The Damareteion Reconsidered: A Reply

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1972

On pp. 1–11 R. T. Williams has tried to re-establish the traditional date of the Syracusan Damareteion/decadrachm by countering the arguments which I had adduced in *Greek Coins and History*, ch. ii, in favour of revising Syracusan numismatic chronology and in particular of reducing the date of the decadrachm and its associated issues to the later 460s. In the last few years the debate has continued in both public and private, and, so far as my original arguments are concerned, there has become room for both repentance and reinforcement. But on the central issue, the date of the decadrachm, I remain convinced that not only the traditional date of 480/79, but also the lower date of c. 470, proposed by C. Boehringer, are both too early. The situation has changed in other ways, and in particular through the publication of G. K. Jenkins's exhaustive work on the coinage of Gela. R. T. Williams, too, has made many useful observations, and has sharpened—or blunted—many of the arguments used; in particular I am attracted by his suggestion (para. 30) that the literary tradition has correctly described the Damareteion as a decadrachm, while the occasion of 480/79 may be the result of sheer speculation, based on the name itself (perhaps already corrupt). I had proposed the more complicated thesis that the occasion was correct, but since I believed that the decadrachm was later in date, I had to postulate the existence of a gold Damareteion of which no specimens have survived. These, however, are speculative matters, and the main purpose of the following paragraphs must be once again to set out and evaluate in the light of developments since my original publication in 1969 what hard evidence there is for abandoning the traditional date 480/79 for the minting of the decadrachm.

1 *The gap in the coinage 479–474* (para. 3)

The intermission in coining which Boehringer postulated between 479 and 474 is historically improbable at a time when the Carthaginian indemnity provided an exceptional supply of silver; Williams approved of Jenkins's rearrangement of Boehringer's Reihe XIIa–*e* to fill this gap. This problem really has little relevance to the date of the decadrachm for it assumes that the traditional date of 480/79 is correct, and then tries to make more probable the historical picture which derives from that assumption. Nevertheless, since the sequence of issues in Reihe XIIa–*e* would retain some interest even in the context of a later date, it is worth examining the validity of Jenkins's proposed rearrangement, which is welcomed by Williams.

The two arrangements can be tabulated as follows:

Tetradrachms	**Boehringer**		**Jenkins**	
9 obv.	XIIa	} 480/79	XII*e* (Damareteion)	} 480/79
14 obv.	XII*b*		XII*a*	
8 obv.	XII*c*		XII*b*	
7 obv.	XII*d*		XII*c*	
6 obv.	XII*e* (Damareteion)		XII*d*	474
No coinage		479–474		
44 obv.				

For Boehringer, Reihe XII as a whole must be concentrated within at most the two years 480/79 because it comes at the end of a long series of issues which has to be fitted in between 485 and 479; Jenkins spreads the same issues over six or seven years. But all are agreed that this is a homogeneous body of coinage showing little internal variation.

When listed and numbered these Reihe look like solid entities following each other in established succession, but in most cases this is far from true; they are (except XII*d* and *e*) stylistic groups of dies which show common features, but between which there are few physical connections. They are made up as follows:

XII*a* (9 obv.): 139, 140–1, 142, 143 (links to *isolated* 150 in XII*b*), 144–5, 146–7 (links to *isolated* 156 in XII*b*).

XII*b* (14 obv.): 148, 149, 150 (see 143 in XII*a*), 151–2, 153–5, 156 (see 146–7 in XII*a*), 157, 158, 159, 160–1.

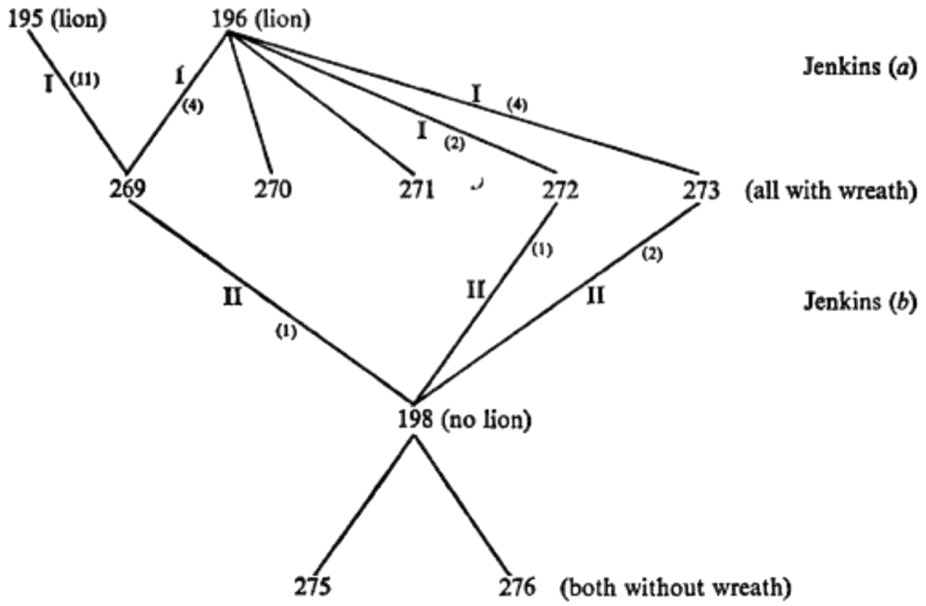
XII*c* (8 obv.): 162–3 (one rev. die from Reihe XI), 164, 165–6, 167, 168–9.

XII*d* (7 obv.): 170–6.

XII*e* (6 obv., 4 drs. only): 194, 195–8, 198E.

In these circumstances, and given the short period involved, there is simply no means of determining the temporal or chronological relations of these coins, except within Reihe XII*d*, where there is the evidence of continuous die-linking, and in *e*, where there are in addition the special features of the Damareteion group. Since we have no means of determining the inter-relationships of the coins in Reihe XIIa–*d*, which in a period of intensive production may have been contemporary rather than successive, it is wholly arbitrary to say that Reihe *e* (Damareteion) was contemporary with Reihe *d*, or with Reihe *a*, or even preceded the whole of Reihe *a*–*d*. Jenkins can find stylistic similarities between *e* and *d*; Williams can find them also between *e* and *a*. In so short a period the artists were the same, and none of this is surprising, or conclusive for the sequence of issues.

Jenkins (p. 23) has another equally insecure argument in favour of his rearrangement. It is based on the deterioration of reverse dies in XII*e*. The evidence can be tabulated as follows:



Jenkins points out, what is incontestable, that reverses 269, 272, and 273 exhibit more wear when combined with obverse 198 than with 195–6, and he calls these two phases *a* (Damareteion) and *b* (post-Damareteion). His argument then runs as follows:

1. Phase *b* contains R276 which has a close stylistic relationship to reverses XII*d*, and is therefore contemporary with it. (This may be accepted, though Williams finds a similar relationship with a reverse of XII*a*.)

