), 183-222.
- (68) Madame R. Doehaerd's article, "Les réformes monétaires carolingiennes," *Annales: Economies, Sociétés, Civilisations*, VII (1952), 13-20, is far from being satisfactory.
- (69) "The gold solidus of Louis the Pious and its imitations," *Jaarboek voor Munt- en Penningkunde*, XXXVIII (1951), 1-41.
- (70) On the subject of place-names on coins, one may mention J. Vannérus, "Les deniers de Charles le Chauve (840-877) avec légendes DE ou IN FISCO....," *R. B. N.*, XCIV (1948), 77-100.
- (71) This is in part a reflection of the greater population of Germany, but there can be no doubt that it is aided by the number of numismatic societies that exist and the variety of publications which they sponsor.
- (72) A. Suhle, *Die deutschen Münzen des Mittelalters* (Handbücher der Staatlichen Museen in Berlin. Berlin, 1936); H. Gebhart, *Die deutschen Münzen des Mittelalters und der Neuzeit* (Berlin, 1929).
- (73) For Jesse, see above, n. 15; A. Loehr, "Probleme der Silberbarren," *N. Z.*, LXIV (1931), 101-09, with a list of recorded specimens; G. A. Loening, *Das Münzrecht im Erzbistum Bremen* (Weimar, 1937), and his more general note in *Forschungen und Fortschritte*, XIV (1938), 352-4; H. Troe, *Münze, Zoll und Markt und ihre finanzielle Bedeutung für das Reich vom Ausgang der Staufer bis zum Regierungsantritt Karls IV* (Stuttgart-Berlin, 1937).
- (74) *Münz- und Geldgeschichte Niedersachsens* (Brunswick, 1952).
- (75) *Die Anfänge der Münzprägung im Herzogtum Sachsen (10. und 11. Jahre hundert)*. 2 vols. (Numismatische Studien, Heft 3/4) Hamburg, 1952.
- (76) For Gumovski, see below, n. 173; K. Sieburg, "Ottoline. Eine rechtsgeschichtliche und numismatische Untersuchung," *N. Z.*, LXVII (1934), 33-56; R. Gaetgens, *Der Fund von Ludwigszeze* (Halle, 1934); O. Schulenburg, "Der Fund von Bibow und die niederelbischen Agrippine," *H. B. N.*, I (1947), 14-34.
- (77) W. Jesse, "Die Brakteaten Heinrichs des Löwen," *Braunschweiges Jahrbuch* (1949), 10-47; A. Suhle, *Das Münzwesen Magdeburgs unter Erzbischof Wichmann, 1152-1192* (Magdeburg, 1950); J. Cahn, *Der Brakteatenfund von Freckleben in Anhalt* (Frankfurt, 1931). The plates in Jesse's article are most unsatisfactory, and those in Suhle's are not much better.
- (78) O. Meier, *Der Brakteatenfund von Bokel bei Beveren, Kreis Bremervorde* (Hanover, 1932); W. Jesse, "Der Münzfund von Hildesheim," *H. B. N.*, II

- (1948), 16-48; W. Jesse and W. Reinecke, "Der Hohlpfennigfund von Goedenstorf," *Blätter für Münzfreunde*, 1940. The first consisted of some 13,000 and the second of over 4,000 denars and bracteates, the third of nearly 8,000 bracteates.
- (79) P. Berghaus, "Der Fund von Westerbörstel, Kreis Norderdithmarschen," *H. B. N.*, II (1948), 49-56; W. Jesse, "Der Münzfund von Bortfeld bei Braunschweig," *Bl. f. Münzfreunde*, 1938.
- (80) H. Buck and O. Meier, *Die Münzen der Stadt Hannover* (Hanover, 1935); H. Buck, *Das Geld- und Münzwesen der Städte in den Landen Hannover und Braunschweig* (Frankfurt, 1935); W. Jesse, "Zur älteren Münzgeschichte Bremens," *Brem. Jahrbuch*, XXXVI (1936), and "Goslars Münzgeschichte im Abriss," in *Froelich Festschrift (Beiträge zur Geschichte der Stadt Goslar, Heft 13, Goslar, 1952)*, pp. 51-70.
