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Why did the Ancient Greeks strike coins?

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Why the ancient Greeks struck coins is not as simple a question as it seems. In fact, it contains within it several different questions with different answers. The first way in which we may approach it is to ask: 'Who struck the earliest Greek coins, and why were these coins issued?'

Early numismatists were content with pointing to the descriptions of the nature of coinage that had been given by Plato and Aristotle and they made assumptions which were to a great extent based on the situation that existed in their own times. They did not address the question of the exact place and circumstances in which coinage came into being, but rather the theoretical advantages which were gained from its introduction, and if they tried to locate this event they leaned on a passage from the *Histories* of Herodotus, which is quoted below, and gave the credit to the Lydians.

In recent years more basic questions have been asked and more varied answers have been suggested. Two major studies should be mentioned. The first is an article which was published in 1964 in the *Journal of Hellenic Studies*.[1] I remember it very clearly because I had just begun to study ancient Greek coinage and this most thought-provoking study made many of the things that I had been reading obsolete or at least obsolescent. The article was entitled 'Hoards, Small Change and the Origin of Coinage'. Its author, the late Colin Kraay, came to the conclusion that coinage was not invented just to support either internal or external trade but to facilitate the management of such things as the payment of harbour dues, fines, the employment of experts from outside the citizen body, the undertaking of large scale building projects which required payment for labour and materials, and the hiring of mercenary soldiers.[2]

Another more recent investigation of this question was made by CJ Howgego in 1990.[3] In the last few years, books on the nature of early Greek coinage have also been published by David Schaps and Richard Seaford and collections of essays have been edited by Miriam Balmuth, and by Andrew Meadows and Kirsty Shipton.[4]

If these recent studies have anything in common, it is that they all move in the direction of recognising that coinage is only one form of money; that before the introduction of coinage many other forms of transaction existed, and that after coinage had come into use in some places other forms of money continued to be employed. Coinage was therefore struck when circumstances made it necessary or useful to do so, rather than because it was the only way of facilitating trade and employment.

Against this background, what is the evidence for the 'invention of coinage' or, to be more precise, the addition of coinage

to other forms of money in the ancient Greek world? In the first place we may examine the written statements of ancient Greek writers, although none of them was contemporary with this event. The answers that are provided by these ancient written sources are varied. For example, coinage was attributed to a number of different people in a statement made by one writer, Julius Pollux, who approaches the question directly. Pollux lived and wrote at Alexandria in the second century AD, long after coinage had begun to be used, and what he wrote is a collection of rumours. He asked (*Onomasticon* IX, 83):

> *...whether Pheidon of Argos was the first to strike coins, or Demodice of Cyme, wife of the Phrygian Midas and daughter of Agamemnon king of Cyme, or the Athenians Erichthonius and Lycus, or the Lydians, as Xenophanes says, or the Naxians, which is the opinion of Aglaosthenes…*

Of these, Pheidon of Argos (a shadowy figure whose date is disputed) is also mentioned by the ancient Greek historian Ephorus, who says that he struck coins on the island of Aegina, a statement which is at first hard to understand, because there is no reason to suppose that Pheidon had political control over Aegina. It is, however, possible to interpret the statement satisfactorily if we understand it as an attempt to reconcile the known fact that European silver coinage was first produced on that island with the tradition that claims that Pheidon, the ruler of Argos, had reorganised the system of weights and measures that was used in the area under his control. The choice of Demodice and Midas is probably inspired simply by the myth that Midas turned everything that he touched into gold. Erichthonius and Lycus of Athens belong to the misty period before anything that we might call historical can be documented and, if they existed, they lived long before the development of coinage. The historian Aglaosthenes was a Naxian, so it is not surprising that he should have claimed the invention of coinage for his own island. But this is a bad guess. The earliest known coins of Naxos are of the last quarter of the sixth century BC, about a century after the time when we believe that coins began to be produced in Asia Minor, and were struck in silver, not in electrum which was the metal used for the earliest coins. The Lydians are the only group in this list who might be thought worthy of a second glance.

