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THE FIRST AGE OF ROMAN COINAGE.¹

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(Plates I-III).

The Romans of later times knew very little about the origins of their coinage. Thus, Pliny the Elder could assign the first issue of bronze to Servius Tullius,² and the mint-master of Trajan could mistake *denarii* of somewhere near 200 B.C. for issues of Horatius Cocles and Decius Mus.³ Apart from isolated notices in metrological and other writers, we have a limited amount of coherent tradition, notably in Pliny the Elder, Varro and Festus, which increases in value as it approaches the Empire. But, even here, we do not find the sure ground on which we should choose to construct our system. The tradition, we all agree, has some relation to facts, and therefore some value: but it is impossible to trust it blindly—it must be checked and criticized and, if need be, adapted to fit the evidence of the coins themselves.

How far has modern scholarship succeeded in filling the gap left by our ancient authorities? Much ground has unquestionably been won. Haeberlin, carrying on the work of Mommsen, has established a stately 'Systematik'⁴ of early Roman coinage, conceived on broad lines and interpreted in masterly fashion in the light of history. If we may believe the claims advanced by him and his school, no serious change in the general plan remains to be made: all that we have still to do is to work out the detail along the lines which he has indicated.

The system of Haeberlin rests on that conception of the early Roman silver-coinage which we owe to Mommsen,⁵ modified and improved in the light of the researches of Samwer and Bahrfeldt,⁶ and on Haeberlin's own magnificent studies of the Roman and Italian *aes grave*.⁷ It is a solid and imposing structure: if its

¹ I owe a very great debt of gratitude to my colleague, Mr. E. S. G. Robinson, for constant help and advice during the writing of this paper. As the approach to the subject is definitely from the Roman side, he has not wished his name to appear as joint-author: but his contribution, particularly on the important question of over-strikes, has been most valuable. We hope shortly to publish in the *Num. Chron.* some closer analyses of the numismatic evidence.

² *Hist. Nat.* xxxiii, 42 ff.

³ Cp. *Num. Chron.* 1926, pp. 233-5, 275.

⁴ *Die Systematik des ältesten römischen Münzwesens*, Berlin, 1905.

⁵ Mommsen, *Geschichte des römischen Münzwesens*, pp. 211 ff.

⁶ *Geschichte des älteren römischen Münzwesens*, Vienna, 1883.

⁷ *Aes Grave*. Two vols. (text and plates), Frankfurt, 1916. Grueber (following De Salis), in *B.M.C. Republic*, does not differ very seriously from Haeberlin in his general plan: the main difference is that he dates the 'Mars gold' and the sextantal *as* c. 240 instead of 269 B.C. The peculiar merit of Grueber is his study of styles. Babelon, *Descr. historique des monnaies de la répub. rom.*, p. 10, assigns the coinage to 'Roman generals charged with wars against the Samnites, Pyrrhus and Carthage,'—limits of date 342-211. This is true enough, but too vague to help very much. Giesecke's *Italia Numismatica* is full of new thought and suggestion but, in the judgment of the present writer, relies far too much on unproved metrological theories.

foundations are sound, it must stand unshaken. If it is true that the *denarius* and the sextantal *as* were introduced together in 269 (or 268) B.C., then we have no choice but to reconstruct the earlier coinage by Haeberlin's plan.

Research, however, does not stand still. Over twenty years ago Sambon, in his valuable book on the coinage of Italy, gave voice to serious doubts about the dating of the 'Romano-Campanian' didrachms¹: his trained eye saw in the later series the style, not of c. 300 B.C., but of the Pyrrhic War. These doubts, cautiously and hesitatingly expressed, did not command much attention. The author of the present paper, in an article published in the *Numismatic Chronicle* of 1924 (pp. 181 ff.), reopened the question and adduced arguments, drawn both from history and numismatics, in favour of a Pyrrhic date for the Romano-Campanian silver. But, though the views there proposed have attracted much interest and won some support among numismatists of reputation, they have not yet made any real impression on the general body of Roman scholars. The structure of Haeberlin has seemed to stand too surely based to be seriously shaken.

Yet, test and re-test his own conclusions as he may, the present writer has been unable to detect any serious error in them. He has, however, arrived at the conviction that the reconstruction required is far more extensive than he had at first imagined.² He has also, he believes, detected the fault in the foundations of Haeberlin, on which the whole error depends. Although the working-out of the new results in detail will still demand much time and study, it should not be premature to state them in general outline. Until some agreement on general principles is attained, it is hopeless to expect agreement over closer details. It is hardly necessary to add that this attempt to move forward argues no lack of appreciation of the work of our great pioneers; no one, in fact, can appreciate that work so fully as the scholar who sets himself the task of carrying it on.

It will help to clear our path through an intricate discussion, if we put forward at once the main principles which we hope to establish. These will run as follows:

(1) The origin of Roman coinage is later than c. 300 B.C. Our first clear view of it is obtained in the war with Pyrrhus, to which the earliest issues of Romano-Campanian silver belong.

(2) The *aes grave* of Rome and Italy represents only a short stage of transition from the early use of uncoined bronze, as a measure of value, to the Greek use of silver money. It can only have originated towards the end of the establishment of Roman domination in Italy.

(3) The main series of Roman *aes grave*, with the prow on

¹ *Les monnaies antiques de l'Italie*, Paris, 1903, pp. 421 ff. pp. 3 ff.: the view given there represents, to some extent, a compromise between old and new views.

² Mattingly, *Roman Coins*, Methuen, 1928,

reverse, dates from the early years of the first Punic War : the first reduction of its weight is directly due to the stress of that colossal struggle.

(4) Until the second Punic War Rome had no silver coinage other than the so-called Romano-Campanian didrachms, including the *quadrigatus*. The coin that we know as the *denarius* was first struck during the struggle with Hannibal. In all probability the first Roman coin to bear the name *denarius* was a didrachm.

(5) As the 'sextantal' and 'uncial' reductions of the *as* must accordingly both fall in the second Punic War, we can no longer accept Pliny's account of them. We are now at liberty to accept the evidence of the coins themselves and recognise that both in silver and bronze there was not a second sudden change, but a gradual 'de facto' decline. We can finally discard Pliny's error about the re-tariffing of the *denarius* at sixteen *asses*, which he has dated nearly a century too early.

(6) The early gold coinage of Rome is in part closely associated with early *denarii* and is of the second Punic War : in part, it may be earlier.

(7) The change in the dating of Roman coins will involve a re-dating of a number of Italian issues.