- (81) K. Kennepohl, "Beiträge zur Geldumlauf in Ostfriesland von der Karolingerzeit bis zum Beginn des 15. Jahrhunderts," *H. B. N.*, IV (1950), 5-25; A. Suhle, "Der Groschenfund von Schoo bei Esens," *Z.f.N.*, XLI (1931), 67-91.
- (82) "Das Münzwesen," in *Der Raum Westfalen*, II (Münster, 1947), pp. 61-74.
- (83) "Das Münzwesen der Bischöfe von Münster bis zum beginnenden 13. Jahrhundert," in *Liudger und seine Erbe (Westfalia Sacra, Band II, Münster, 1950)*, pp. 187-213.
- (84) *Währungsgrenzen des Westfälischen Oberwesergebietes im Spätmittelalter* (Numismatische Studien, Heft I. Hamburg, 1951). His study on the sterling in Westphalia is referred to above, n. 24.
- (85) K. Kennepohl, "Der Münzfund von Friesoythe," *Oldenburger Jahrbuch des Vereins für Landesgeschichte und Altertumskunde*, XLI (1937), 129-44; P. Berghaus, "Der Turnosenfund von Oberveischede, Kreis Olpe," *H. B. N.*, IV (1950), 49-76; K. Kennepohl, "Der Borsteler Münzfund," *Bl. f. Münzfreunde*, 1940.
- (86) K. Kennepohl, *Die Münzen von Osnabrück* (Munich, 1938); E. Stange, *Geld- und Münzgeschichte der Grafschaft Ravensberg* (Münster, 1951).
- (87) *Die Münzen der Grafen und Herzöge von Kleve* (Munich, 1931). The volume on Jülich (to 1423), Moers and Alpen had appeared in 1927, the two volumes on Berg and Jülich-Berg in 1929.
- (88) *Die Münzen von Köln, vom Beginn der Prägung bis 1304* (Cologne, 1935). For some later details, see H. Lückger, *Nachträge und Berichtigungen zu Band I des Kölner Münzwerkes* (Munich, 1939).
- (89) *Der Kölner Pfennig in 12. und 13. Jahrhundert* (Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, Beiheft 18, Stuttgart, 1930).
- (90) For the Arnhem find, see below, n. 151.
- (91) H. Lückger, "Zwei Trierer Münzfunde," *Z. f. N.*, XLII (1935), 174-218. They are of the late 12th and the 14th century respectively.
- (92) "Neue Münzschatzfunde aus dem Rheinlande," *Bonner Jahrbücher*, CL (1950), 229-60.
- (93) J. Sydow, "Palaeographie der Kölner Münzinschriften des Mittelalters," *Bonner Jahrbücher*, CXLIX (1949), 239-86.
- (94) "Das Münzwesen der Stauferzeit in der Landschaft zwischen Rhein, Main und Lahn," *Mitteilungen des Oberhessischen Geschichtsvereins*, N. F., XXXII (Giessen, 1934), 36-48; "Der Heller am Mittelrhein," *Bl. f. Münzfreunde*, 1930; *Das ältere Münzwesen der Wetterau bis zum Ausgang des 13. Jahrhunderts* (Marburg, 1936).
- (95) "Der Rheinische Münzverein," *Festschrift Christian Echert* (Mainz, 1949), pp. 89-120.
- (96) "Die Anfänge des landesherrlichen Münzwesens der Markgrafen von Baden," *Zeitschrift für die Geschichte des Oberrheins*, XCVII (1949), 56-177; *Der Breisgauer Pfennig und seine Münzstätten* (Numismatische Studien, Heft 2, Hamburg, 1951).
- (97) W. Lebek, *Die Münzen der Stadt Überlingen* (Halle, 1939); A. Haerberle,

- Ulmer Münz- und Geldgeschichte des Mittelalters (Ulm, 1935); H. Gebhart, "Die Münzgeschichte des Stiftes Kempten," *M. B. N. G.*, LI (1933), 19-107. Lebek also wrote a monograph on Lindau (below, n. 165), and Haeblerle published a complementary volume on the later monetary history of Ulm in 1937.