2. Phase *a* is therefore earlier than both XII*d* and phase *b*.

3. But since 'Reihe *a*–*d* is homogeneous', phase *a* (Damareteion) should be *earlier* than Reihe *a*–*d*.

There appears to be a lapse in logic in the last step of the argument, because the 'homogeneity' of Reihe *a*–*d* does not exclude the alternative that, if phase *b* was contemporary with Reihe XII*d*, then phase *a* could have been contemporary with Reihe XII*c*. Jenkins gets round this by saying that we cannot 'determine how much time elapsed before the dies in question [i.e. R. 269, 272, 273] *were brought back into use*' (my italics), thus implying a definite interval between phases *a* and *b*. But though there could have been such an interval there is absolutely no positive evidence for it. The surviving examples of the three dies are as follows:

	269	272	273
Phase *a*	15	2	4
Phase *b*	1	1	2

The rather worn state of the three phase *b* specimens of R. 272–3 is quite insufficient to prove anything other than normal continuous working through phases *a* and *b*; and in the case of R. 269, where there is a larger total number of specimens, the wear on the only surviving specimen of phase *b* also carries no implications of anything but normal and continuous working. In fact, Jenkins's argument (though it seems to me that the whole exercise is unsoundly based) really leads to the conclusion that the whole Damareteion group (phases *a* and *b* together) is more likely to be contemporary with Reihe XII*c* and *d* than with XII*a*.



Quite apart from the manipulation of Reihe XIIa–*e*, there seems to me to be one inherent improbability in Jenkins's proposed reconstruction. We are assured that the decadrachm was a quite exceptional masterpiece minted in 480/79, in circumstances of a great national victory, when it would presumably receive extensive publicity. Yet we are asked to believe that it in no way influenced for the next six or seven years the style of the coinage produced in the same mint, but that thereafter, from 474, the Syracusan coinage in Reihe XIII and XIV suddenly exhibited that influence very clearly.

2 *The Gela hoard* (paras. 5–8)

The burial of this hoard has now been dated by Jenkins (p. 22) to 485; I am inclined to suggest a year or so later, simply on the grounds that the minting of coinage may not always be the first priority, and that the commission and acceptance of a new design can take up some time. But the difference is not material, and the date itself is not contested by Williams; moreover, the hoard is relevant to the date of the decadrachm only in so far as it bears on the date of the beginning of that huge volume of coinage of which the decadrachm issue constitutes a late phase.

Williams, however, goes on to criticize the arguments by which the date 484 was substantiated. So far as my argument from the coinage of Leontini is concerned I accept entirely his criticisms (paras. 5–6); it now seems to me that the coinage of Leontini (not represented in the Gela hoard) cannot have started before the mid seventies, and therefore can have no immediate bearing on the date of the Gela hoard. Another interesting point raised by Williams (para. 9) is whether in a hoard buried away from Syracuse the date of the latest Syracusan coins included may not be significantly earlier than the date of burial (or the date of the latest local coins). In the present case, if the latest Syracusan coins in the Gela hoard are to be dated 485/4, then the hoard may have been buried a year or two later; or, if the hoard was buried 485/4, then the latest Syracusan coins may be a year or two earlier. Once again this has little direct bearing on the date of the decadrachm, though it does involve a problem of some historical interest—whether the impressive new Syracusan issues with dolphins on reverse were initiated by Gelon after he had made Syracuse his capital in 485 B.C., or were they already in production under the preceding democracy. The question is at present incapable of proof, but to me, at least, the proposition that they were Gelon's is attractive, if only because later they provided the models for the first tetradrachm issues at the subsidiary Deinomenid mints of Gela and Leontini. Since only five obverse dies of this series were dated by Boehringer before 485, the displacement suggested is not large.

3 *Passo di Piazza hoard* (paras. 9 and 18)

My suggested lower date of c. 480 for this hoard has since received support from Jenkins on the basis of the coins of Gela which it contains (*Gela*, p. 22, 480/478 B.C.). These cover almost the whole range of the didrachms, which were in all probability superseded by tetradrachms on the accession of Polyzalus in 478. Yet in para. 18 Williams says 'the latest Syracusan, Boehringer 85 (obv. V41), *well down in the massive issues* [my italics], will be c. 475'. I find it difficult to see how any version of my chronology could lead to this result. V. 41 is, in fact, listed by Boehringer as the fifteenth obverse die out of a total series of 147, and unless Boehringer's sequence is in need of total revision (which Williams does not suggest) this can hardly be described as 'well down in the massive issues'; it is really right at the beginning, which would be dated 485/4 on the traditional



chronology, or 480/79 on mine (and presumably on Jenkins's). Nor does the possibility that Syracusan coins were delayed in reaching Gela offer much scope for manoeuvre, for at both these dates Gela and Syracuse were included in the same political unit, within which the interchange of currency appears to have been both swift and easy.

4 *Mazzarino hoard* (paras. 10 and 19)

With this hoard we at last reach the area of the decadrachm, for whereas Passo di Piazza belongs to the first phase of the massive Syracusan issues, Mazzarino belongs to the last; the latest Syracusan coin is Boehringer 333 from Reihe XII*c*, more or less contemporary with the decadrachm and its associated tetradrachms. When I originally dealt with this hoard, it contained nothing, as then knew it, which could justify a date of burial later than 475 —except, of course, the Syracusan issues, the date of which I was trying to prove—and at 475 it could just be accommodated within the traditional chronology, which postulated an interruption in Syracusan coinage between 479 and 474. Williams, of course, notices (para. 19) that my final conclusion that the decadrachm is to be dated in the late sixties logically requires that the burial of the Mazzarino hoard be brought down at least as late, and this is precisely what I would now do.

Williams's further conclusion, however, that 'Jenkins's Gela Group II will have to be down-dated a decade', does not follow, though some slighter adjustment to Jenkins's dates may be required. The Mazzarino hoard is the earliest to include tetradrachms of Gela, and, though there are only seven of them, these span almost the whole of Group II, loosely dated by Jenkins 480/475–475/470. Within the first bracket the obvious occasion for the introduction of the tetradrachm is the division on Gelon's death in 478 of his kingdom into two allied kingdoms of Gela and Syracuse, ruled respectively by the brothers Polyzalus and Hieron; hitherto the Syracusan tetradrachm had been the standard coin of Gelon's kingdom, but from 478 Polyzalus, for reasons of prestige, required his own coinage, analogous but distinct. At the same time the similar coinage of Leontini may have been started by a third member of the family (Ainesidemos ?), when he acquired a separate realm. If Group II at Gela represents the coinage of Polyzalus, it may be presumed to have continued until his death at an uncertain date, but probably before 466. This does not, indeed, bring us to the late sixties, but what Williams has overlooked is that Jenkins postulates a gap at Gela of between five and ten years between the end of Group II and the beginning of III, a gap which on my chronology would coincide with the collapse of Deinomenid rule at Gela. Our new knowledge of the coinage of Gela now makes it unlikely that almost the whole of Group II could have been in circulation by 475, unless indeed most of the reign of Polyzalus is to be denuded of coinage.

