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Worn and Corroded Coins: Their Importance for the Archaeologist

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This study offers a demonstration of the kinds of information that can be obtained from a study of the wear and corrosion on coins.

Introduction

Almost every historical excavation in Classical areas turns up coins, often in great numbers. These coins are important for dating the strata in which they occur and for helping to indicate trade patterns, political boundaries, and the economic circumstances of the area under consideration. However, in some unfortunate circumstances these coins fail to impart their evidence: they may be destroyed by disintegration during cleaning or they may be too worn or corroded to be read. The two latter groups are usually termed *illegible* in published reports and they tend to be dismissed from all further consideration. This should not be the case.

The first distinction that should be made is that between coins rendered illegible by wear and those affected by corrosion. Wear is simply a function of the length of time the coin spent in active circulation while corrosion is due solely to the interaction of the chemicals in the soil with the metal of a buried coin. Severe corrosion does not necessarily take a great deal of time. Wear results in coins with a polished surface and with designs that become increasingly faint. The latter often devolve into silhouettes and finally disappear altogether. Corrosion, on the other hand, can cause coins to have a bubbled and pitted surface, to laminate or fracture, to crumble or, at best, to have part of the surface flake away.

The following observations stem from coins found in the excavations in the Athenian Agora but none of the problems involved can be thought of as exclusive to that area.[1]

Corrosion

Severe corrosion often completely destroys a coin's evidential value. With no fragment of the type visible, the coin can only be roughly attributed by its size and the coin can be dated only within the widest of parameters (i.e., "Hellenistic," "5th century Roman," etc.). A group of coins from the Agora (FIG. 1)[2] show the results of severe corrosion: they are virtually undateable. Many partially corroded coins, however while unattractive and often described as almost illegible, can give precise dates for their contexts.

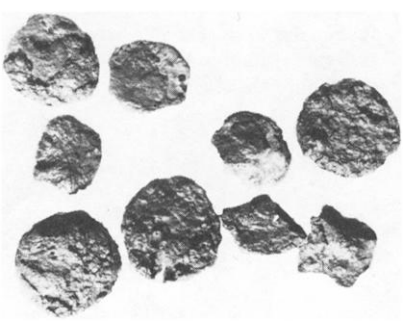

Figure 1. Coins illegible through corrosion.

1. I would like to thank Professors H. A. Thompson and T. Leslie Shear, Jr., for allowing me to publish this material. I would also like to thank Eugene Vanderpool, Jr., for his photographs.

2. Uncatalogued corroded coins from recent excavations in the Agora. All such coins are stored in the Agora coin room in a special area.

Figure 2. Corroded *follis* of Justinian I. Obverse above, reverse below.

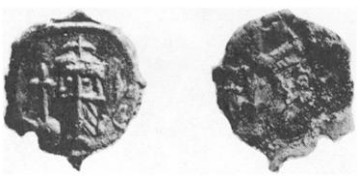

Figure 3. Corroded half-*follis* of Constans II.

Figure 2 shows a *follis* of Justinian I minted in 538/9 A.C.[3] Much of the obverse and reverse surfaces have flaked away but what remains is in very good condition with little wear. The robber trench in which it was found can therefore reasonably be dated ca. 550 A.C. Another coin which clearly shows the inconsistent nature of corrosion is a half-*follis* of Constans II dated 660-668 A.C. (FIG. 3).[4] The obverse is perfect, but the reverse is almost completely corroded away and would be described as "almost illegible." Once again such a report would be quite misleading since the condition of the obverse suggests that it was deposited very shortly after it was minted.

In general, all identifiable corroded coins should be very carefully examined to determine their condition prior to the onset of corrosion: if this is not done much of the coin's chronological significance will be lost.

Wear

The importance of relative wear in helping to establish the chronological sequence of differing issues is well-known from the study of coin hoards. The study of relative wear is also of value for the thousands of coins dropped in antiquity and found in excavations since these coins are present through accidental loss rather than any conscious selection. Thus it follows that the longer the specific issue of coinage stays in circulation the more worn the average specimen of that issue will be. Equally as many coins may be lost in the first year of their circulation as in any subsequent year, but after a few years of use they lose their original freshness. Exceptions to this general rule should be noted by the archaeologist.