(8) The victoriate was essentially a creation of Rome's wars in Greece, following the war with Hannibal. There is, therefore, a grain of truth in Pliny's statement that it was 'ex Illyrico advectus.' The denomination, however, is no more nor less than a drachm of the *quadrigatus*-didrachm, and served Rome's purposes in trade in the West as well as in the East.¹

There is much here that will, and should, challenge contradiction : for, if these premises are correct, we are committed to a drastic re-consideration of many problems of numismatics which affect, not only metrology and attribution to mints, but general history as well. It is not desirable, even if it were possible, that they should be accepted without very serious criticism. That they rest on a strong basis of fact—not on mere hypothesis—and that they lend support to, and derive support from, one another the succeeding statement, I trust, will show.

(1) Mommsen's view of the Romano-Campanian silver-issues (plate 1, nos. 2, 4, 6-10), as coinage struck for Rome at Capua from a time soon after its adherence to Rome, has never been more than a plausible hypothesis. The arguments against it, as summed up in *Num. Chron.* 1924, pp. 181 ff., have not yet been satisfactorily answered. The type of horse's head—perhaps that of free horse also—has every appearance of being Carthaginian in origin. Ridgeway, in an interesting paper, has pointed out possible Roman connexions between the Mars, who

This view is taken direct from Haeberlin, who states it with convincing precision. All that is altered here is the dating of the coin.

figures on some of the obverses, and the horse.¹ But these arguments, though enlarging our conception of the possible meanings and uses of the type, do not affect the case for its Carthaginian origin. Two definite pieces of evidence clinch the argument :

(a) The types of the earliest silver didrachm, with *obv.* head of Mars to left,² *rev.* horse's head (plate I, no. 2), are copied on coins of Cosa, the colony founded in Etruria in 273 B.C. (plate I, no. 3). The Cosa of the coins is a maritime place, as the dolphin, added below the horse's head on the reverse, suggests : there is no doubt then that it is the Etruscan Cosa. It is hardly possible to explain the imitation of the South Italian didrachm on this Etruscan coin, unless we accept the obvious explanation, that a colony founded for veterans of the Pyrrhic war took its types from the coin in which they had drawn their pay.

(b) The bronze coin of Beneventum (plate I, no. 5)—not earlier than 268 B.C., when the colony received its new name in place of the old Maleventum,—is an almost exact copy³ of a second didrachm (*obv.* head of Apollo, to left, *rev.* free horse, to right ; plate I, no. 4), early, like the 'Mars didrachm', as its heavy weight shows. Once again we create unnecessary difficulties if we separate the coins far in time from one another.

It is not for a moment suggested that the last word has here been said on these interesting issues. All that is claimed is that there are definite indications of a Pyrrhic date for the beginning, not the close, of the series. The adoption of a Carthaginian reverse-type, the reduction in weight of the didrachm, the reappearance of types on coins of Cosa and Beneventum, are all explained at once by this dating and are left partially or entirely unexplained by an earlier. Whether the later didrachms of reduced weight are all Pyrrhic, or may extend over into the following period, perhaps into the first Punic War itself, has still to be determined. We have still to ascertain the mints of these didrachms, their exact relations to the *aes grave* and also to the token-bronze that accompanies them, and their meaning in relation to history. But this is clearly a case where a solution of such detailed problems must follow, not precede, an agreement as to the general historical setting of the series.

If we leave aside for a moment the Roman *aes grave* with the prow on reverse, all the main Roman series are intimately connected with

¹ *Proceedings of the Cambridge Philological Society*, 1925 (also a short rejoinder by the present writer).

² The style of this head recalls that of the head of Leucippus on coins of Metapontum, perhaps (not certainly) as early as c. 315 B.C. (plate I, no. 1). The resemblance, however, though certain, is not

very close, and is quite consistent with an interval of a generation between the coins.

³ Cp. Grueber, *B.M.C. Republic*, ii, p. 120, quoting Dressel (*Beschreib. ant. Münz. königl. Mus.*, vol. iii, p. 169) 'the dies for both pieces must have been made by the same engraver and the coins must have been struck at the same mint.'

the Romano-Campanian silver.¹ If, then, as we have next to show, the prow-series begins only in the first Punic War, there is no Roman coinage to which a date much earlier than the Pyrrhic War can be assigned. The reported introduction of the mint triumvirs (*III viri aere argento auro flando feriundo*) c. 289 B.C.² may actually be historical, and may be intimately connected with the introduction of coinage at Rome.

(2) Once we have made up our minds to the fact—already fully recognised by Haeberlin—that the Roman *aes grave* is little, if at all, earlier in date than the earliest Roman silver, it becomes clear that the *aes grave* was only a transitory stage of coinage. Rome, learning the use of silver and of token-bronze from the Greeks of South Italy, was led to give at least the form of a coinage to the bronze in which she was accustomed to trade with the Italian peoples. It was inevitable that this clumsy coinage should soon give way to the more convenient silver. A glance over the *aes grave* of Rome and Italy is enough to show that Roman influence is dominant throughout. Even independent cities, like Tuder or Iguvium, cast their pieces after the Roman pattern. The coinage of the Roman colonies is significant for dating. Luceria (founded 314 B.C.), Venusia (291), Hatria (290–286), Ariminum (268) and Firmum (264) are all represented; and the earlier of these colonies hardly show longer series of *aes grave* or series in earlier style than the later. The general conclusion is that the coinage of *aes grave* only began when Roman influence was already predominant in Italy, and that it is to be dated rather by the later than by the early colonies issuing it.

This argument is perhaps of too general a character to carry absolute conviction. What it does show is that there is nothing in the *aes grave* itself to conflict with the dating we are striving to establish.

The *aes signatum*, whatever its exact function, has been proved by Haeberlin to be intimately connected with the Romano-Campanian didrachms and the accompanying bronze. So far as its types allow a guess as to date, they lend support to our suggestion. The bar with type of elephant and sow (plate III, no. 1) has already been attributed, by Haeberlin among others, to the victory over Pyrrhus: it might even refer to the later victory of Panormus when the Carthaginian elephants were taken. Must not the bar with types of feeding chickens and *rostra* and dolphins (plate III, no. 2) refer to one of the great naval battles of the first Punic War? ³

(3) In the centre of the problem of the *aes grave* stands the

¹ This is one of the main conclusions which we owe to Haeberlin. There is so much hard thinking and imaginative insight in his view of the rôle played by Capua in this coinage, that many will be unwilling to abandon it without further testing;

but it undoubtedly involves serious difficulties. A revision of the dating is unavoidable.

² Pomponius in *Digest*, i. 2, 2, 30.

³ Probably Mylae or Ecnomus: not, of course, Drepana, when the chickens quite rightly refused to eat,

Roman series with Janus on obverse of the *as* (fig. 1) and the prow on the reverse of all denominations. There is one obvious date for the introduction of this issue, which, curiously enough, has not yet received consideration. It is time that it should be given a fair trial. If the issue seems on general grounds to fit it, we can proceed to ask if there are any weighty objections against it.