The Phoenicians, whose main base was in what we should nowadays call Lebanon and Syria, and who operated trading establishments around the Mediterranean, were also suggested as possible originators of coinage. A work entitled *Odysseus*, which is ascribed to the fourth century BC rhetorician and sophist Alcidamas, contains this statement (26–7):

> *Did not the Phoenicians, the most learned and intelligent of foreign nations, discover coinage? For they divided up an equal portion of beaten metal, and set a stamp upon it according to whether it had a greater or lesser weight.*

Again, this is a bad guess, although it is not illogical, since the Phoenicians were the major trading nation in the Mediterranean until their bases were conquered by Alexander the Great and the Romans. But the earliest coinage that we can attribute to any Phoenician group belongs to the fifth century BC, long after the introduction of

coinage elsewhere; and it must be assumed that until and even after that time their trade was conducted by barter rather than by the use of coined money.

The statement which has generally received the greatest prominence in modern books was made by Herodotus, who wrote (*Histories*, I, 94):

> *The Lydians...have approximately the same customs as the Greeks, except that they prostitute their female children; and they were the first people of whom we have knowledge who struck and used coinage of gold and silver, and were the first who became retailers.*

The obvious way in which we can interpret these words is as a clear statement: that the Lydians, a non-Greek people living in the interior of Asia Minor, were the inventors of coinage. But there are two difficulties in this interpretation: in the first place, the earliest coins were not made of gold and silver, but in an alloy of the two metals. We call this electrum, as the Romans did, but the Greeks called electrum 'gold', because this is what it was to them, simply one form of gold as opposed to pure gold (it was sometimes called 'white gold' because of its paler colour). The Lydians were, however, definitely the first to produce coins in pure gold as well as in pure silver. We may guess therefore that when Herodotus composed this sentence, he (or the source that he was copying) was thinking of the pure gold and silver coinage which began to be issued more than half a century after the first electrum coins appeared.

The second difficulty that we have in attributing the invention of coinage to the Lydians is that their society was a monarchy, ruled by a king supported by an aristocracy, and based on agriculture and the pasturing of animals, rather than on commercial activities. There is no reason why coinage should have been invented by them for the sake of any internal activity.

There is, however, one major reason which might have led to the production of coins for, and perhaps by, the Lydians, whether they actually invented it or not. This is (as Kraay saw) the employment of mercenary soldiers, who would have had to be paid at the end of their service with something that was of high worth, easily portable and made up of units which were clearly of the same value, so that each soldier could see that he was receiving his fair share. Here a fragment (partially preserved on a scrap of papyrus) of a lost poem composed by the poet Alcaeus of Lesbos may be relevant:

> *O Father Zeus, the Lydians angry at what has happened, have given us two thousand staters, if we can enter the ?holy city...*[5]

Alcaeus was probably active from *c.*610 BC, and this fragment of a poem, which mentions 'staters', is perhaps the earliest surviving reference to coinage. The word 'stater' in this context seems to mean the standard major unit of coinage, as it did later in this area. The context suggests that the Lydians are paying Greeks to attack a city. An incomplete word at the end of the third line may, as the editors suggest, be completed to read 'holy' (as in the translation printed above), a word sometimes used at this time to describe cities; on the other hand, it may be the beginning of the name of a city, Hiera or Hira, which we are told was one of the cities on the island of Lesbos, the home of Alcaeus. The fragmentary nature of the

poem does not allow any certainty, but it should be remembered that at the time when the poem was composed, about 600 BC, the mainland opposite Lesbos was under the control of the Lydians. My own guess, and it can be no more than this, is that coinage was invented in order to distribute pieces of electrum of a standardised weight among Greek mercenaries who were fighting for the Lydians, after their period of service had been successfully concluded in the terms of the contract under which they were employed. It is more likely that the Greeks were the ones who devised this method of distribution than the Lydians, whose society was regal, with everything owned by the king. This is a much more credible explanation than the alternative suggestion, that the earliest coins might have been used to pay fines or harbour dues, because these could have continued to be paid in other ways, in metal objects or a proportion of the goods handled, a practice which was already well established.