Much the same conclusion can be drawn from the five crab didrachms of Himera in the hoard. These were issued between c. 483 and 472 and have recently also been the subject of careful analysis by Jenkins (*Annali* 16–17, *Supplemento* 21 ff.). Three of the five didrachms were struck from Jenkins's obverse O13 which is almost at the end of a continuously linked sequence of obverse dies (O6–O15). The die sequence (*Annali*, p. 27) suggests that only one pair of dies was normally in use at the same time, so that striking was not bunched at the beginning of the period. This makes it unlikely that O13 was in use before 475 or that coins struck from it could have been buried on the other side of Sicily at Mazzarino as early as 475. My conclusion is that Jenkins's date for the Mazzarino hoard (475/470) is about a decade too early, and that, as Williams observes (para. 19), 'the latest Syracusan will be a decade or more later than the latest dated coins in the hoard, the Himera crabs, 482–472'. This is perfectly acceptable and, indeed, to be expected. Down to 472 Himera was ruled by Theron, and its mint was, in effect, a branch mint of Acragas; its didrachms



circulated with those of Acragas itself into east Sicily. In 472 Himera became independent and initiated a small series of tetradrachms. These had a much more restricted circulation than the didrachms had had, and though they reached Selinus (Noe 109, 949), no specimen can yet be documented from an east Sicilian hoard before the very end of the century (Schiso, N. 931).

5 *Villabate hoard* (para. 11)

With an agreed date in the forties this hoard is too late to provide direct evidence on the date of the decadrachm. I only draw attention to my refutation below of the idea that it can have anything to do with Seltmann's hoard (Williams, para. 13).

6 *Seltmann's hoard*

For my case this is the crucial document, for at last it provides a chronological correlation between the coinage of Syracuse and another series with a reliable date; my opponents are, therefore, entitled to minimize its importance, but not to dismiss it altogether. Jenkins (*Gela* 159) says 'details of this hoard are not preserved, except for the Himera pieces', and while this is true for the coins of Gela, it overlooks the eight coins from mints other than Himera which are illustrated, as well as the implications of the eighteen pages which Seltmann devoted to a discussion of the chronology and style of the hoard's contents. Williams has another line in depreciation to explain the absence of certain coins, which is inexplicable on the traditional chronology: Seltmann 'might well *in the field* [my italics] have failed to recognize an early tetradrachm of the sea-serpent group, if the sea-serpent happened to be off the flan, as frequently it is'. Those three words, 'in the field', conjure up the picture of a hurried perusal of coins (perhaps uncleaned?) in the dim light of a peasant's hut. This is not what Seltmann records. He first saw half the hoard in the possession of an 'antiquario', with whom he enjoyed such good relations that when 'some weeks later' the second half of the hoard was acquired, it was sent to Seltmann for his examination, and the two halves were found to cover the same period and the same mints. This was no casual survey, but a considered and leisurely examination of the coins.

Nor need we suppose with Williams that Seltmann, lacking the advantage of Boehringer's work, would have been unable, in the absence of the sea-serpent, to distinguish between issues minted before and after the decadrachm. The distinction is clear in Head's *History of the Coinage of Syracuse*, published sixteen years before, and mentioned by Seltmann in his article. There is no reason at all to doubt Seltmann's assertion that all the Syracusan coins were those attributed to the period of Gelon, 485–478. Indeed, had any later issues been present, there would have been no point to his article; for its purpose was to draw attention to the combination (since wholly neglected), in the same hoard, of issues of Syracuse (in the finest condition) then and since dated 485–478 with issues of Himera, which Seltmann thought might be as late as the fifties, but which in any case cannot well be earlier than 465. Given the predominance of Syracusan coinage in hoards all over Sicily, such a discrepancy cannot be due merely to a time-lag before more recent Syracusan issues reached Himera.

Williams (para. 12) protests that we should use Seltmann's hoard as confirmatory evidence only if 'all the relevant hoards showed a similar discrepancy'. But this is asking too much of ancient evidence; if 'all the relevant hoards' showed the discrepancy, we would not need Seltmann's hoard at all; as it is, his hoard (probably found near Himera) alone preserves this unique chronological



correlation. But it is unique only in this. In other respects it is exactly similar to Mazzarino, except that Mazzarino was buried in a quarter of Sicily to which tetradrachms of Himera did not usually penetrate. As shown above, the Mazzarino hoard cannot be comfortably accommodated within the traditional chronology, for its didrachms of Himera push its burial date down to at least 475 and the Geloan content to a later date still. Another comparable hoard is that from Casulia, near Leontini (Jenkins, *Annali* 16–17, *Supplemento* 31): Syracuse down to Boehringer 324 in Reihe XIIc; Himera didrachms (with crab) from obverses O10, O13, O14, and O15, giving a terminus slightly later than that of Mazzarino. Three hoards are thus known, all of which terminate in Syracuse, Reihe XII, in the neighbourhood of the decadrachm. In all three hoards the didrachms of Himera (which in Seltmann's hoard were only *mittelmässig erhalten*) suggest a date of burial pushing hard up against, if not beyond, the latest possible date (475) for the associated coins of Syracuse on the traditional chronology. At Mazzarino the end of the Geloan series indicates a date at least some years later than 475, and finally Seltmann's hoard provides a correlation between Reihe XII at Syracuse and tetradrachms of Himera at a date not earlier than c. 465.

One more attempt to make the inconvenient Seltmann hoard vanish must be countered. Williams (para. 13) repeats an 'interesting question' raised by Jenkins as to whether Seltmann's hoard may not be a part of the Villabate (nr. Palermo) hoard. Dates of discovery were close, Seltmann's in 1890, Villabate in 1893; the presence of tetradrachms of Himera in both suggests a common source in north Sicily, since these, as we have seen, did not normally circulate in the east of the island; both were sizeable hoards of 200 or more coins drawn from the usual range of Sicilian mints. But here the resemblance ends, and if the following major differences are considered, it will become evident that two entirely separate hoards must be involved.

1. Composition: Seltmann's hoard contained didrachms certainly from Himera, Leontini, Segesta, Syracuse, and almost certainly from Acragas and Gela as well. Villabate consisted exclusively of tetradrachms.

2. Himera (tetradrachms): Seltmann's included Gutmann and Schwabacher 4 (1 ex.), 7 (6), 12 (1); Villabate, G. and S. 1 (1), 2 (2), 4 (4), 6 (2). This almost complete lack of correspondence would be remarkable if a single hoard had been divided.