A series of coins in which the only reverse type refers to the sea would naturally seem to imply an intense interest in naval affairs. There is only one period in early Roman history when such an interest is to be found—the period of the first Punic War. At first almost exclusively a land power, Rome had begun towards the close of the fourth century to look occasionally seaward. History records no serious naval development at Rome before the breach with Carthage made the command of the sea a matter of life and death. The appointment of *duoviri navales* in 309 B.C. was at the time a matter of minor importance. The quarrel with Tarentum was no doubt provoked by some indications of Roman interest in the Adriatic; but



FIG. 1 (1/2).

they were for the future, not the immediate present. The Pyrrhic war itself was for Rome almost entirely a land war. We may argue, of course, that the prow was a more or less conventional type with nothing beyond a general meaning: or, alternatively, that Rome had serious naval interests before the first Punic War, which have missed their fair share of attention in our tradition. But either line of argument is precarious and unconvincing—calculated not so much to explain as to get rid of facts which rightly puzzle us. The prow-series is far easier to understand as the representation in coinage of Rome's supreme effort to grasp the trident than on any other hypothesis.

Why then has so attractive a theory never yet been seriously considered? The answer is not hard to find. The Romans of later days imagined that their *aes grave* of the prow-series was of very great antiquity, and modern research has not yet freed itself from that ancient prejudice. It has been tacitly assumed that the most famous series of Roman *aes grave* must also be the earliest, and this assumption has struck so deep into our imagination that it is hard to uproot it and make room for a new conception.

Let us make the effort and consider the whole question afresh.

The 'prow' coinage would be a most suitable issue for the first Punic War: is there any cogent reason for seeking its origin earlier?

The argument from style is certainly not against the new dating. The earliest Janus-heads belong approximately to the same period as the Roma-heads of the *aes grave* which accompanies the Romano-Campanian didrachms. They need not be earlier and may well be later. This would probably not be seriously contested by supporters of Haeberlin's theory and need not be argued at great length here.

The critical point is this: Are those series of *aes grave* which Haeberlin calls 'Latin' different in status from the Janus-series, or are they not? If they *are* different, there is some reason for supposing a continuation upwards of the Janus-series to run parallel to them. If they are not different, they themselves take the place of the Janus-series, and the question of its earlier dating ceases to exist. The earliest series of the Janus-prow *aes* has marks of value on both sides, but no



FIG. 2 (1).

mention of the name of Roma: we only know from the general character of the types and from the appearance of the name 'Roma' on the reduced series that it actually was Roman. Much the same is true of Haeberlin's Latin series. They are quite as definitely Roman as the Janus-series itself: we might even claim that the head of Roma herself is a more definite sign of Roman origin than the heads of Janus and Jupiter. That Rome may have issued series of *aes grave* under varying conditions, that some may have been cast for Rome, some for Latium and its environs, may be conceded as a general possibility. But we cannot make such distinctions between series, unless we can point to real differences; and those differences, we suggest, are not to be found in this case. The 'Latin' wheel-series, with its fixed type for all reverses, is a very close parallel indeed to the prow-series (*cf.* fig. 2—*dupondius*). It looks exactly like a first attempt to give settled form to the *aes grave*, made a little earlier than the Janus-series, when Rome's interest was still concentrated on road-building and expansion by land, not yet on the command of the sea.

After all, prejudice once put aside, the evidence for the view that the Janus-series is the latest series of Roman *aes grave* is overwhelming. It is obviously the last to stay; for it is the only Roman series which undergoes the drastic reductions in weight which led to the sextantal and uncial *as*. It shows no sign of interruption: we are not at liberty to suppose that the other series of *aes grave* were interpolated in it. It is not distinct from those other series as a peculiarly 'Roman' from a 'Latin' series. Set in its right place in numismatics at the end of Roman *aes grave*, it finds its right place in history in the first Punic War.

If the Janus-prow series only began to be struck in the first Punic War, its issue on the libral standard lasted only over a very limited period—*c.* 261–251 B.C., with a small margin of increase at both ends. The statement of Pliny that the reduction of weight was due to the strain of the war is so extremely probable on general grounds that we dare not discard it for any but the most cogent reasons; for drastic changes of standard in coinage are normally symptoms of national strain—and of war strain in particular. The exact dating of the first reduction of the *as* to about five ounces and of its subsequent declension from about five to about three ounces cannot yet be exactly determined¹; but we must certainly assign the former at least to the War.

It may, however, be argued that the Janus-prow *aes* of the libral standard is far too large a coinage to be compressed into these narrow limits. Is it? We shall see later that the Roman coinage of silver in the first Punic War seems to have been on quite a modest scale—perhaps on a very small scale indeed. It is quite easy to understand that Rome, after her breach with Carthage, may have found her supplies of silver seriously curtailed. It would be a mistake to suppose either that she herself had as yet any large reserves of precious metal or that she could draw at will on the resources of the wealthier Greek cities: she had not yet reached the days of plunder and plenty. Under these circumstances she met the expenses of a great war with a coinage consisting largely of bronze. Small wonder that this coinage appears to us considerable. Something like 100,000,000 *asses* must be cast to represent the value of £1,000,000 in our money; and, however high we place the purchasing power of money in those days, the cost of the war must have run into many millions of pounds.

The obverse types of the series present some difficulties. The fact that Janus, not Jupiter, heads the list has been held to point to an early importance of the two-faced god, which was afterwards almost

¹ The latest stages of this decline may be as late as the second Punic War: Carthaginian bronze of that period is found overstruck on Roman *unciae* weighing not much less than half-an-ounce, i.e. of an early stage in the decline. Cf. Müller, *Numismatique de l'ancienne Afrique*, ii, p. 100, nos. 258 ff.:

the style is south Italian and, therefore, presumably Hannibalic: cf. plate ii, 17, for bronze, and 16 for corresponding silver. Cf. Grueber, *B.M.C. Republic* i, pp. 22 ff.—*unciae* attributed to period 268–240, now seen to belong to a later date.

forgotten. But we turn naturally to the passage of Tacitus (*Annals*, ii, 49) where he alludes to the temple of Janus, 'quod apud forum holitorium C. Duilius struxerat, qui primus rem Romanam prospere mari gessit triumphumque navalem de Poenis meruit.' The *as* with Janus on obverse and prow on reverse would then speak directly of the opening of the series of naval victories.¹ This is either decisive evidence for our view or a very singular coincidence indeed. We may add that a rostral column was set up in honour of Duilius; to this the prow with *rostrum* on the reverse would refer.