This explanation, that the first coins were invented for a specific purpose in a specific situation, is much more useful than the theorising of the philosophers, for example the imaginary dialogue conducted between Socrates (the first speaker) and his 'feed' (in stage terms), Adeimantus, in Plato's *Republic* (II, 371b):

> *'Well then; in the city itself how will they exchange with one another what they make? It was, after all, for this purpose that we created a community and founded a city.'*
> *'Clearly', he said, 'by buying and selling.'*
> *'And from this there will come into being a market, and coinage as a token for the purpose of exchange.'*
> *'Certainly.'*

This description of coinage is an invention, based on the situation that existed in Athens (the most economically advanced city in the Greek world) in Plato's time, some two and a half centuries after the earliest coins had been produced. A similar account of coinage is given by Aristotle in his *Nicomachean Ethics* (V, v, 10):

> *All things which can be exchanged need to be compared. For this purpose coinage has come into being, and is a medium, as it were. It measures everything, including the relative superiority and inferiority of things, such as the number of shoes that are equal to a house or to a certain amount of food.*

Again, this statement was true for the more economically advanced cities of Aristotle's own time, but it shows no knowledge of the actual situation at the time that the first coins were produced. The implication of these passages, that coinage was invented for the purpose of conducting retail trade, is clearly wrong, since the earliest electrum coins were produced in a very valuable metal and even the smallest fractions would have been too valuable to use for small purchases. It is in fact clear that coinage was invented for a small number of specific situations and its use then spread more widely.

In addition, it is becoming increasingly clear that in the ancient world coinage was only one form of money and that the other forms that preceded its invention continued to exist after coinage began to be used. Many ancient Greek cities never

issued coins (remember that there was never any universal ancient Greek coinage, only the issues of individual states, leagues and rulers) and of those that did issue coinage, some did so only rarely and then only in special circumstances.

It is not possible to say exactly how many communities in the ancient Greek world were sufficiently advanced for them to have considered issuing coins on some occasions. The number may be estimated at between two and three thousand. On the other hand, the number of these that issued coins continuously for long periods was quite small and the total number that minted coins at any time, sometimes only a few small issues in the course of their history, was between twelve and thirteen hundred, about a half of those that might have done so.

Let us consider the different situations that existed among the Greek states that did not coin regularly. The earliest coinage that can be attributed to the Spartans was produced late in their history, in the reign of King Areus I (309–265 BC). Greek tradition attempted to explain this lack of coinage as the result of an attempt by an early lawgiver, Lycurgus, to remove temptation from the citizens by ordaining that the only kind of currency permitted at Sparta should be bars of iron, too large to be hidden from sight and too heavy to be easily transported if any large payment needed to be made. But this is a moralising invention designed to explain the absence of coinage in that city. Before any coinage was produced by the Spartans, they must have used coinage produced by other cities. We do in fact have the remains of an inscription dated to 427/6 BC which records financial contributions made by other Greek states to the Spartans during the first stage of the Peloponnesian War, and this includes contributions in silver coins of Aegina and Persian gold Darics, two of the principal international coinages of the time.[6] This shows that the Spartans could, and did, use coinage, even if they did not produce it in their own name.

The coinage of the small island of Syros, situated in the middle of the Aegean, presents us with a quite different picture. By contrast with Sparta, we do not know much about its history. It issued a small number of coins in small denominations of silver and later in bronze. These coins of low value look like the sort of money that might have been created for a specific purpose, for example to pay foreign workmen, who were not slaves and needed to be able to buy food while they were working on the island. But early in the second century BC, the island issued some large silver tetradrachms. This might suggest that a large payment had to be made to some outside authority, because by this time tetradrachms of Attic weight were the standard component of interstate currency. The coins of Syros, however, are rather lighter in weight than the silver coins of Athens or of Alexander and his successors, the weights of which were, to judge from the surviving specimens, quite accurately controlled. So the island had some reason for making a special and unusual issue of coins of high value, but without further information we have no way of knowing what the circumstances were that led to these coins being minted. We may guess that soldiers had to be paid off at the conclusion of a period of service, but there is no evidence that would make this more than a conjecture.