If coins are *invariably* found in very good condition the cause may be one of the following: the site itself may have been abandoned or destroyed immediately after the arrival of the coins, or the coins may have been demone-

3. Agora inventory number T-1058. Minted in Constantinople, 538/9 A.C., Workshop 5. A. R. Bellinger, *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection and in the Whittemore Collection, Volume One: Anastasius I to Maurice 491-602* (Washington 1966) 84, no. 37e. Hereafter cited as *D.O.C.*

4. Agora inventory number Z-47. Minted in Constantinople, 660-668 A.C. P. Grierson, *D.O.C. Volume Two: Phocas to Theodosius III 602-717* (Washington 1968) 463-464, no. 95.

Figure 4. Athenian bronze coins struck in 87/6 B.C. The head on the obverse is of Athena and the figure on the reverse is a fulminating Zeus. The star-between-crescents symbol of Mithradates VI is to the right on the reverse.

tized for political or economic reasons. Two groups of coins from the Agora illustrate political demonetization: the bronze coins issued by Athens in 87/6 B.C.[5] and the facing-head *denier* coinage of Guillaume de Villehardouin issued ca. 1258.[6] The Athenian bronzes of 87/6 B.C. are almost never found in poor condition (FIG. 4)[7] and must have been withdrawn immediately after the fall of Athens to Sulla in 86 B.C. The coins, after all, bear the star and crescents device of Rome's great enemy, Mithradates VI of Pontus, and they could not be allowed to continue circulating. The coins of Villehardouin with his facing head are extremely rare; yet most of the large number found in the Agora show little wear (FIG. 5).[8] The only possible explanation for this state is that they were withdrawn after the capture of Villehardouin by the Byzantines in 1259 and the subsequent lifting of strict Achaian control from the Duchy of Athens.

Economic demonetization, on the other hand, can be shown by Athenian Imperial coins of the third period of issue, ca. 240-267 A.C., which are also most commonly found in fine condition (FIG. 6).[9] This circumstance results from the economic collapse of the third quarter of the 3rd century A.C. The coins were minted in huge numbers, probably connected with the need to prepare for possible barbarian incursions or with strife on the eastern frontier, but the great inflation of the 260s and the standardization of coinage by Imperial authorities effectively ended their circulation by ca. 275 A.C.

Figure 5. *Deniers* of Guillaume Villehardouin struck ca. 1258. The reverse type of a cross *pattée* is shown on the upper left.

5. J. Svoronos, *Les Monnaies d'Athènes* (Munich 1923-6) pl. 81, 45-48; M. J. Price, "The New Style Coinage of Athens: Some Evidence from the Bronze Issues," *NC* (1964) 27-36.

6. G. Schlumberger, *Numismatique de l'Orient Latin* (Paris 1878) pl. XII 6; D. M. Metcalf, "Frankish Petty Currency from the Areopagus at Athens," *Hesperia 34* (1965) 207-223.

7. Nine specimens of Svoronos, op. cit. (in note 5), pl. 81, 45-48 chosen at random from among the Agora finds. Their inventory numbers are A-677/1222/1344, AA-191/787/906, AR-17/19/36.

8. Five specimens of Villehardouin's facing head *deniers* chosen at random from among the Agora finds. Their inventory numbers are AA-845, AR-74, B-105/452, ΣA-218.

9. For the chronology of all Athenian Imperial issues see J. Kroll, "The Eleusis Hoard of Athenian Imperial Coins and Some Deposits from the Athenian Agora," *Hesperia* 42 (1973) 312-333. The eight coins pictured come from a small hoard described by Kroll (note 23a). Their inventory numbers are B-318/320-1/323-6/328. Note how corrosion gives the appearance of wear to some of these coins.

Figure 6. Period Three Athenian Imperial coins. The upper rows show obverse heads of Athena; representative reverse types are in lower two rows.

Figure 7. Roman *Sestertii*. From left to right, top to bottom: Hadrian, Faustina I, Sabina, Trajan, Lucilla, Gordian III, Faustina I.

Some coins in the Agora are found with moderate to extreme wear as a *normal* condition. This is specially true for Roman Imperial AE coins of the 2nd century A.C. and Athenian Imperial issues of Periods One and Two, ca. 125-170 A.C. and ca. 170-193 A.C. respectively.[10] The Roman coins (FIG. 7)[11] must have remained in constant circulation until the inflation of the 3rd century forced them out of use. This can be proved both by hoard evidence and by their common occurrence in the destruction level of 267 A.C.[12] However, should these coins turn up in fresh condition in any numbers they can be taken as precise dating evidence for their find spot. Period One Athenian Imperials are the most worn of the entire series; they are found only in small numbers and are usually barely legible. The coinage of Period Two was issued

10. These dates are tentative. The author is currently preparing what will hopefully be a definitive study of the Athenian Imperial Coinage of Athens.