(4) We now reach the most vital point in the whole question. Pliny and Livy agree that the Romans began to use silver money in 269 or 268 B.C. Both passages deserve to be quoted in full. Pliny (*Hist. Nat.* xxxiii, 43 ff.) says: 'Populus Romanus ne argento quidem signato ante Pyrrhum regem devictum usus est', and later, 'argentum signatum anno urbis CCCCLXXXV, Q. Ogulnio C. Fabio coss., quinque annis ante primum Punicum bellum. et placuit denarium pro decem libris aeris valere, quinarium pro quinque, sestertium pro dupondio ac semisse' (269 B.C.). The Epitomator of Livy (*Per.* xv) says: 'Picentibus victis pax data est. coloniae deductae, Ariminum in Piceno, Beneventum in Samnio. tunc primum populus Romanus argento uti coepit. Umbri et Sallentini victi in deditionem accepti sunt' (268 B.C.). Pliny appears to regard this silver money as consisting of the *denarius* and its half and quarter, the *quinarius* and *sestertius*; and it has become customary to accept the introduction of the *denarius* at this date as a fact beyond dispute. But it is precisely at this point, where certainty seemed most certain, that the old system breaks down. As everything depends upon correctness here, we will examine the issue with particular attention.

First, be it noted that Livy and Pliny agree only about the introduction of silver²: secondly, that Pliny adds to his statement an equation of the *denarius* with ten libral *asses*, which no one to-day accepts and which is in fact inconceivable, since the decisive researches of Samwer and Bahrfeldt proved the intimate connexion of the earliest *denarii* and the sextantal *as*: thirdly, that no numismatist of any standing has ever ventured to take literally the statement that the Romans first used silver at this time.³ What we have been building on, therefore, is not a plain and uncontradictory ancient record, but a deliberate selection from an admittedly faulty tradition.

Further, the strong arguments in favour of the Pyrrhic date of the earliest Romano-Campanian issue of silver and the accompanying *aes grave* are at the same time arguments against the introduction of *denarius* and sextantal *as* in 268. The attempt at compromise made

¹ I am indebted for this reference to my chief, Dr. G. F. Hill.

² The discrepancy of date is not serious. Perhaps 269 is better than 268 (Cp. Leuze in *Z.f.N.* 1920 (32), pp. 15 ff.). But how can we in the present state

of our knowledge conceivably decide with certainty?

³ And yet why has not the attempt at least been made? It is perhaps possible that we may still have to make it.

by the present writer in his *Handbook of Roman Coins* has the advantage of holding in view both the old and the new theory ; but it is safe now to say that in the long run it must be found unacceptable. The ancient evidence, be it added, is unanimous in continuing the libral *as* down to the first Punic War ; and confirmation is available in the coinage of Ariminum and Firmum—presumably subsequent to their foundation as colonies in 269 and 264 B.C., but still cast on the libral standard.

Next follows a consideration based on the nature and origin of the Roman *denarius* itself. It has already been noted—nowhere more clearly and acutely than by Sir Arthur Evans in *Num. Chron.* 1894, pp. 226 ff., especially 231 ff.—that the *denarius* can only be derived from the δεκάλιτρος στατήρ of Sicily and South Italy, a standard silver-unit equivalent to ten pounds (whether of full weight or reduced) of bronze. But the δεκάλιτρος στατήρ was originally never anything but a didrachm,¹ and we therefore expect—and Sir Arthur Evans actually conjectures—an original Roman *denarius* (perhaps not represented in coinage) of didrachm-weight. After all, why should the Romans introduce the denomination into their system so drastically reduced in weight ? This is a serious argument, which weighs more and more heavily the longer and more deeply it is considered.

These arguments are enough to rouse doubts,—perhaps not enough to win conviction. What we need most is a definite decision on the actual date of the first *denarii* ; if we can prove that they were in point of fact struck long after 269, Pliny's statement will simply cease to bind us. That proof we can now offer. Among *denarii* of admittedly early date, are series marked on reverse C and MA—presumably signatures of mints—each with its accompanying bronze. Bronze coins of both these issues (plate II, no. 15, C) are found commonly *overstruck on Sardinian coins* which can hardly be earlier than the revolt against Rome in 216 (plate II, no. 14) : for they belong to what is clearly an emergency-issue, and are later than the Punic period and not the first of such later issues, while corresponding silver coins show a portrait of a dynast, who is probably the Hampsicora of the revolt of 216 B.C. just mentioned. The C and MA *denarii*, then, were struck after 216 B.C.² ; and they come so early in the series that a prolongation of it as far back as 269 becomes unthinkable. We can even go one step further. The C *denarii* are intimately connected with one series of the *denarii* that accompany the 'Mars-eagle' gold—the series with symbol,

¹ With the Roman *denarius* in mind, Evans (p. 226 ff.) traces a ten-*lira* piece of drachm (not didrachm) weight to Dionysius the Elder of Syracuse. But this does not help us. We actually have a *lira*, struck in silver in the Romano-Campanian series—presumably, as normally, a tenth of the didrachm. What we know for certain are (a) a Greek ten-*lira* piece—a didrachm in weight ; (b) a Roman ten-*lira* piece—a drachm in weight. D'Ailly has already conjectured a 'denarius' of didrachm weight, earlier than 269 B.C.

² Cp. V. Bornemann, *Blätter für Münzfreunde*, 1900, pp. 117 ff., esp. 121 : the author suggests that MA and C stands for governors of Sardinia—Mam-mula, 217 B.C., and Cato, 198 B.C.

The evidence is mainly independent of opinion and is very nearly conclusive. It might still be pleaded that the overstruck bronze of the C and MA series is too light for the sextantal standard—in fact, so light that it might more fairly be called uncial—and that it is some distance in time from the silver with the same mint-marks. Let this plea

staff or sceptre.¹ That gold coinage then falls at a date not far removed from 216 B.C. We have only two dates to choose from—217, the date which seems to be given by Pliny in a famous passage,² or 210–209 B.C., the year in which all classes in the state brought in their precious metal to be coined and when four thousand pounds of gold were withdrawn from the special reserve.³ It is very tempting to assign the gold coinage, with the introduction of the *denarius* and the sextantal bronze, to this latter date. We should then have an admirable equivalent in our coinage for the supreme financial effort made by Rome during the war. But, until we have cleared up further the vexed question of the mints of the early *denarii*, it is safer to leave open the possibility of a date a few years earlier. What is certain beyond question is the fixing of two groups of early *denarii* to a date well within the second Punic War.

Our doubts about the *denarius* of 269 were therefore fully justified. The first *δεκάλιτρος στατήρ* of Rome was in fact, as in theory we were bound to expect, a didrachm. Having learnt the use of the didrachm in South Italy in the Pyrrhic war, Rome proceeded to graft it on to her own monetary system. Whether, however, the *litra* of this ‘ten-*litra stater*’ was ever the Roman pound must remain open to grave doubt. The equation one didrachm = ten libral *asses* implies an improbably high value of silver in terms of bronze. Probably the *libra* was a fraction of the *as*—perhaps the *quadrans*. Only later, when the weight of the *as* itself had descended to about three ounces, would the ‘ten-*litra stater*’ actually be the equivalent of ten Roman *asses*; and this stabilisation was in all probability later than the first Punic War.