3. Syracuse: Seltmann's ends with Reihe XII; Villabate continues to Boehringer 535 (Reihe XV) well within the series signed with a sea-serpent.

There appears to be nothing to recommend the conflation of these two groups, except the consequent disappearance of the disconcerting evidence provided by Seltmann's hoard. In describing the findspot of the Villabate hoard (*NC* 1894, 201) Evans remarks that 'this is the third hoard of similar composition that has been found on this spot during recent years'. Seltmann's hoard was presumably one of the others, and Noe 785 (tetradrachms of Himera only, found in 1894) might be the third.

The evidence provided by the hoards constitutes the solid foundation for the down-dating of the decadrachm, and for the more plausible historical context for the Syracusan and other Sicilian coinages of the period which this allows. Williams (para. 20) insists that '*complete* hoards will produce important information', but a rigorous application of this standard will leave but a handful of usable hoards in the whole Greek world. We have to use the evidence that is available, defective as it may be, in the confidence that the coins that are missing from any hoard will have been removed from motives other than those of proving or disproving a chronological thesis. Finally, it may be queried whether a down-dating of at least fifteen years can really be described as 'a fine



chronological adjustment' (para. 20); a discrepancy of such size should be detectable in the hoards, especially within a closed area of circulation like Sicily, where coinage circulated intensively from city to city. But Williams's refutation does not stop at the hoards, and there are still other aspects to be considered.

7 *The epigraphical argument* (paras. 21–2)

Only after I had already reached my general conclusion that historical considerations and the contents of hoards pointed to a down-dating of the Syracusan coinage, did I observe that on this revised chronology the use of *kappa* on the coins now coincided with the *kappa* on the base of Gelon's dedication at Delphi; this coincidence seemed to me to offer 'some support' for the revised chronology, but according to Williams I had reckoned without the principle that the letter forms on coins tend to be in advance of the monumental script. His evidence for this is a very general statement by L. H. Jeffery in her *Local Scripts of Archaic Greece*, p. 65, which has no specific reference to Syracuse.

Williams makes heavy weather of this whole question, proving that the stone itself is local Delphian and not Syracusan, and that 'it is unlikely that a mason was sent from Syracuse just to carve the six words of the script'. It *is* indeed unlikely. Is it not much more probable that the text of the inscription was transmitted from Syracuse to Delphi on a bronze tablet, or a sheet of papyrus, or even an ostrakon, and that Gelon would no more have wished his inscription to appear in non-Syracusan letters than to be couched in an alien dialect? There is no general principle here that can require the lettering of his coinage to be out of step with that of his inscription. In fact, from Jeffery, p. 265, where she discusses briefly the epigraphy of early Syracusan coinage, it is apparent that the idea (derived from Boehringer) that die-sinkers were quicker than monumental masons to abandon archaic letter forms rests on his early dates for Syracusan coinage: Williams now uses the abandonment of early letters by die-sinkers to justify the early dates. The argument is circular. It is not too much to say that far from supporting the early dates for the coinage the epigraphists have found them an embarrassment.

8 *The Aetna tetradrachms* (paras. 23–8)

My case for down-dating the Syracusan coinage was elaborated and published before the new tetradrachm of Aetna became known. I will leave to C. Boehringer the defence of his own thesis that the new tetradrachm of Aetna belongs to a stylistic phase earlier than that of the decadrachm, and that, if this is so, then the decadrachm must be later than 476, the year in which Aetna was founded. Williams, on the other hand, argues plausibly that many details of the Aetna tetradrachm are derived from the common mass of Syracusan coins in circulation, but that some also are taken from the decadrachm, in which case the tetradrachm must be later than the decadrachm. If Williams is right, it will follow on my chronology that the new tetradrachm belongs to the later rather than the earlier years of Hieronian Aetna. And it should not be forgotten that the inhabitants and name of Aetna were transferred to Inessa in 461 (Diod. xi, 76, 3), and it is possibly to this later foundation that the Brussels tetradrachm should be attributed.



9 *Historical considerations* (para. 29)

If I am right that the decadrachm is to be dated in the late sixties, this revision of the hitherto accepted chronology will inevitably draw the larger part of the massive issues down after 479, but I have no wish in principle to denude the years between 485 and 480 of all Syracusan coinage; as Williams shows (para. 29), a tyrant's life was an expensive one. For this particular point our only evidence is the Passo di Piazza (near Gela) hoard, but it is a small one of forty-five coins of which only nineteen are Syracusan. On Jenkins's chronology for Gela (with which I am in agreement at this point) its terminal date can hardly be earlier than 480, yet only the first fifteen of the Syracusan dies are represented. This may possibly be a case of Williams's time-lag whereby the latest issues of Syracuse in the years before 480 are not represented. But even if it could be shown conclusively that there was only a trickle of tetradrachms from Syracuse between 485 and 480, Gelon still had a very abundant coinage of didrachms from the mint of Gela with which to defray the expenses of his reign.

Finally, after the arguments have been presented, all that is left is the historical context. Historical plausibility can never of itself constitute a proof of the validity of a particular reconstruction; the improbable happens, and what looks plausible to us now might appear very different if we knew all the factors in a given situation. Nevertheless, coinage through its very nature is much affected by political circumstances; this relationship between coinage and contemporary history is something which numismatists wrapped up in the minutiae of their subject, have sometimes been slow to explore.

Gelon was already a power in east Sicily before he moved his capital to Syracuse in 485. It may well be that, as Williams suggests (p. 9, n. 2), he had already been controlling Syracuse from Gela for a number of years. But it seems to me unlikely that he initiated the very handsome (and distinctively Syracusan) dolphin coinage of Syracuse, before he had moved his capital there in 485; thereafter until 480 the Syracusan coinage was probably not extensive, for Gelon seems to have retained Gela as his principal mint (coining didrachms) throughout his reign.

After 480 the output of Syracusan coinage increased enormously; bullion was available from the Carthaginian booty, from ransoms for prisoners, and from the 2,000-talent war indemnity. It is clear from Diodorus that the victors of Himera gained a great boost in prosperity, of which the surviving Sicilian temples are impressive testimony. The situation was radically changed by the death of Gelon in 478, for his kingdom was then divided between his brothers Hieron and Polyzalus.

Under Hieron the Syracusan coinage continued to be struck in great and uninterrupted volume; at Gela Polyzalus initiated a new coinage of tetradrachms, for the obverse of which he adopted the distinctively Syracusan quadriga, thus declaring himself an equal and an ally of Hieron; this coinage appears to have lasted throughout the reign of Polyzalus. We do not know in what circumstances the Deinomenid tyranny came to an end at Gela, but the date of its collapse there was probably not far from 466, when it collapsed at Syracuse; it is at this point between Groups II (Polyzalus) and III that Jenkins postulates an interruption in the coinage of Gela, which on my chronology may have been due to disturbances following the fall of the tyranny.