- (98) Münz- und Geldgeschichte der Mark Meissen und Münzen der weltlichen Herren nach Meissnerschen Art (Brakteaten) vor der Groschenprägung, 1. Teil: Abbildungstafeln. (Frankfurt, 1931).
- (99) G. Krug, "Die Meissner Groschen," in *Festschrift Hermann Grote* (Münster, 1952), 37-51.
- (100) *Die Münzen der Grafschaft Lüchow* (Halle, 1937).
- (101) On early finds, W. Petzsch, *Die vorgeschichtlichen Münzfunde Pommerns* (Griesswald, 1931). A number of 12th and 13th century Lusatian finds have been recently described by W. Haupt, but his publications have not been accessible to me.
- (102) A. Dieudonné, *Catalogue des monnaies françaises de la Bibliothèque Nationale. Les monnaies capétiennes. 2^e section (de Louis IX à Louis XII)*, Paris, 1932; *Catalogue des monnaies françaises de Hugues Capet à Charles VIII* (1^{re} partie), sale catalogue of 22 November 1927 (Paris, L. Ciani); H. Rolland, *Monnaies françaises. Etude d'après le Cabinet numismatique de M. Georges Motte, de Roubaix* (Mâcon, 1932). The later section of the Marcheville collection was dispersed in two further sales in 1928. The Motte collection was dispersed in a sale of 12 November 1951 (Paris, E. Bourgey).
- (103) *Les monnaies des rois de France. I. Hugues Capet à Louis XII* (Paris-Bâle, 1951).
- (104) "Denier parisis et denier tournois. De l'emploi de ces appellations dans les textes," *Le Moyen Age*, XLIX (1939), 17-30.
- (105) "Les ateliers monétaires de Ste. Ménéhould et de Châlons-sur-Marne," *R. N.*, 5^e série, VIII (1945), 65-133; IX (1946), 115-63.
- (106) "Trouvaille de Saint-Aubin (Allier)," *R. N.*, 5^e série, III (1939), 65-88.
- (107) "Chambre et Cour des Monnaies (XIV^e, XV^e et XVI^e siècles). Aperçu historique," *R. N.*, 4^e série, XXXVII (1934), 63-99, 175-97; XXXVII (1935), 67-89; XXXIX (1936), 157-79, 327-45.
- (108) For Perroy, above, n. 9; G. L. Lesage, "La circulation monétaire en France dans la seconde moitié du XV^e siècle," *Annales: Economies, Sociétés, Civilisations*, III (1948), 304-16.
- (109) E. Stampe, *Das Zahlkraftrecht in den Koenigsgesetzen Frankreichs von 1306 bis 1547* (Berlin, 1930), with review by G. Hubrecht in *Revue historique de droit français et étranger*, 4^e série, XII (1933), 337-47. The same question, from the point of view of canon law, was dealt with by E. Stampe, *Das Zahlkraftrecht der Postglossatorenzeit* (Berlin, 1928), and review in *Ibid.*, 776-83.
- (110) Above, n. 12. Also his article, "Le Melgorien. Exemple de variations de monnaie médiévale," *R. N.*, 4^e série, XXXV (1932), 31-36.
- (111) "De la succession des monnaies de compte en Lorraine," in *R. N.*, 5^e série, I-III (1937-39).
- (112) H. Morin, *Numismatique féodale du Dauphiné* (Paris, 1854), p. 80.
- (113) Vols. XII (Florence), XIII (Marches), XIV (Umbria and Lazio), XV (Rome I), XVIII (Minor mints of Southern Italy), XIX (Naples I).
- (114) This last defect is particularly apparent in the long series of carlini of King Ferrante of Naples listed in Vol. XIX.
- (115) G. Castellani, "La moneta del Comune di Ancona," in *Studia Pisana*, vol. XI (1935); L. dell'Erba, "La riforma monetaria angioina e il suo sviluppo storico nel reame di Napoli," in *Arschivio Storico per le Provincie Napoletane*, 1932-35.