With this demonstration that the coin we know as the *denarius* is not earlier than the second Punic War,⁴ the old chronology finally breaks down. It was inevitable in its time, and has served a most valuable purpose. Without the labours that went to its construction, its very refutation would have been impossible. But it has served its turn and must now give way to something new. Where the argument leads, we have no choice but to follow.

The question remains, what was the silver coinage of Rome between the Pyrrhic and the second Punic War? To fill the gap,

be given its full force. But we do not think any numismatist will agree, on this ground, to separate bronze and silver by more than a very few years at the outside: still less, after he has read our comments on the sextantal and uncial standards below. The old date of the *denarius* can only be rescued, if we place the silver with C and MA as early as c. 250 B.C. at latest.

The *denarii* and bronze with mint-mark MA are described in Grueber, *B.M.C. Republic* ii, pp. 171–2, those with mint-mark C, *ibid.* pp. 187 ff. Grueber unfortunately mistook the under-type for one of Cales. In all series it is the Roman *sextans* that is

overstruck on Sardinian bronze with *obv.* head of Ceres to left; *rev.* bull to right; above, star.

¹ Grueber, *B.M.C. Republic* ii, pp. 155 ff., especially p. 161–2.

² See below.

³ Livy xxvi, 26; xxvii, 10.

⁴ We may add that, if the gold coinage was later than 241 (end of the first Punic War), it cannot as an emergency coinage be reasonably explained in the interval between 241 and 218. It therefore comes down into the second Punic War and, in all probability, carries the *denarius* with it.

we have the Romano-Campanian didrachms of reduced weight—the series with *obv.* head of Hercules, *rev.* she-wolf and twins, ROMANO ; the series with *obv.* head of Roma, *rev.* Victory, ROMANO ; the two series with *obv.* head of Mars¹ and *rev.* horse's head and free horse, ROMA ; the series with *obv.* head of Apollo, to right, *rev.* free horse, ROMA (plate I, nos. 6–10) ; and the early *quadrigati* (plate I, no. 13). The *quadrigati* correspond vaguely to the Janus-prow *aes grave*, but not so closely as the earlier didrachms to the early *aes grave*. It is possible, then, that the connexion between them is less close, and that the *quadrigatus* was introduced a little later than the Janus-*aes*. It seems to be in a very special way the coinage of the period just preceding the second Punic War ; for all our references in literature to the *quadrigatus* are of the Hannibalic age² and its influence is obvious and strong on the coins of rebel Capua.³ Its origin, however, is probably to be sought in Sicily, early in the Punic War.

It has been customary to interpret *quadrigati* as meaning *denarii*,—and this interpretation no doubt began in ancient times. We know, however, for certain that the *quadrigae*-reverses on *denarii* do not begin earlier than *c.* 140 B.C., so that *quadrigatus* as a name for a *denarius* of the second Punic War is a misnomer : Livy's stock name is *bigatus*. Our new hypothesis allows the word *quadrigatus* to carry its proper meaning and, at the same time, explains how the confusion arose.

Did any other of the light series of Romano-Campanian silver last down into the War ? Against such a view there are two obvious objections :

(a) The corresponding series of *aes grave* appear to give place to the Janus-prow series. It is perhaps surprising, if the silver outlasts them.

(b) The types of horse's head and free horse, of Carthaginian origin, might well be discarded on the break with Carthage.

Neither argument is decisive. The parallelism of *aes grave* and silver need not have been complete in every detail, and the horse-types, once adapted to a Roman setting, may have been sufficiently nationalised to be retained even during the first years of the war. In

¹ For two finds of *quadrigati* at Selinus, cf. *Rhein. Mus.* 1905, pp. 359, 395, *Notizie degli Scavi*, 1894, pp. 211, 392.

² Cp. the admirable review of the literature in Giesecke's *Italia Numismatica*, pp. 202, n. 1.

³ The bronze coins of Capua, Calatia and Atella, with Oscan legend (plate I, nos. 17–19, Capua ; ii, no. 1, Atella ; ii, no. 2, Calatia) are important for our argument and deserve specially careful attention. The use of Oscan instead of Latin, the close similarity of style, the fact that those three communities alone share in this issue, combine to prove that the coinage belongs to the revolt of the three cities against Rome under Hannibal. The elephant on the reverse of the

small bronze coin of Capua (plate I, no. 19) lends confirmation to this view. The attribution to the revolt is so obvious that it could hardly have been neglected but for the supposed necessity on the Roman side for a different dating.

The bronze *triens* of Atella (plate II, no. 1) is found over-struck on Roman *sextantes* weighing nearly an ounce, cf. Grueber, *B.M.C. Republic* I, pp. 20 ff., dated 268–230 B.C., now seen to be later. These *sextantes*, though struck on a heavier standard and presumably earlier, were still in regular currency.

The close relation of the *quadrigatus* to the electrum (plate I, no. 16) issued by the Carthaginians in South Italy is another argument for a late date.

any case, the bulk of the issues of 'Janus-prow' *aes grave* suggests that Rome financed the war very largely in that metal, and not in silver.

(5) From the second Punic War—if not earlier—we have been accustomed hitherto to write our numismatic history with some strength of conviction. We have accepted the definite statement of Pliny that the sextantal *as* was struck in the first Punic War,¹ and have been content to dismiss as a mere slip Festus's attribution of it to the second Punic War.² When Pliny continues 'postea Hannibale urgente Q. Fabio Maximo dictatore asses unciales facti, placuitque denarium sedecim assibus permutari . . . in militari tamen stipendio semper denarius pro decem assibus datus est,'³ we have rejoiced to find so confident and explicit a statement and have grappled resolutely with the difficulties involved. From the coins we have inferred a change from a *denarius* of four to one of three and a half scruples and have associated the reduction more or less closely with the change from sextantal to uncial standard in the bronze. Have we been justified in our confidence?

It is a miserable task to upset an established tradition, unless we are prepared to replace it by a better: but here we have certainly trusted Pliny too confidently and too blindly. It looks very well on paper to set out the equations:

One *denarius* of four scruples ($\frac{1}{6}$ ounce) equals ten *asses* of two ounces each (ratio of silver to bronze 1 : 120).

One *denarius* of three and a half scruples ($\frac{7}{8}$ oz.) equals sixteen *asses* of one ounce each (ratio of silver to bronze 1 : 110 nearly.)

The careful maintenance of the relation of the metals over a change of money-system has a convincing appearance; but, if we choose to make use of our certain knowledge, we can satisfy ourselves that this is no exact picture of what really happened.

Pliny's statement is open to doubt for three different reasons:

(a) His account of the sextantal *as* differs from that of Festus. This objection, though perhaps slight in itself, certainly becomes serious if it is reinforced by others.