At Leontini, too, a coinage of tetradrachms, closely modelled on that of Syracuse, was started in the mid-seventies, probably by another member of the Deinomenid family, who managed to carve a fief for himself out of Gelon's kingdom. Coinage continued there parallel to those of Syracuse and Gela, down to the middle or late sixties, when there was a similar change of regime at Leontini.



This is marked by the abandonment of the Syracusan quadriga as a coin type, and its replacement from c. 460 by the head of the local god Apollo.

Throughout the period Syracuse remained the major mint, producing a huge series of tetradrachms which culminated c. 465/460 in the decadrachm/ Demareteion issue. We do not know the occasion of this special issue but there are several possibilities in the very last years of the tyranny, or in the following years of civil war from 466 to 461. It is possible that at Syracuse, too, coinage was interrupted at this time, before it was resumed with the long series of issues now signed with the ketos, and minted by the democracy which succeeded the tyranny.

In this whole argument on the date of the Syracusan decadrachm, the traditional chronology rests on the account in Diodorus, which not even Williams is prepared to accept as a whole; few other positive arguments have been adduced in its favour, apart from a number of minor adjustments to make it more plausible. The lower chronology is based essentially on the evidence of the hoards, which does not seem to me to have been successfully impugned; no doubt further finds will in time either confirm or disprove the lower chronology.

The Demareteion Reconsidered: A Reply

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ON pp. 1–11 R. T. Williams has tried to re-establish the traditional date of the Syracusan Demareteion/decadrachm by countering the arguments which I had adduced in *Greek Coins and History*, ch. ii, in favour of revising Syracusan numismatic chronology and in particular of reducing the date of the decadrachm and its associated issues to the later 460s. In the last few years the debate has continued in both public and private, and, so far as my original arguments are concerned, there has become room for both repentance and reinforcement. But on the central issue, the date of the decadrachm, I remain convinced that not only the traditional date of 480/79, but also the lower date of c. 470, proposed by C. Boehringer, are both too early. The situation has changed in other ways, and in particular through the publication of G. K. Jenkins's exhaustive work on the coinage of Gela. R. T. Williams, too, has made many useful observations, and has sharpened—or blunted—many of the arguments used; in particular I am attracted by his suggestion (para. 30) that the literary tradition has correctly described the Demareteion as a decadrachm, while the occasion of 480/79 may be the result of sheer speculation, based on the name itself (perhaps already corrupt). I had proposed the more complicated thesis that the occasion was correct, but since I believed that the decadrachm was later in date, I had to postulate the existence of a gold Demareteion of which no specimens have survived. These, however, are speculative matters, and the main purpose of the following paragraphs must be once again to set out and evaluate in the light of developments since my original publication in 1969 what hard evidence there is for abandoning the traditional date 480/79 for the minting of the decadrachm.

The gap in the coinage 479–474 (para. 3)

The intermission in coining which Boehringer postulated between 479 and 474 is historically improbable at a time when the Carthaginian indemnity provided an exceptional supply of silver; Williams approved of Jenkins's rearrangement of Boehringer's Reihe XII*a–e* to fill this gap. This problem really has little relevance to the date of the decadrachm for it assumes that the traditional date of 480/79 is correct, and then tries to make more probable the historical picture which derives from that assumption. Nevertheless, since

the sequence of issues in Reihe XII*a–e* would retain some interest even in the context of a later date, it is worth examining the validity of Jenkins's proposed rearrangement, which is welcomed by Williams.

The two arrangements can be tabulated as follows:

Tetradrachms	Boehringer		Jenkins	
9 obv.	XII*a*	480/79	XII*e* (Demareteion)	480/79
14 obv.	XII*b*		XII*a*	
8 obv.	XII*c*		XII*b*	
7 obv.	XII*d*		XII*c*	
6 obv.	XII*e* (Demareteion)		XII*d*	474
No coinage		479–474		
44 obv.				

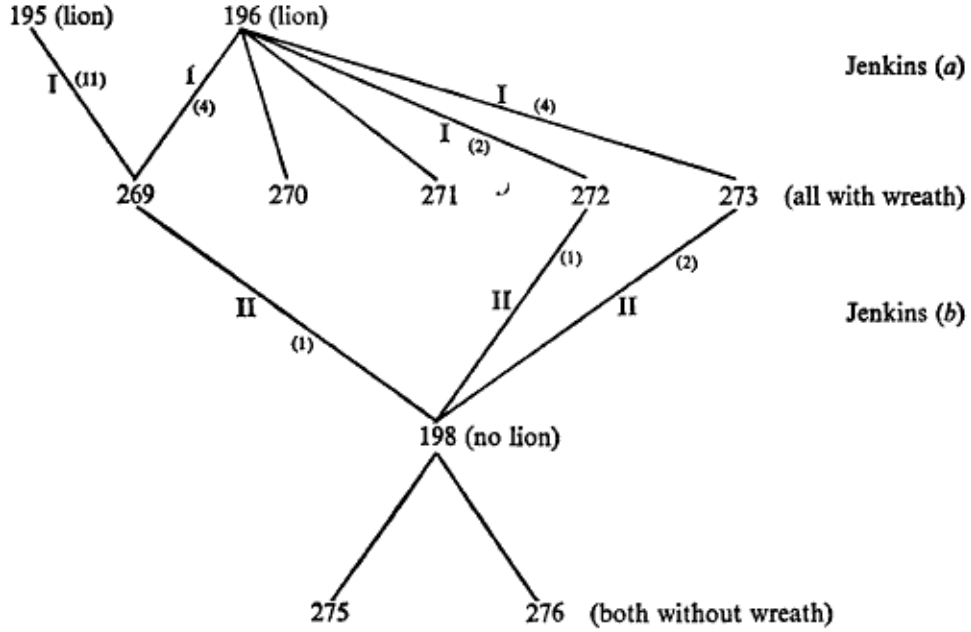
For Boehringer, Reihe XII as a whole must be concentrated within at most the two years 480/79 because it comes at the end of a long series of issues which has to be fitted in between 485 and 479; Jenkins spreads the same issues over six or seven years. But all are agreed that this is a homogeneous body of coinage showing little internal variation.

When listed and numbered these Reihe look like solid entities following each other in established succession, but in most cases this is far from true; they are (except XII*d* and *e*) stylistic groups of dies which show common features, but between which there are few physical connections. They are made up as follows:

XII*a* (9 obv.): 139, 140–1, 142, 143 (links to *isolated* 150 in XII*b*), 144–5, 146–7 (links to *isolated* 156 in XII*b*).
XII*b* (14 obv.): 148, 149, 150 (see 143 in XII*a*), 151–2, 153–5, 156 (see 146–7 in XII*a*), 157, 158, 159, 160–1.
XII*c* (8 obv.): 162–3 (one rev. die from Reihe XI), 164, 165–6, 167, 168–9.
XII*d* (7 obv.): 170–6.
XII*e* (6 obv., 4 drs. only): 194, 195–8, 198E.