- (116) H. E. Ives, "The design of Florentine florins as an aid to their dating," *A.N.S. Museum Notes*, V (1952), 103-112; A. Carson Simpson, "The mint officials of the Florentine florin," *Ibid.*, 113-55.
- (117) *Constitutio artis monetariorum civitatis Florentie* (Florence, 1939).
- (118) F. C. Pegolotti, *La Pratica della Mercatura*, ed. A. Evans (Cambridge, Mass., 1936); F. Borlandi, *El Libro di Mercatantie et Usanzi de' Paesi* (Turin, 1936).
- (119) *Problemi monetari veneziani fino a tutto il secolo XIV* (Padua, 1937).
- (120) G. Luzzatto, "L'oro et l'argento nella politica monetaria veneziana dei secoli XIII e XIV," *Rivista storica italiana*, 5th series, II, fasc. 3 (1937), 17-29.
- (121) C. M. Cipolla, *Studi di storia della moneta*, I. I movimenti di cambi in Italia dal secolo XIII al XV (Pavia, 1948).
- (122) Since their illustrations consist only of line engravings, and the plates of the great Vidal Quadras y Ramon catalogue (1892) are deplorable, it is worth noting that extremely fine plates of Spanish gold coins are now available in the *Catalogo de la Colecion Numismatica: Emilio Carles-Tolra* (2 vols. Barcelona, 1936), and of Portuguese gold coins in the sale catalogue of the R. A. Shore collection (London, Glendining, 16 July 1945). The Carles-Tolra collection was an unhappy victim of the Spanish Civil War, and its exact fate is still not known. The catalogue just cited was not published in 1936, when the text and plates were printed, but a small number of made-up copies have recently appeared on the market.
- (123) *La ceca de Valencia y las acunaciones valencianas de los siglos XIII a XVIII* (Valencia, 1929).
- (124) E. J. Hamilton, *Money, prices and wages in Valencia, Aragon and Navarre, 1351-1500* (Harvard Economic Studies, Vol. 51. Cambridge, Mass., 1936.) There is also much of interest on Catalan monetary problems in A. P. Usher, *The early history of deposit banking in Mediterranean Europe*, Vol. I (cited above, n. 8), which is largely concerned with Barcelona.
- (125) *Catalogo de los ponderales monetarios del Museo Arqueologico Nacional* (Madrid, 1934).
- (126) Among the more important are "De la Hispania visigoda a la Marca Hispanica carolina," *Analecta sacra Tarraconensis*, XIX (1946), and "Consideraciones sobre nuestra Reconquista," *Hispania*, XLII (1952). His article "El ducado, unidad monetaria internacional oro durante el siglo XV, y su aparacion en la peninsula Iberica (Notas a proposito del Hallazgo de Puerto de Santa Maria, Cadiz)," *Anuario del Cuerpo Facultativo de Archiveros, Bibliotecarios y Arqueologicos*, II (1934), 1-34, shows the amount of foreign gold circulating in Spain at the end of the 15th century.
- (127) "La primitiva organizacion monetaria de Leon y Castilla," *Anuario de Historia del derecho espanol*, V (1928).
- (128) P. Batalha Reis, *Morabetinos portugueses* (Lisbon, 1940); P. Beltran, "La gran dobla de Fernando el Santo," *Anuario del Cuerpo Facultativo de Archiveros* . . . , II (1934), 129-46.
- (129) *Cartilha da numismatica portuguesa*. The title-page bears the imprint of Lisbon, 1946, but the fascicules of which it is composed were not completed till 1952.
- (130) "The Iona hoard of Anglo-Saxon Coins," *N.C.*, 6th series, XI (1951), 68-90.
- (131) C. E. Blunt, "A gold penny of Edward the Elder," *B.N.J.*, XXV (1948), 277-81; D. F. Allen, "Edward the Confessor's gold penny," *Ibid.*, 259-76.