(b) When we turn to the coins, we find it hard to trace any clear line between sextantal and uncial bronze and between heavy and light *denarii*. To judge from them, there was no sudden change of standard either in silver or in bronze, but a gradual decline—which need not have been prescribed by any law. Within groups of coins in both metals, very closely related in style,¹ we find serious variations in weight. To make weight a main criterion and to class all the heavy *denarii* as early, all the light ones as late, would make havoc of any

¹ Pliny, *Hist. Nat.* xxxiii, 44.

² Festus, *de verb. sig. s.v. grave* and *sextantari*.

³ Pliny, *Hist. Nat.* xxxiii, 45: *cp.* Festus, *op. cit.* *s.v. sesterti notam*—a passage which is too imper-

fect to help much without Pliny, but which seems to mention a 'lex Flaminia minus solvendi.'

⁴ *Cp. e.g.* Grueber, *B.M.C. Republic*, ii, pp. 155 ff.

arrangement. In finds, too, there is no clear distinction between sextantal and uncial bronze,¹ and heavy and light *denarii*. The coins in fact have to be bullied into accordance with the statement of Pliny.

(c) Even more serious, we know that Pliny's account of the re-tariffing of the *denarius* is incorrect.² It is true that the *denarius* originally equalled ten *asses* and yet by the time of the Empire had come to equal sixteen. But the coins themselves show us quite clearly the appearance of the sixteen-*as denarius*, its conflict with the ten-*as denarius* and its final victory; and we can date the whole process with confidence to the period from c. 133-90 B.C.³

Unless, then, we resort to the desperate hypothesis that the *denarius* changed its standard from ten to sixteen *asses* in the second Punic War, then reverted to ten, and then slid again from ten to sixteen in the Gracchan age, we must recognise that Pliny simply gives us an ingenious but incorrect reconstruction—based perhaps on metrological calculation rather than on historical tradition. What Pliny meant by his statement that a *denarius* was always given for ten *asses* in the soldiers' pay has always been obscure: it certainly does not help to support the earlier part of his evidence.

Finally, it is possible to make a very probable guess at the source of Pliny's error. The victoriolate, which was originally in standard a half of the *quadrigatus*-didrachm, was made into a half of the *denarius* by the lex Clodia (c. 100 B.C.?). The *denarius*, in fact, becomes a double victoriolate just when it was finally settling down to the value of sixteen *asses*. It is natural to guess that the *quadrigatus* had been tariffed at sixteen *asses*, when the *denarius* took its place as the ten-*as* piece, and that, when the *denarius* succeeded to the tariff of sixteen *asses*, it succeeded also to the place of double victoriolate. Pliny will simply have fallen a victim once more to the initial ambiguity of the word '*denarius*' in Roman numismatics.

It is not yet time to propose a rigid scheme, but the following may come somewhere near the truth:

(a) In the first years of the second Punic War, the *quadrigatus*-didrachm (*denarius*) was being struck together with bronze of the standard of about four to three ounces to the *as*.

(b) In 210 B.C., or possibly a little earlier, a new reduced *denarius* was introduced, together with bronze, on a standard of two ounces to the *as*. The *quadrigatus* may now have been re-valued at sixteen of the new *asses*.

¹ Cp. especially Haeberlin on coins found at Numantia in A. Schulten, *Numantia* iv.

² Giesecke, *Italia Numismatica* (pp. 261 ff.) has already called attention to the difficulties of Pliny's account and suggested a re-interpretation of it.

³ Cp. Grueber, *B.M.C. Republic* i, pp. 124-188; ii, pp. 255-326. I hope to deal more fully with these coins in a paper on the coinage of the Gracchan age.

Both in silver and bronze there was a steady decline in weight towards a three-and-a-half scruple and an uncial standard for *denarius* and *as* respectively: but this was dictated by stress of necessity—not by any law, and it involved no change in the relations of the coins to one another.

(6) We come next to the issue of Roman gold—the series with head of Mars on obverse and eagle on reverse (plate II, nos. 3, 6), with values expressed in *sestertii* (LX, XL and XX), and the series with young Janiform head on obverse and an oath-scene on reverse (plate I, nos. 11, 12, 14). The two will require separate treatment.

Pliny in a famous passage¹ assigns the ‘*sestertius*-gold’ to a date 51 or 62 years after the introduction of the silver,—i.e. to a date certainly within the second Punic War, whichever reading may actually be correct. The best manuscript gives LI (51) which, when we reckon from Pliny’s date for the silver, 269 B.C., leads us to the year 218 or even 217. It is good to be able to follow Pliny in his general dating; but to recover the exact year from the varying traditions of the MSS. seems hopeless. Only two dates are in any way likely—the year 217, when Hiero, Naples and other Roman allies offered presents of gold to Rome, or 209, when the gold was withdrawn from reserve; and our researches on the origin of the *denarius* make the latter date appear definitely preferable. Willers many years ago attributed the oath-scene series to this date,² while maintaining the earlier issue of the ‘Mars gold’.

One curious point in the passage of Pliny has escaped attention. The passage in full reads in the *Codex Bambergensis* ‘*denarius nummus post annos LI percussus est quam argenteus, ita ut scripulum valeret sestertio vinciens quod efficit in librali ratione serstertii qui tunc erant CCCC. postea placuit XXXX signari ex auri libris, paulatimque principes imminuere pondus, et novissime Nero ad XXXXV*’. A facsimile, given by Bahrfeldt, shows that after ‘*ratione*’ the reading is not clear: in any case it is not ‘*sestertii*’ but ‘*serstertii*’ and there is some appearance of a ‘*scr*’ erased at the beginning. A careful reading of the whole shows that Pliny is recording not the number of *sestertii*, but the number of gold pieces in a pound.³ The number 400 is not then to be emended away, if it can be explained on this assumption. Can it? The smallest of the ‘Mars-gold’ pieces weighed a scruple—and 288, not 400 scruples, went to the Roman pound. But Priscian, commenting on a passage in Livy,⁴ shows us that the Attic pound or *mina* was reckoned to the Roman in exactly the proportion of 400

¹ Pliny, *Hist. Nat.* xxxiii, 47. For a good discussion of the problem, with references to modern literature see Bahrfeldt, *Die römische Goldmünzenprägung während der Republik*, pp. 2 ff.

² *Corolla Numismatica*, pp. 310 ff.

³ Mommsen’s drastic emendation of 400 to 5760 may, therefore, be spared.

⁴ Priscian quoted in Hultsch, *Metr. script.* ii, 22. Livy xxxviii, 38, 196 B.C. ‘*talentum ne minus pondo octoginta Romanis ponderibus pendat*’: Priscian values the talent at $83\frac{1}{2}$ Roman pounds. The whole passage is quoted and discussed by Giesecke, *Italia Numismatica*, pp. 217 ff.

to 288; and it becomes highly probable that Pliny records here, whether or not correctly, a use of this Attic pound in the Roman reckoning of gold. As Rome normally used foreign gold-coin, the adoption of a foreign standard to weigh it is not inherently improbable.