We therefore need to realise that when the ancient Greek cities issued coins, they often issued them for specific reasons, rather than because every member of every community had a need for them. The first likely reason must have been warfare, because coins represented a portable form of wealth, which a soldier could take home when his service had ended. But we can refine on this, because separation payments would be in large denominations, silver coins worth four drachmas or more, or gold coins, whereas soldiers who were marching through friendly territory might be given coins in small denominations to buy food or other things from the local inhabitants. This is a pattern that is very evident in the coinage of Alexander the Great: drachmas and fractions were minted in areas through which his army passed without waging war on their inhabitants, but the great bulk of high value coinage was produced when he had been successful and was disbanding his forces. For example, we may ask why he minted coins of high value in Cyprus, but when we realise that some of the crews that manned his fleet came from that island, the reason is immediately clear.

The next reason for minting coins must have been to pay for public works (not completely divorced from warfare, because the public works might include the building of warships or fortification walls). When men were taken from their farms or other occupations, or brought from some other community to work, it was necessary to recompense them in some way and paying them with coins will have been one of the best ways of doing this, since they could use the coins to feed themselves and their families and take any surplus home when the task was finished.

We should remember that many ancient Greek communities which were politically independent never minted coins at all, or only rarely (presumably when they were involved in a war, or in some major public building project). We do not know exactly how many ancient Greek communities would have been described by the name of 'polis', which was the word that the Greeks used to describe a politically independent unit of their society large enough to have considered issuing coins, but at a rough guess, if we include foundations created during the time of the Roman Empire, the number might have been about three thousand and, as has already been said, less than half of that number issued coinage. To reinforce this statistic, I can report a small investigation that I undertook a little while ago. I counted the number of entries appearing under the letter *alpha* in the surviving epitome of the *Ethnika* of Stephanus of Byzantium, an author of the 6th century AD, who compiled an alphabetical list of Greek place names. Of the 539 names in this list, only 215, less than half, are known to have struck coins at any time and most of this number did not engage in anything like continuous minting. This will give an indication of the extent to which most ancient Greek communities engaged in this activity.

On the other hand some cities minted continuously for long periods. This may have been because of their commercial activities; Corinth would be a good example of this. On the other hand, the little island of Aegina, not far from Athens, produced a

very large volume of coinage in the sixth and early fifth centuries, far more than could possibly have been demanded by the commercial requirements of its citizens. Hoards show that this coinage was exported in large quantities to parts of the Mediterranean world, notably Egypt and the Levant, which were deficient in silver. In this case, therefore, the silver coinage that the island produced was a commodity as much as a currency. The silver seems to have come from the island of Siphnos, which in this respect was like Australia, exporting its resources to another place so that they could be processed into a different form.

Are there any other reasons which would lead an ancient Greek city to issue coins? If we leave on one side the purely commercial motives, or the specific circumstances requiring large expenditures, which might have led an ancient Greek city to strike coinage, there are two other reasons which can be suggested. We have an interesting inscription from Sestus, a city on the south-east coast of the Gallipoli peninsula, carved about 120 BC, which refers to a decision to strike a coinage in bronze, and gives the reasons that lay behind this decision:

> *...and when the people had decided to use the city's own bronze coinage, so that the city's coin type might have currency, and that the city might receive the profit that would accrue from a revenue of this kind...*[7]

In these few words we can see two very different ideas. The first is that a city could advertise itself by striking coins that showed something to the viewer that could be associated with its history or religious cults. This is obviously true, because the coins of the Greek cities overwhelmingly show designs that advertise the major religious cult, or some other symbol associated with the city in question.

Then there is the idea of profit: making money by making money. This could be done in various ways. The earliest electrum coinage was produced very accurately, so far as the weight of the coins was concerned, but the proportions of gold and silver in individual coins varies quite markedly. It was suggested by Sture Bolin half a century ago that this showed that the coins were overvalued.[8] The mathematical calculations that he presented to support this thesis have not been generally accepted. Neverthless, it seems probable that the general principle was sound and that coins in electrum were tariffed at a value higher than the value of the metal that they contained. There is also evidence which shows that at a later date electrum was valued more highly in the area in which it was issued than outside (electrum being 2/3 of the value of pure gold in the area under the control of the minting authority, but only 1/2 of the value of gold outside it).[9]