11. Roman *Sestertii* of the 2nd century A.C. from a dropped purse of 267 A.C. found in the "room of the two marble busts." See Kroll, op. cit. (in note 9) 318 ff. The *sestertius* on the bottom left (Gordian III, 238-244 A.C.), from the same purse, is included for comparison. The others date to the reigns of Trajan, Hadrian, Sabina, Faustina I, and Lucilla. Their inventory numbers are IIII-411/420/423/425/444/450/457.

12. See note 11.

in much greater numbers but it, too, is almost invariably found in a very worn state (in comparison with Period One, it is significantly less worn, as would be expected). These two examples indicate quite clearly that once a coin has reached moderate wear it can no longer serve as an exact chronological point. It will, however, specifically show that such coins had to remain in use because of a lack of any other issue to take their place. This lack then has to be explained: trade routes may have changed, economic circumstances may have changed and reduced the need for money, the ancient population may have rejected newer coins as being inferior in some way, etc.

Finally, there are coins whose usual find-condition is extreme wear or total illegibility. The post-Sullan Athenian bronze coinage of the 1st century B.C. can often be identified only by size when found in the Agora since all detail has been worn away (FIG. 8).[13] The coins shown in Figure 8 were found in levels of the 1st-3rd centuries A.C. and could simply be dismissed in a report as illegible coins of little value. What these coins do show, in fact, is that they continued in *use* through the 3rd century A.C. (FIG. 9).[14] The use of old Hellenistic coins in the Roman period should not be thought of as unlikely, since these earlier coins were usually smaller than issues of the Roman period and could easily be used as low-value fractions. For these coins the context is all-important since sherds and other evidence found with the coins date the coins' *period of use* rather than, as usual, the coins' dating their context.

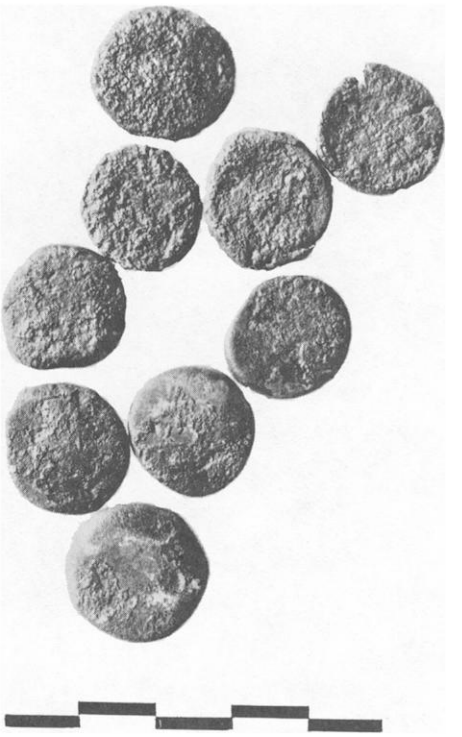

Figure 8. Hellenistic coins worn flat by wear.

Conclusion

In order to obtain all the information that numismatic material can supply,

13. Hellenistic Greek coins, probably Athenian, from a late 2nd century A.C. context in the Stoa of Attalos. Agora deposit number Q-R 10:1; Inventory number ΣA-416c.

14. Athenian coins, mostly post-Sullan, and two *antoniniani* of Gallienus from a large deposit beneath the floor of Shop II in the Stoa of Attalos. The inventory numbers are ΣA-421/437/444/449/455/461/462/464/465/472.

Figure 9. A group of coins found beneath the floor of one of the shops in the Stoa of Attalos. The two coins in the top row are of Gallienus, struck during his sole reign, 260-268 A.C. The remaining coins are Athenian of the 1st century B.C.

archaeologists must be aware of the ramifications of wear and corrosion. The examples cited above show that even exceedingly worn or corroded coins may have a real significance: they can either give a precise date for their contextual assembly or illuminate the economic and political circumstances of their period of deposition.

Alan Walker is a Ph.D. candidate at the University of Pennsylvania in the Department of Classical Archaeology. He is writing his dissertation on the Greek Imperial Coinage of Athens. Mr. Walker has been doing research at the American School of Classical Studies at Athens since fall, 1973, and was appointed Agora Numismatist in June, 1975.