The second series of gold is difficult to place. Willers, we have seen, attributed it to 209: but it must be admitted that in style the pieces are very close to *quadrigati* (plate I, no. 13: cf. no. 15, for a later specimen) to which we should be inclined to give an earlier date. For the present it seems advisable to keep an open mind on this question.

The 'oath-scene' gold is known in three denominations—a six-scruple and a three-scruple piece with no mark of value (plate I, nos. 11, 12), and a four-scruple piece marked XXX and often condemned as false, but probably after all genuine (plate I, no. 14). If a scruple of gold equals twenty *sestertii*, four scruples equal eighty *sestertii*. The unit of the XXX piece is, therefore, about $\frac{8}{3}$ *sestertii* in value,—a piece of something like victoriate weight. But, as we shall see below, the victoriate was probably not yet issued and the *quadrigatus*-drachm is too rare a coin to be suitable for use as a unit of reckoning. There is a puzzle still awaiting solution. The old plea that the unit was the libral *as* can hardly be considered seriously, in view of the certain late date of the coin.¹

(7) The dates of the Roman series have been used so freely to date Italian issues, that a change in one is bound to involve changes in the other. We will consider here only one or two typical cases.

The gold and silver coins of the Brettii (plate II, nos. 9–12) present a striking parallel to the 'Mars-gold' and the early *denarii*. At the same time, they echo in a remarkable way the types of Pyrrhus, and have been assigned by Regling,¹ in the main at least, to the Pyrrhic war. In one notable find, however, Brettian silver was found with Carthaginian silver of a class which my colleague, Mr. Robinson, attributes with confidence to the second Punic War. Perhaps then, after all, the Brettian coinage actually belongs to the same period. Bruttium was the centre of the anti-Roman movement in Italy, and a national Italian coinage there is just what we might expect. The references back to the old hostility to Rome under Pyrrhus need not be too surprising. Pyrrhus, it is true, had been an enemy of Carthage as well as of Rome, but the fact may have been neglected for the more important consideration that Hannibal now appeared as his successor in leading the opposition against Rome. If the case for the late date of the *denarius* is as strong as we believe it to be, a re-dating of the Brettian coinage follows as an almost inevitable corollary. The

¹ The piece makes an impression of distinctly later date than the other two denominations. It is certainly very close in date to the Carthaginian electrum, with imitation of *quadrigatus*-types, of the second Punic War. It is possible that the XXX

gold coin was struck in the South after the capture of Tarentum and that the unit is the Tarentine didrachm of much reduced weight.

² In *Janus (Festschrift für Lehmann-Haupt)*, 1921, pp. 80 ff.

Bruttians showed considerable independence in their relations with Hannibal: and, after their occupation of Croton, they had, what they had hardly got before, a suitable centre for a mint.

The other Italian series in question is the silver of Populonia marked XX,¹ X, V and II,—a clear parallel to the *denarius*, *quinarius* and *sestertius*. Here too the new dating of the *denarius* invites a later date for the Etruscan coin than has yet been assigned. Perhaps this coinage of Populonia, struck on the *denarius*-standard, represents the voluntary contributions made by the Etruscan cities to the resources of Scipio for the invasion of Africa. The fact that the contribution was, in theory at least, voluntary may explain why the coinage is in the name of the Etruscan city and not of Rome.²

Since it no longer seems probable that Rome can have asserted any kind of monopoly in silver coinage in Italy before the end of the first Punic War at earliest, it will be necessary to ask whether some of the independent Greek coinages do not extend to a later date than has yet been given them. Evans in his *Horsemen of Tarentum* has already continued the coinage of that city well below the Pyrrhic war. It will be surprising if a similar result is not found to hold for such cities at Naples and Velia too.

(8) Finally we come to the victoriæ (plate II, nos. 18–20),—as a denomination nothing but the drachm of the *quadrigatus*-didrachm, as a coin a later invention than the *denarius* itself. Pliny tells us that it was ‘ex Illyrico advectus’ and that it was treated as commodity, not coin—‘loco mercis habebatur.’³ The occurrence of the same denomination at Massalia and Saguntum and the finding of Roman victoriæ in Spanish hoards⁴ prove that the coin served the Roman trade west as well as east of Italy. The victoriæ is later in origin, but not much later, than the *denarius*; for, after quite a few early issues of *denarii* alone, victoriæ begin to appear beside them with the same mint-marks.⁵ We shall now be inclined to regard the victoriæ as the ‘Victory coin’ of the end of the second Punic War and to ascribe its main currency to the half century, c. 200–150 B.C. The coins themselves seem to lend themselves readily to this dating. The style of the head of Jupiter on the obverse of the victoriæ often very definitely suggests that of heads of Zeus on silver coinage

¹ A piece of the weight of the XX piece, but obviously earlier, occurs with mark of value X. This is not without significance, for a transference of the name *denarius* (as equal to *δεκάλιτρος στατήρη*), from didrachm to drachm.

² Livy xxviii, 45. Sir Arthur Evans (*Num. Chron.* 1894, pp. 226 ff.) dates the coins of Populonia to the first half of the fourth century B.C. on grounds of style. It seems to the present writer that the Roman style of reckoning (X, V, IIS) proves that

the coins are not earlier than the *denarius* and cannot therefore be nearly as early as Evans places them. The style can only be judged from the Gorgon's head on obverse, and what to some looks old in it may be merely archaistic.

³ Pliny, *Hist. Nat.* xxxiii, 46.

⁴ Cp. Haebler, report on coins found at Numantia in Schulten, *Numantia* iv.

⁵ Cp. Grueber, *B.M.C. Republic* i, pp. 37 ff.; ii, pp. 178 ff.

of the Thessalian League, of Boeotia and of the Achaean League.¹ If we follow up this general clue and begin to regard the victoriates as typically the coin of the second Macedonian War and later wars in Greece, some attractive solutions of mint problems suggest themselves.² The famous double victoriate³ is probably nothing but the well-known denomination of the Thessalian league, struck exceptionally with Roman types. The victoriates marked **VB** and **CROT**,⁴ for example, may be assigned with confidence to Vibo and Croton. The coinage in all probability followed very soon after the foundations of colonies at those two cities in 192 and 194 B.C. respectively. The occurrence of victoriates in comparatively late hoards is not easy to explain, unless the coin was actually struck well into the second century B.C. The victoriate, in fact, seems on its own showing to require a system of dating which accords admirably with our re-dating of the *denarius*.