In these circumstances, and given the short period involved, there is simply no means of determining the temporal or chronological relations of these coins, except within Reihe XII*d*, where there is the evidence of continuous die-linking, and in *e*, where there are in addition the special features of the Demareteion group. Since we have no means of determining the inter-relationships of the coins in Reihe XII*a–d*, which in a period of intensive production may have been contemporary rather than successive, it is wholly arbitrary to say that Reihe *e* (Demareteion) was contemporary with Reihe *d*, or with Reihe *a*, or even preceded the whole of Reihe *a–d*. Jenkins can find stylistic similarities between *e* and *d*; Williams can find them also between *e* and *a*. In so short a period the artists were the same, and none of this is surprising, or conclusive for the sequence of issues.

Jenkins (p. 23) has another equally insecure argument in favour of his rearrangement. It is based on the deterioration of reverse dies in XII*e*. The evidence can be tabulated as follows:



I, II = states of wear
(11) etc. = no. of specimens recorded in Boehringer

Jenkins points out, what is incontestable, that reverses 269, 272, and 273 exhibit more wear when combined with obverse 198 than with 195–6, and he calls these two phases *a* (Demareteion) and *b* (post-Demareteion). His argument then runs as follows:

1. Phase *b* contains R276 which has a close stylistic relationship to reverses XII*d*, and is therefore contemporary with it. (This may be accepted, though Williams finds a similar relationship with a reverse of XII*a*.)
2. Phase *a* is therefore earlier than both XII*d* and phase *b*.
3. But since 'Reihe *a–d* is homogeneous', phase *a* (Demareteion) should be *earlier* than Reihe *a–d*.

There appears to be a lapse in logic in the last step of the argument, because the 'homogeneity' of Reihe *a–d* does not exclude the alternative that, if phase *b* was contemporary with Reihe XII*d*, then phase *a* could have been contemporary with Reihe XII*c*. Jenkins gets round this by saying that we cannot 'determine how much time elapsed before the dies in question [i.e. R. 269, 272, 273] *were brought back into use*' (my italics), thus implying a definite interval between phases *a* and *b*. But though there could have been such an

interval there is absolutely no positive evidence for it. The surviving examples of the three dies are as follows:

	269	272	273
Phase *a*	15	2	4
Phase *b*	1	1	2

The rather worn state of the three phase *b* specimens of R. 272–3 is quite insufficient to prove anything other than normal continuous working through phases *a* and *b*; and in the case of R. 269, where there is a larger total number of specimens, the wear on the only surviving specimen of phase *b* also carries no implications of anything but normal and continuous working. In fact, Jenkins's argument (though it seems to me that the whole exercise is unsoundly based) really leads to the conclusion that the whole Demareteion group (phases *a* and *b* together) is more likely to be contemporary with Reihe XII*c* and *d* than with XII*a*.

Quite apart from the manipulation of Reihe XII*a–e*, there seems to me to be one inherent improbability in Jenkins's proposed reconstruction. We are assured that the decadrachm was a quite exceptional masterpiece minted in 480/79, in circumstances of a great national victory, when it would presumably receive extensive publicity. Yet we are asked to believe that it in no way influenced for the next six or seven years the style of the coinage produced in the same mint, but that thereafter, from 474, the Syracusan coinage in Reihe XIII and XIV suddenly exhibited that influence very clearly.

The Gela hoard (paras. 5–8)

The burial of this hoard has now been dated by Jenkins (p. 22) to 485; I am inclined to suggest a year or so later, simply on the grounds that the minting of coinage may not always be the first priority, and that the commission and acceptance of a new design can take up some time. But the difference is not material, and the date itself is not contested by Williams; moreover, the hoard is relevant to the date of the decadrachm only in so far as it bears on the date of the beginning of that huge volume of coinage of which the decadrachm issue constitutes a late phase.

Williams, however, goes on to criticize the arguments by which the date 484 was substantiated. So far as my argument from the coinage of Leontini is concerned I accept entirely his criticisms (paras. 5–6); it now seems to me that the coinage of Leontini (not represented in the Gela hoard) cannot have started before the mid seventies, and therefore can have no immediate bearing on the date of the Gela hoard. Another interesting point raised by Williams (para. 9) is whether in a hoard buried away from Syracuse the date of the latest Syracusan coins included may not be significantly earlier than the date of burial (or the date of the latest local coins). In the present case, if the latest Syracusan coins in the Gela hoard are to be dated 485/4, then the hoard may

have been buried a year or two later; or, if the hoard was buried 485/4, then the latest Syracusan coins may be a year or two earlier. Once again this has little direct bearing on the date of the decadrachm, though it does involve a problem of some historical interest—whether the impressive new Syracusan issues with dolphins on reverse were initiated by Gelon after he had made Syracuse his capital in 485 B.C., or were they already in production under the preceding democracy. The question is at present incapable of proof, but to me, at least, the proposition that they were Gelon's is attractive, if only because later they provided the models for the first tetradrachm issues at the subsidiary Deinomenid mints of Gela and Leontini. Since only five obverse dies of this series were dated by Boehringer before 485, the displacement suggested is not large.

Passo di Piazza hoard (paras. 9 and 18)

My suggested lower date of c. 480 for this hoard has since received support from Jenkins on the basis of the coins of Gela which it contains (*Gela*, p. 22, 480/478 B.C.). These cover almost the whole range of the didrachms, which were in all probability superseded by tetradrachms on the accession of Polyzalus in 478. Yet in para. 18 Williams says 'the latest Syracusan, Boehringer 85 (obv. V41), *well down in the massive issues* [my italics], will be c. 475'. I find it difficult to see how any version of my chronology could lead to this result. V. 41 is, in fact, listed by Boehringer as the fifteenth obverse die out of a total series of 147, and unless Boehringer's sequence is in need of total revision (which Williams does not suggest) this can hardly be described as 'well down in the massive issues'; it is really right at the beginning, which would be dated 485/4 on the traditional chronology, or 480/79 on mine (and presumably on Jenkins's). Nor does the possibility that Syracusan coins were delayed in reaching Gela offer much scope for manœuvre, for at both these dates Gela and Syracuse were included in the same political unit, within which the interchange of currency appears to have been both swift and easy.

Mazzarino hoard (paras. 10 and 19)

With this hoard we at last reach the area of the decadrachm, for whereas Passo di Piazza belongs to the first phase of the massive Syracusan issues, Mazzarino belongs to the last; the latest Syracusan coin is Boehringer 333 from Reihe XII*c*, more or less contemporary with the decadrachm and its associated tetradrachms. When I originally dealt with this hoard, it contained nothing, as I then knew it, which could justify a date of burial later than 475 —except, of course, the Syracusan issues, the date of which I was trying to prove—and at 475 it could just be accommodated within the traditional chronology, which postulated an interruption in Syracusan coinage between 479 and 474. Williams, of course, notices (para. 19) that my final conclusion

that the decadrachm is to be dated in the late sixties logically requires that the burial of the Mazzarino hoard be brought down at least as late, and this is precisely what I would now do.