- (132) W. C. Wells, "The Northampton and Southampton mints," *B.N.J.*, XXI (1931-33), 1-57; "The Stamford and Peterborough mints," *B.N.J.*, XXII (1934-37), 35-77; XXIII (1938-41), 7-28; XXIV (1941-44), 70-109, 145-74; H. de S. Shortt, "The mints of Wiltshire," *N.C.*, 6th series, VIII (1948), 169-87, and in a slightly different form in the *Archaeological Journal*, CIV (1947), 112-128; J. Stevens Cox, *The Ilchester mint and Ilchester trade*

- tokens (Ilchester, 1949); R. A. G. Carson, "The mint of Thetford," *N.C.*, IX (1949), 189-236; T. M. Turner, "Pennies of the Colchester mint," *B.N.J.*, XXIV (1941-44), 8-21; H. H. King, "The Steyning mint," *ibid.*, 1-7.
- (133) *A Catalogue of English Coins in the British Museum. The cross-and-crosslets (Tealby) type of Henry II* (London, 1951).
- (134) W. C. Wells, "The Shrewsbury mint in the reign of Richard I, and the silver mine at Carreghova," *N.C.*, 5th series, XII (1932), 215-35; G. Askew, "The mint of Newcastle-upon-Tyne," *N.C.*, 6th series, I (1941), 76-87; P. Grierson, "Oboli de Musc," *English Historical Review*, LXVI (1951), 75-81; W. C. Wells, "The Pipe Rolls and *Defalta Monetarium*," *N.C.*, 5th series, XI (1931), 261-89, and "Notes on the Long Cross coinage of Henry III, 1247-1250," *B.N.J.*, XXII (1934-37), 79-107.
- (135) D. F. Allen, "The Boyton find of coins of Edward I and II," *N.C.*, 5th series, XVI (1936), 115-55 (with note by C. A. Whitton in *B.N.J.*, XXIV (1941-44), 53); L. A. Lawrence, "The coinage of Edward I from 1351; Parts III, IV, N. C., 5th series, XII (1932), 96-174; XIII (1933), 15-79 (the earlier parts had been published in 1926 and 1929); C. E. Blunt, "The mint of Berwick-on-Tweed under Edward I, II and III," *N.C.*, 5th series, XI (1931), 28-52.
- (136) "Some new light on the heavy silver coinage of Henry IV, 1399-1412," *Trans. International Numismatic Congress, London, 1936*, pp. 360-65; "The heavy gold coinage of Henry IV," *B.N.J.*, XXIV (1941-44), 22-27.
- (137) "Privy marks in the reign of Henry V," *N.C.*, 5th series, X (1930), 44-87.
- (138) On some general questions of late medieval English monetary problems in relation to the coinage, see C. A. Whitton, "Some aspects of English currency in the later Middle Ages," *B.N.J.*, XXIV (1941-44), 36-46.
- (139) "The heavy coinage of Henry VI," *B.N.J.*, XXIII (1938-41), 59-90, 206-67, 399-437; XXIV (1941-44), 118-9.
- (140) "The coinages of Edward IV and Henry VI (restored)," *B.N.J.*, XXV (1945-48), 4-59, 130-82, 291-339. Also D. F. Allen, "The Coinage of Henry VI restored: notes on the London mint," *N.C.*, 5th series, XVII (1937), 28-59, and G. C. Brooke, "The mints of Canterbury and York in the reigns of Edward IV and Henry VII," *B.N.J.*, XXI (1931-33), 73-87.
- (141) "The angels and groats of Richard III," *B.N.J.*, XXIV (1941-44), 179-189.
- (142) W. O'Sullivan, "The earliest Irish coinage," *Journal of the Royal Society of Antiquaries of Ireland*, LXXIX (1949), 190-235; D. F. Allen, "The Irish bracteates," *N.C.*, 6th series, II (1942), 70-85.
- (143) "Le monnayage de l'atelier de Nivelles," *R.B.N.*, XCII (1946), 19-37; "Le monnayage dans les villes de Flandre et de Brabant aux XII^e et XIII^e siècles," *Académie royale de Belgique, Bull. de la classe des lettres*, 5^e série, XXVI (1940), 34-48.