Here for the time we must leave our study of the early Roman coinage. In the new view of its origin that we offer, the war with Pyrrhus marks the real beginning of coinage at Rome, the first Punic War brings the great issue of libral *aes* of the Janus-prow series and the first convulsion of the Roman money-system. The *quadrigatus* is essentially the coin of the first Punic War and the interval between the first and second, while the 'Mars-gold' coinage, the *denarius* and the sextantal *as* are the record of the supreme financial effort of Rome in the struggle with Hannibal. Finally, the victoriate is the coin of Roman trade, expanding east and west in the early second century B.C.

This new interpretation has arisen out of an honest criticism of defects in the old system. It is certain to carry in it defects of its own, and it will be through criticism of those defects that advance will again be made. There are two lines of research which are certain, if carefully pursued, to lead to further confirmation or to refutation of the new theory. The first is the study of the mints of the early *denarii*. A very little further advance will enable us to say with absolute certainty whether a date in the first Punic War is possible or not.⁵ The second is the study of the coinage from c. 200 to c. 133 B.C. If the general view of the victoriate sketched above can be substantiated in detail, we shall once again be compelled to assign the origin of the *denarius* to the second Punic War—or, alternatively, to leave a huge inexplicable gap in the coinage. It is to be hoped that these tests may not have to wait long to be applied.

¹ See Head, *Historia Numorum* under the appropriate headings.

² The victoriates signed L and T or T (plate ii, no. 18) may represent 'Larissa Thessalorum,' M T (plate ii, no. 19) 'Magnetes Thessalorum,' C—M 'Cassope Molossorum,'—a little known place, but one which is shown by its own silver coinage to have enjoyed some temporary importance; NP (plate ii, no. 20) may even stand for 'Macedonum Prima.'

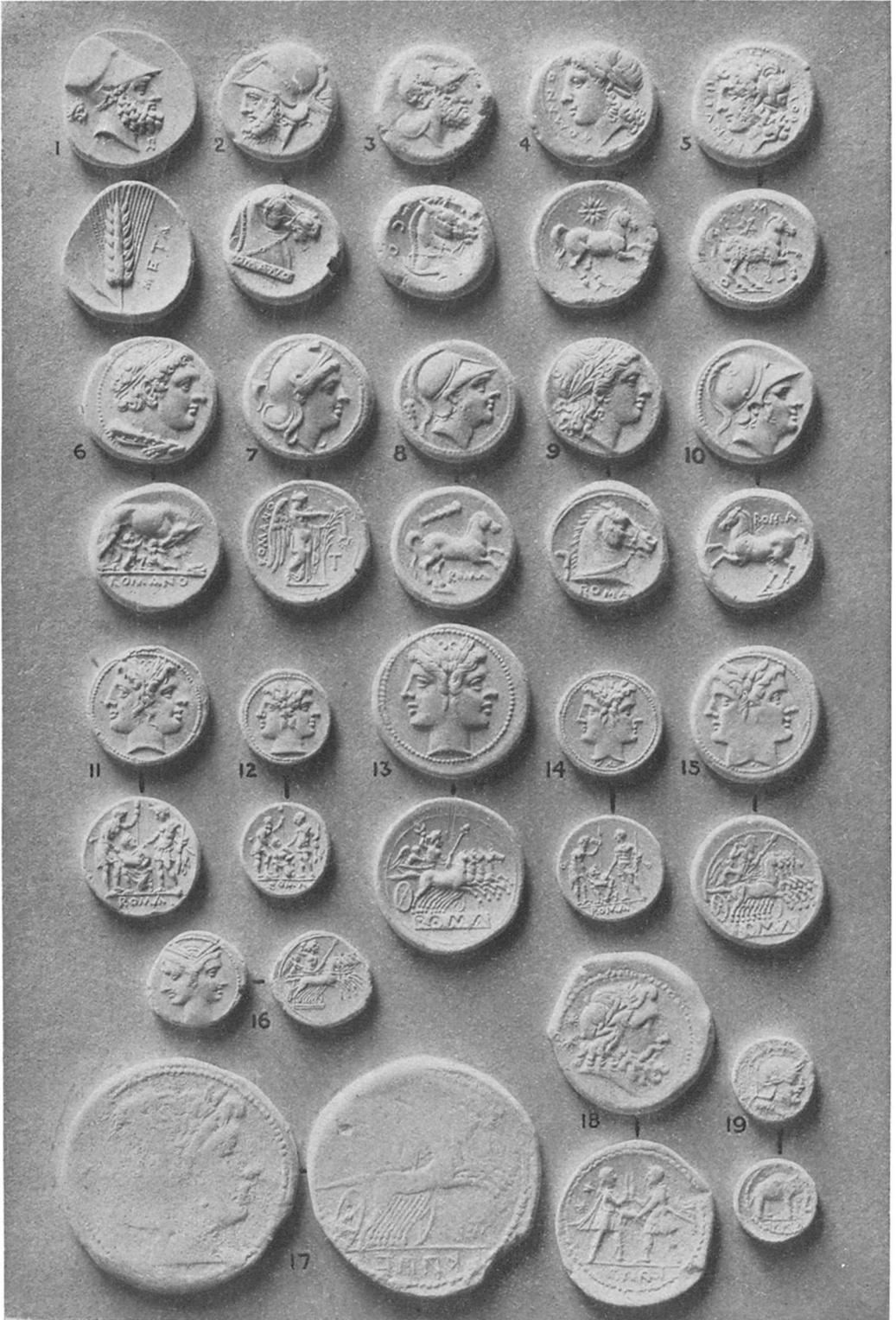
Cp. Grueber, *B.M.C. Republic* ii, pp. 185 ff., 197 ff., 201 f.

³ Grueber, *op. cit.* i, p. xlix., quoting Zobel de Zangroniz. The coin, which is unique, was found in Spain.

⁴ Grueber, *op. cit.* ii, pp. 199-201.

⁵ In the author's view, the evidence of over-strikes on Sardinian bronze is already decisive against this possibility.

Yet the end of the present inquiry, if the main theory is right, represents not an end but a new beginning. I would invite especial attention to the evidence of the over-strikes,—the most objective that we can command. The over-strikes of bronze of Hannibal and of rebel Atella on Roman bronze of a standard well above sextantal prove that the sextantal standard was at any rate not yet firmly established in 215 B.C. The over-strikes of Roman bronze of a reduced sextantal standard on Sardinian bronze of *c.* 216 B.C., actually perhaps made a few years after that date—confirm the belief that the sextantal standard was introduced in the second Punic War. This position once established, many other arguments, which have not been generally recognised as strong, begin to make their real weight felt.



ROMANO-CAMPANIAN AND KINDRED COINS: CAPUA (see pp. 21, 22, 30-34). †.



ATELLA, CALATIA : ROMAN BRETTII : CARTHAGINIAN : VICTORIATES (see pp. 26, 28, 30, 33 ff.). †.



NO. 1.



NO. 2.



AES SIGNATUM (BARR. SEC P. 23). $\frac{1}{2}$.