Williams's further conclusion, however, that 'Jenkins's Gela Group II will have to be down-dated a decade', does not follow, though some slighter adjustment to Jenkins's dates may be required. The Mazzarino hoard is the earliest to include tetradrachms of Gela, and, though there are only seven of them, these span almost the whole of Group II, loosely dated by Jenkins 480/475–475/470. Within the first bracket the obvious occasion for the introduction of the tetradrachm is the division on Gelon's death in 478 of his kingdom into two allied kingdoms of Gela and Syracuse, ruled respectively by the brothers Polyzalus and Hieron; hitherto the Syracusan tetradrachm had been the standard coin of Gelon's kingdom, but from 478 Polyzalus, for reasons of prestige, required his own coinage, analogous but distinct. At the same time the similar coinage of Leontini may have been started by a third member of the family (Ainesidemos?), when he acquired a separate realm. If Group II at Gela represents the coinage of Polyzalus, it may be presumed to have continued until his death at an uncertain date, but probably before 466. This does not, indeed, bring us to the late sixties, but what Williams has overlooked is that Jenkins postulates a gap at Gela of between five and ten years between the end of Group II and the beginning of III, a gap which on my chronology would coincide with the collapse of Deinomenid rule at Gela. Our new knowledge of the coinage of Gela now makes it unlikely that almost the whole of Group II could have been in circulation by 475, unless indeed most of the reign of Polyzalus is to be denuded of coinage.

Much the same conclusion can be drawn from the five crab didrachms of Himera in the hoard. These were issued between c. 483 and 472 and have recently also been the subject of careful analysis by Jenkins (*Annali* 16–17, *Supplemento* 21 ff.). Three of the five didrachms were struck from Jenkins's obverse O13 which is almost at the end of a continuously linked sequence of obverse dies (O6–O15). The die sequence (*Annali*, p. 27) suggests that only one pair of dies was normally in use at the same time, so that striking was not bunched at the beginning of the period. This makes it unlikely that O13 was in use before 475 or that coins struck from it could have been buried on the other side of Sicily at Mazzarino as early as 475. My conclusion is that Jenkins's date for the Mazzarino hoard (475/470) is about a decade too early, and that, as Williams observes (para. 19), 'the latest Syracusan will be a decade or more later than the latest dated coins in the hoard, the Himera crabs, 482–472'. This is perfectly acceptable and, indeed, to be expected. Down to 472 Himera was ruled by Theron, and its mint was, in effect, a branch mint of Acragas; its didrachms circulated with those of Acragas itself into east Sicily. In 472 Himera became independent and intiated a small series

of tetradrachms. These had a much more restricted circulation than the didrachms had had, and though they reached Selinus (Noe 109, 949), no specimen can yet be documented from an east Sicilian hoard before the very end of the century (Schiso, N. 931).

Villabate hoard (para. 11

With an agreed date in the forties this hoard is too late to provide direct evidence on the date of the decadrachm. I only draw attention to my refutation below of the idea that it can have anything to do with Seltmann's hoard (Williams, para. 13).

Seltmann's hoard

For my case this is the crucial document, for at last it provides a chronological correlation between the coinage of Syracuse and another series with a reliable date; my opponents are, therefore, entitled to minimize its importance, but not to dismiss it altogether. Jenkins (*Gela* 159) says 'details of this hoard are not preserved, except for the Himera pieces', and while this is true for the coins of Gela, it overlooks the eight coins from mints other than Himera which are illustrated, as well as the implications of the eighteen pages which Seltmann devoted to a discussion of the chronology and style of the hoard's contents. Williams has another line in depreciation to explain the absence of certain coins, which is inexplicable on the traditional chronology: Seltmann 'might well *in the field* [my italics] have failed to recognize an early tetradrachm of the sea-serpent group, if the sea-serpent happened to be off the flan, as frequently it is'. Those three words, 'in the field', conjure up the picture of a hurried perusal of coins (perhaps uncleaned?) in the dim light of a peasant's hut. This is not what Seltmann records. He first saw half the hoard in the possession of an 'antiquario', with whom he enjoyed such good relations that when 'some weeks later' the second half of the hoard was acquired, it was sent to Seltmann for his examination, and the two halves were found to cover the same period and the same mints. This was no casual survey, but a considered and leisurely examination of the coins.

Nor need we suppose with Williams that Seltmann, lacking the advantage of Boehringer's work, would have been unable, in the absence of the sea-serpent, to distinguish between issues minted before and after the decadrachm. The distinction is clear in Head's *History of the Coinage of Syracuse*, published sixteen years before, and mentioned by Seltmann in his article. There is no reason at all to doubt Seltmann's assertion that all the Syracusan coins were those attributed to the period of Gelon, 485–478. Indeed, had any later issues been present, there would have been no point to his article; for its purpose was to draw attention to the combination (since wholly neglected), in the same hoard, of issues of Syracuse (in the finest condition) then and since dated 485–478 with issues of Himera, which Seltmann thought might

be as late as the fifties, but which in any case cannot well be earlier than 465. Given the predominance of Syracusan coinage in hoards all over Sicily, such a discrepancy cannot be due merely to a time-lag before more recent Syracusan issues reached Himera.

Williams (para. 12) protests that we should use Seltmann's hoard as confirmatory evidence only if 'all the relevant hoards showed a similar discrepancy'. But this is asking too much of ancient evidence; if 'all the relevant hoards' showed the discrepancy, we would not need Seltmann's hoard at all; as it is, his hoard (probably found near Himera) alone preserves this unique chronological correlation. But it is unique only in this. In other respects it is exactly similar to Mazzarino, except that Mazzarino was buried in a quarter of Sicily to which tetradrachms of Himera did not usually penetrate. As shown above, the Mazzarino hoard cannot be comfortably accommodated within the traditional chronology, for its didrachms of Himera push its burial date down to at least 475 and the Geloan content to a later date still. Another comparable hoard is that from Casulla, near Leontini (Jenkins, *Annali* 16–17, *Supplemento* 31): Syracuse down to Boehringer 324 in Reihe XII*c*; Himera didrachms (with crab) from obverses O10, O13, O14, and O15, giving a terminus slightly later than that of Mazzarino. Three hoards are thus known, all of which terminate in Syracuse, Reihe XII, in the neighbourhood of the decadrachm. In all three hoards the didrachms of Himera (which in Seltmann's hoard were only *mittelmässig erhaltene*) suggest a date of burial pushing hard up against, if not beyond, the latest possible date (475) for the associated coins of Syracuse on the traditional chronology. At Mazzarino the end of the Geloan series indicates a date at least some years later than 475, and finally Seltmann's hoard provides a correlation between Reihe XII at Syracuse and tetradrachms of Himera at a date not earlier than c. 465.