- (144) "Les deniers d'Arnot émis à Alost," *R.B.N.*, XCVIII (1952), 41-55.
- (145) "Les rois de France de Philippe-Auguste à Philippe-le-Bel et la monnaie de Flandre," *R.B.N.*, XC (1938), 5-78.
- (146) "De muntslag in Vlaanderen onder Lodewijk van Male," *Mededelingen van de Koninklijke Vlaamse Academie voor Wetenschappen, Klasse der Letteren*, XI (1949), 5-27; "Currency manipulation in the Middle Ages. The case of Louis de Male, count of Flanders," *Transactions of the Royal Historical Society*, 4th series, XXXI (1949), 115-127; "De Vlaamse munthervorming van 1389-90," *Nederlandsche Historiebladen*, I (1938), 336-47; "De economische en sociale gevolgen van de muntpolitiek der graven van Vlaanderen (1337-1433)," *Annales de la Société d'Emulation de Bruges*, LXXIV (1931), 1-15. There is much of value regarding the coinage of the 14th and 15th centuries in the same author's *De Gentsche stadsfinancien in de middeleeuwen* (Brussels, 1934). On the coinage of Flanders in the 14th century, see also H. Enno van Gelder, "De munten van

- Vlaanderen onder Lodewijk van Nevers en Lodewijk van Male," *Jaarboek voor Munt- en Penningkunde*, XXVI (1939), 122-31.
- (147) *La loi de Gresham au moyen âge. Essai sur la circulation monétaire entre la Flandre et le Brabant à la fin du XIV^e siècle* (Brussels, 1933). For contemporary understanding of some of the issues involved, see the same author's article "Le problème des traductions françaises du "Traité des Monnaies" d'Oresme dans les Pays-Bas bourguignons," *Revue d'histoire économique et sociale*, XXI (1933), 13-24.
- (148) *Staatliche Münz- und Geldpolitik in den Niederlanden unter den burgundischen und habsburgischen Heerschern, besonders unter Kaiser Karl V* (Munich, 1932). See also H. Enno van Gelder, "De muntpolitiek van Philips de Schone, 1482-96," *Jaarboek voor Munt- en Penningkunde*, XXXVIII (1951), 42-53.
- (149) "De munten van Friesland van de 10^e tot het begin der 14^e eeuw," *Jaarboek voor Munt- en Penningkunde*, XXVI (1939), 1-55; "De munten in de Lex Frisonum," *Ibid.*, XXX-XXXII (1943-45), 1-68.
- (150) P. Naster, "Trouville de Geel (1948)," *R.B.N.*, XCV (1949), 128-36.
- (151) H. Enno van Gelder, "Vondst van 12^e-eeuwsche munten te Arnhem," *Bijdragen en Mededeelingen der Vereeniging "Gelre"*, LI (1951), 121-47.
- (152) It may be noted in passing that I. H. Gosses' excellent study, "Utrechtsch en Friesch-Groningsch geld van de 11^e tot den aanvang der 14^e eeuw" (1908) was republished in his *Verspreide Geschriften* (ed. F. Gosses and H. F. Niermeyer. Groningen, 1946).
- (153) *Mont*, edited by S. Aakjaer (*Nordisk Kultur*, Vol. XXIX. Stockholm, 1936). A German translation of Georg Galster's section in it on Danish coinage was published at Halle in 1939.
- (154) A. Ernst, "Bidrag til Ribe monts historie," *Nordisk Numismatisk Arsskrift*, 1948, pp. 1-38; F. Lindahl, "Montfundet fra Vejstrup," *Ibid.*, 1949, pp. 29-38. A find of capital importance was that of Grenaa (G. Galster, "La trouvaille de Grenaa et les deniers jutlandais de la période 1146-1234," *Mem. de la Soc. royale des Antiquaires du Nord*, 1932-33, pp. 487-544), which, when compared with other finds, has made possible a radical revision of the classification of Jutland coins proposed by Hauberg.