This is the background against which a very interesting inscription dated to *c.*400 BC should be studied. It records a treaty between the mainland city of Phocaea on the west coast of Asia Minor and Mitylene, the principal city of the island of Lesbos, concerning the arrangements which would govern the striking of electrum coins in alternate years by these two neighbouring cities.[10] The most interesting section of the treaty reads as follows:

> *...The one who mixes the gold is to be legally responsible in both cities. As*

judges there are to be, for the one who mixes at Mytilene, more than half of the officials at Mytilene, and at Phocaea more than half of the officials at Phocaea, and an audit is to take place when a year has ended, within six months...and if anyone is convicted of willingly mixing the gold too weakly, he is to be punished with death, and if he is found not guilty of willingly committing an error, let the court decide what is a fitting penalty for him to suffer or pay, and the city is to be guiltless and free from penalty. The Mytilenaeans drew by lot the right to strike first…

The results of analyses of seven late 6th century electrum hektai (1/6 staters) of Mytilene are as follows:

Gold content: 35% to 41%.
Silver content: 49% to 60%.
Copper content: 2% to 15%.[11]

These figures show that at this mint in the archaic period the relative proportions of all these three metals (copper, when not an accidental impurity, was probably added to darken the alloy and make it look more like pure gold) was variable. Analyses of later electrum coins of Mytilene and Phocaea, on the other hand, show a more consistent alloy and this fact, taken together with the inscription quoted above, suggests that the electrum coinage of these mints was being produced in a way that provided a profit for the minting authority.

Even better evidence for this practice is provided later by the mint of Carthage. The results of some analyses of 'gold' coins of this mint in the fourth and third centuries BC show that within each group of coins the quality of the metal is consistent but that on several occasions, when a new series came to be issued, the proportion of gold was reduced. In each case the mint must have made a profit by forcing the new coins to be accepted at the same rate as the old ones (many of which would have been taken out of circulation, melted down and reminted with the addition of some silver). The figures for a selection of some of these groups of coins are as follows[12]:

Group III: gold 93.5%, silver 6.5%.
Group IV: gold 73%, silver 27%, trace of copper.
Group V: gold 60%, silver 39%, copper 1%.
Group VI: gold 45%, silver 54.5%, copper 0.5%.
Group Xb: gold 35.6%, silver 64%, copper 0.4%.

There can be no doubt that this decline of metallic value over a period of a number of decades, although it may have been partly caused by a shortage of gold, was mainly the result, at a time when the issuing of coinage had become a more sophisticated process, of a decision to take advantage of the fact that successive series of coins could be issued at slightly lower metallic values, with their acceptance enforced, and the issuing authority could either, to look at it one way, make a profit or, more probably, get more mileage out of the existing supply of precious metal.

We may also suspect that the gradual reduction of the weights of coins struck in pure silver that we see at some ancient Greek mints had exactly the same purpose: to make a profit for the city, or to make the existing supply of silver go further (which would have the same effect). An excellent example of this is provided by the East Greek coinages of various mints, most notably Chios and Rhodes, which have given their names to weight standards; although there is no ancient evidence that

would show that these weight standards were anything but local reductions of a standard which remained unaltered when interstate transactions were being effected. The situation that we meet again and again in the documents is that payment of large sums, particularly when made outside the circulating area of one city, is demanded in silver of Attic or Alexander weight (two names for the same weight standard). There are modern parallels for this: major payments are denominated in US dollars or euros, even when these are not the official currency of the country in which the transaction takes place.

Again, when ancient Greek cities struck coinage in bronze, we are certain that the city made a profit from this activity, because when we compare the weights of the bronze and silver coins issued by any mint, in cases in which the relative values of the metals and the relative values of the coins are known, it is clear that the bronze coins were overvalued.

It seems therefore that some Greek mints issued coins that were worth more or less the same as they were in terms of their silver content (allowing for a minting charge which might have been about five per cent). Others issued coins that were tariffed at a certain level, but might not have contained as much silver as other coins of the same nominal value, and followed this by reducing the weights of the coins that they produced over the course of a few generations; thus creating a small profit for the city that issued the coins. So coins were issued not only to meet the needs of specific circumstances, but to advertise the city that issued them and perhaps to make a profit.