- (155) Above, n. 66.
- (156) "The Roman-Byzantine coins of the Hon Find," *Symbolae Osloenses*, VI (1928), 74-6; *On the coins of the Hon Find* (Oslo, 1931); "Hon-fundet," in *Norges Innskrifter med de Ingre Runer* (Oslo, 1951), pp. 132-40.
- (157) E. Person, *Svenska Myntfynd från Vikingatiden* (Lund, 1935); M. Stenberger, *Die Schatzfunde Gotlands der Wikingerzeit*, II. Band. *Fundbeschreibung und Tafeln*. (Stockholm, 1947); R. Skovmand, "De danske Skattefund fra Vikingetiden og den ældste Middelalder indtil omkring 1150," *Aarbøger for Nordisk Oldkyndighed og Historie*, 1942, pp. 1-275. The two latter publications deal with all classes of finds, not merely those of coins.
- (158) A typical example is G. Galster, "Montfundet fra Haagerup," *Nordisk Numismatisk Arsskrift*, 1944, pp. 93-157. This hoard, of the mid 11th century, contained a great mass of English and German coins in addition to those of Denmark, to say nothing of a few from eastern Europe and even one from Italy.
- (159) *Deutsche Münzen in vorgeschichtlichen Funden Finnlands* (Helsinki, 1948).
- (160) A number of rare or unpublished German coins from Stockholm have been published by P. Berghaus, "Deutsche Münzen des 11. Jahrhunderts in Kungl. Myntkabinettet, Stockholm," *H.B.N.*, V (1951), 7-26. This is only a foretaste of what is to come.
- (161) See especially E. Baumgartner, "Die Blütezeit der Friesacher Pfennige. Ein Beitrag zur Geschichte des innerösterreichischen Münzwesens im 13. Jahrhundert," *N.Z.*, LXXIII (1949), 75-106.

- (162) K. Moeser and F. Dworschak, *Die grosse Münzreform unter Erzherzog Sigmund von Tirol* (Vienna, 1936). This was intended to form the seventh volume of a series entitled *Oesterreichisches Münz- und Geldwesen im Mittelalter*, but is the only volume which has appeared up to the present.
- (163) "Über das Münzrecht der Andechser zu Innsbruck und seinen geschichtlichen Hintergrund," *Tiroler Heimat*, XI (1947), 81-91; XII (1948), 113-29.
- (164) *Oesterreichische Geldgeschichte* (Vienna, 1946).
- (165) D. W. H. Schwarz, *Münz- und Geldgeschichte Zürichs im Mittelalter* (Aarau, 1940); E. Demole and W. Wavre, *Histoire monétaire de Neuchâtel*, revue et publiée par L. Montandon (Neuchâtel, 1939); J. Simmen, "Die Münzen von Solothurn," *Revue suisse de numismatique*, XXVI (1934-38), 347-82; XXVII (1939), 82-112; W. Lebek, "Die Münzen der Stadt Lindau," *D.J.B.N.*, III-IV (1940-41), 115-80. See also the latter's monograph on Überlingen, cited above, n. 97.
- (166) *Denar knížete Václava svateho a počátky českého mincovnictví* [The penny of St. Wenceslas and the beginnings of Czech coinage], Prague, 1929. An important find of the late 10th century was published by the same author in the annual of the museum of Brandys, Vol. VII (1932).
- (167) *O chronologii denaru Boleslava I. a Boleslava II.* (Prague, 1935).
- (168) "Studie o českých a moravských brakteátech," *Num. cas. česk.*, V (1929), 57-81; VIII (1932), 28-62. The first of these is a study of the Jezdovice find of 4,500 bracteates of the late 13th century.
- (169) "O českých zlatých razbách 14. století," *Num. cas. česk.*, XIX (1950), 55-73.
- (170) "Moravská mincovna markgrabete Josta," *Ibid.*, IX (1933), 45-70.
- (171) See above, n. 27.
- (172) J. Teisinger, *Variety pražského groše krále Vladislava II., 1471-1516* (Budejovice, 1934), with supplement in *Num. cas. česk.*, X (1934), 25-7; K. Castelin, "Ke chronologii bílých peněz Vladislava II.," *Ibid.*, VI (1930), 75-94. The first is concerned with the groschen and the latter with the weissspennige.
- (173) *Corpus nummorum Poloniae*. Vol. I. *Monety X i XI w.* (Cracow, 1939).
- (174) In *Bull. de l'Institut archéologique bulgare*, VI (1930-31), 221-40.
- (175) "Die russischen Funde abendländischer Münzen des 11. und 12. Jahrhunderts," *Z. f. N.*, XXXIX (1929), 1-187; XL (1930), 188-228; XLII (1935), 153-73; "Die Silber- und Goldbarren des russischen Mittelalters. Ein archäologische Studie," *N.Z.*, LXII (1929), 77-20; LXIV (1931), 61-100.
- (176) D. H. Cox, *The Tripolis hoard of French seigniorial and crusader's coins* (N.N.M., No. 59. New York, 1933); H. Longuet, "Le trésor de Kessab en orient latin," *R.N.*, 4^e série, XXXVIII (1935), 163-83; D. F. Allen, "Coins of Antioch, etc., from Al-Mina," *N.C.*, 5th series, XVII (1937), 200-210.
- (177) D. H. Cox, *The Caparelli hoard* (N.N.M., No. 43. New York, 1930).
- (178) *Précis de numismatique géorgienne* (Publ. de la Faculté de Lettres de l'Université de Strasbourg, fasc. 81. Paris, 1938).
- (179) J. Jeanprêtre insists on its utility for classifying the anonymous deniers of Lausanne and Geneva ("De l'importance de l'analyse chimique pour l'étude de nos deniers épiscopaux," *Revue suisse de numismatique*, XXV (1930-33), 378-86).

ABBREVIATIONS

A	—	Antike.
AC	—	Antiquité classique.
AJA	—	American Journal of Archeology.
AJP	—	American Journal of Philology.
ANR	—	Annuario numismatico Rinaldi.
ANS	—	American Numismatic Society.
ARCH	—	Archaeology.
BCH	—	Bulletin de correspondance hellénique.
BNJ	—	British Numismatic Journal.
BSAB	—	Bulletin de la Société archéologique bulgare.
BSFN	—	Bulletin de la Société française de Numismatique.
BSEHPM	—	Bulletin de la Société d'Etude pour l'Histoire du Papier-monnaie.
BZN	—	Beitrag zur Numismatik.
CA	—	Critica d'Arte.
CR	—	Classical Review.
DAIA	—	Deutsches archeologisches Institut in Athens.
DJBN	—	Deutsches Jahrbuch für Numismatik.
DM	—	Deutsche Münzblätter.
H	—	Hesperia.
HBN	—	Hamburger Beiträge zur Numismatik.
HEL	—	Hellenica.
JAI	—	Jahrbuch des deutschen archeologischen Instituts.
JHS	—	Journal of hellenic studies.
JNG	—	Jahrbuch für Numismatik und Geldgeschichte.
JNG MP	—	Jahrboek van het k. Genootenschap voor Munt-en Penningkunde.
JRS	—	Journal of Roman Studies.
M	—	Monatshefte.
MBNG	—	Mittheilungen der bayerischen numismatischen Gesellschaft.
MN	—	Museum Notes. (The American Numismatic Society).
N	—	Numismatica.
NC	—	Numismatic Chronicle.
NNA	—	Nordisk Numismatik Arsskrift.
NNM	—	Numismatic Notes and Monographs (American Numismatic Soc).
NUM	—	The Numismatist.
NZ	—	Numismatische Zeitschrift.
RA	—	Revue archéologique.
RBN	—	Revue belge de numismatique.
REA	—	Revue des Etudes anciennes.
RIN	—	Rivista italiana di numismatica.
RN	—	Revue numismatique.
SANJ	—	South Australian Numismatic Journal.
SNR	—	Schweizerische Numismatische Rundschau.
ZFN	—	Zeitschrift für Numismatik.