There is another reason for which ancient Greek coins might have been issued: to commemorate a specific occasion. This motive is so apparent in the coinage of the late Roman Republic and the early Roman Empire that it is easy to transfer it to the coinage of an earlier period and, for example, to assume that when the Athenians issued decadrachms in the 460s BC, coins more than twice the weight and much larger than the tetradrachms that had previously been the largest coins that they had minted, or when the Syracusans issued coins of the same denomination at about the same time, and produced another similar series in a more advanced style towards the end of the fifth century, these issues were commemo-rative and were created to celebrate victories. But this would have been a new departure in the history of Greek coinage and it is probably better to assume that these large coins were issued because large payments had to be made and it was convenient to make them in as few coins as possible. In addition, although the earlier and the later 'Arethusa' coins of Syracuse may be admired as supreme examples of Greek numismatic art (and some of the later ones bear names that are probably those of the artists who engraved the dies from which they were struck, which shows that they were unusually highly regarded), it is possible to take a cynical approach and argue that the reason for employing the best artists on the largest coins was to ensure that they would be almost impossible to counterfeit and that, if coins appeared which were judged to have been struck from dies made by a counterfeiter, the culprit would not be hard to find.

It is therefore not likely that Greek coins were struck to commemorate events or living persons during the first few

centuries of the existence of this form of money. But during the fourth century BC the situation changed and now we come to the last reason which led to the striking of coins by Greek mints. The coins of Philip II of Macedon, which began to be issued a few years after his accession, bear types which seem to advertise his victories at the Olympic Games. His son, Alexander, did not issue coins bearing his own portrait (although he might not have been offended if he found that the youthful Hercules whom he chose to place on his silver coins was believed to represent him), but his successors placed their portraits on the obverses of their coins where only gods had been shown before, and it became the normal practice for the coinage of a ruler in this period (the Hellenistic period, as it is called) to show the ruler's head as the obverse type.

An outstanding example of a commemorative Greek coin (used in this case to advertise a foreigner in a way that the coinage of his own country had not yet attempted) is the gold stater that was issued in the name of the Roman conqueror T Quinctius Flamininus, at some time after his victory over the Greeks at the battle of Cynscephalae in 196 BC. This bears a portrait in Greek style of the conqueror on the obverse and—copying the coinage of Alexander the Great—a figure of Victory, on the reverse. This kind of message, however, comes late to Greek coinage. For the full development of a new language, which used coins to commemorate events and to send political messages, we should look to the Romans, who took over this institution from the Greeks, as they took so many others.

Notes

1. *JHS* 84, 1964, 76–91.
2. The last of these reasons had been suggested in a smaller publication some years before by RM Cook of Cambridge University ('Speculations on the origins of coinage', *Historia* 7, 1958, 257–62).
3. Howgego, CJ. 'Why did Ancient States Strike Coins', *The Numismatic Chronicle* 1990, 1–25.
4. Schaps, David M. *The Invention of Coinage and the Monetization of Ancient Greece*, University of Michigan Press, 2004; R Seaford, *Money and the Early Greek Mind: Homer, Philosophy, Tragedy*, Cambridge, 2004; M Balmuth (ed.), *Hacksilber to Coinage: New Insights into the Monetary History of the Near East and Greece*, New York, 2001; A Meadows and K Shipton, *Money and its Uses in the Ancient Greek World*, Oxford, 2001.
5. Lobel, E and D Page, *Poetarum Lesbiorum Fragmenta* D 11, lines 1–4.
6. *Inscriptiones Graecae*, V, 1, 1.
7. *Orientis Graecae Inscriptiones Selectae* 339.
8. Bolin, S. *State and Currency in the Roman Empire to 300 A.D.*, Stockholm, 1958, pp 11–46.
9. I have argued this in my article 'The Value of Electrum in Greece and Asia', in R Ashton and S Hurter (eds), *Studies in Greek Numismatics in Memory of Martin Jessop Price*, London, 1998, 259–68.
10. *Inscriptiones Graecae* XII, 2, 1.
11. *See* JF Healy, *Mining and Metallurgy in the Greek and Roman Worlds*, London, 1978, 202.
12. These figures have been extracted from GK Jenkins and RB Lewis, *Carthaginian Gold and Electrum Coins*, London, 1963.

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