One more attempt to make the inconvenient Seltmann hoard vanish must be countered. Williams (para. 13) repeats an 'interesting question' raised by Jenkins as to whether Seltmann's hoard may not be a part of the Villabate (nr. Palermo) hoard. Dates of discovery were close, Seltmann's in 1890, Villabate in 1893; the presence of tetradrachms of Himera in both suggests a common source in north Sicily, since these, as we have seen, did not normally circulate in the east of the island; both were sizeable hoards of 200 or more coins drawn from the usual range of Sicilian mints. But here the resemblance ends, and if the following major differences are considered, it will become evident that two entirely separate hoards must be involved.

1. Composition: Seltmann's hoard contained didrachms certainly from Himera, Leontini, Segesta, Syracuse, and almost certainly from Acragas and Gela as well. Villabate consisted exclusively of tetradrachms.
2. Himera (tetradrachms): Seltmann's included Gutmann and Schwabacher 4 (1 ex.), 7 (6), 12 (1); Villabate, G. and S. 1 (1), 2 (2), 4 (4),

6 (2). This almost complete lack of correspondence would be remarkable if a single hoard had been divided.

3. Syracuse: Seltmann's ends with Reihe XII; Villabate continues to Boehringer 535 (Reihe XV) well within the series signed with a sea-serpent.

There appears to be nothing to recommend the conflation of these two groups, except the consequent disappearance of the disconcerting evidence provided by Seltmann's hoard. In describing the findspot of the Villabate hoard (*NC* 1894, 201) Evans remarks that 'this is the third hoard of similar composition that has been found on this spot during recent years'. Seltmann's hoard was presumably one of the others, and Noe 785 (tetradrachms of Himera only, found in 1894) might be the third.

The evidence provided by the hoards constitutes the solid foundation for the down-dating of the decadrachm, and for the more plausible historical context for the Syracusan and other Sicilian coinages of the period which this allows. Williams (para. 20) insists that '*complete* hoards will produce important information', but a rigorous application of this standard will leave but a handful of usable hoards in the whole Greek world. We have to use the evidence that is available, defective as it may be, in the confidence that the coins that are missing from any hoard will have been removed from motives other than those of proving or disproving a chronological thesis. Finally, it may be queried whether a down-dating of at least fifteen years can really be described as 'a fine chronological adjustment' (para. 20); a discrepancy of such size should be detectable in the hoards, especially within a closed area of circulation like Sicily, where coinage circulated intensively from city to city. But Williams's refutation does not stop at the hoards, and there are still other aspects to be considered.

The epigraphical argument (paras. 21–2)

Only after I had already reached my general conclusion that historical considerations and the contents of hoards pointed to a down-dating of the Syracusan coinage, did I observe that on this revised chronology the use of *koppa* on the coins now coincided with the *koppa* on the base of Gelon's dedication at Delphi; this coincidence seemed to me to offer 'some support' for the revised chronology, but according to Williams I had reckoned without the principle that the letter forms on coins tend to be in advance of the monumental script. His evidence for this is a very general statement by L. H. Jeffery in her *Local Scripts of Archaic Greece*, p. 65, which has no specific reference to Syracuse.

Williams makes heavy weather of this whole question, proving that the stone itself is local Delphian and not Syracusan, and that 'it is unlikely that a

mason was sent from Syracuse just to carve the six words of the script'. It *is* indeed unlikely. Is it not much more probable that the text of the inscription was transmitted from Syracuse to Delphi on a bronze tablet, or a sheet of papyrus, or even an ostrakon, and that Gelon would no more have wished his inscription to appear in non-Syracusan letters than to be couched in an alien dialect? There is no general principle here that can require the lettering of his coinage to be out of step with that of his inscription. In fact, from Jeffery, p. 265, where she discusses briefly the epigraphy of early Syracusan coinage, it is apparent that the idea (derived from Boehringer) that die-sinkers were quicker than monumental masons to abandon archaic letter forms rests on his early dates for Syracusan coinage; Williams now uses the abandonment of early letters by die-sinkers to justify the early dates. The argument is circular. It is not too much to say that far from supporting the early dates for the coinage the epigraphists have found them an embarrassment.

The Aetna tetradrachms (paras. 23–8)

My case for down-dating the Syracusan coinage was elaborated and published before the new tetradrachm of Aetna became known. I will leave to C. Boehringer the defence of his own thesis that the new tetradrachm of Aetna belongs to a stylistic phase earlier than that of the decadrachm, and that, if this is so, then the decadrachm must be later than 476, the year in which Aetna was founded. Williams, on the other hand, argues plausibly that many details of the Aetna tetradrachm are derived from the common mass of Syracusan coins in circulation, but that some also are taken from the decadrachm, in which case the tetradrachm must be later than the decadrachm. If Williams is right, it will follow on my chronology that the new tetradrachm belongs to the later rather than the earlier years of Hieronian Aetna. And it should not be forgotten that the inhabitants and name of Aetna were transferred to Inessa in 461 (Diod. xi, 76, 3), and it is possibly to this later foundation that the Brussels tetradrachm should be attributed.

Historical considerations (para. 29)

If I am right that the decadrachm is to be dated in the late sixties, this revision of the hitherto accepted chronology will inevitably draw the larger part of the massive issues down after 479, but I have no wish in principle to denude the years between 485 and 480 of all Syracusan coinage; as Williams shows (para. 29), a tyrant's life was an expensive one. For this particular point our only evidence is the Passo di Piazza (near Gela) hoard, but it is a small one of forty-five coins of which only nineteen are Syracusan. On Jenkins's chronology for Gela (with which I am in agreement at this point) its terminal date can hardly be earlier than 480, yet only the first fifteen of the

Syracusan dies are represented. This may possibly be a case of Williams's time-lag whereby the latest issues of Syracuse in the years before 480 are not represented. But even if it could be shown conclusively that there was only a trickle of tetradrachms from Syracuse between 485 and 480, Gelon still had a very abundant coinage of didrachms from the mint of Gela with which to defray the expenses of his reign.

Finally, after the arguments have been presented, all that is left is the historical context. Historical plausibility can never of itself constitute a proof of the validity of a particular reconstruction; the improbable happens, and what looks plausible to us now might appear very different if we knew all the factors in a given situation. Nevertheless, coinage through its very nature is much affected by political circumstances; this relationship between coinage and contemporary history is something which numismatists wrapped up in the minutiae of their subject, have sometimes been slow to explore.

Gelon was already a power in east Sicily before he moved his capital to Syracuse in 485. It may well be that, as Williams suggests (p. 9, n. 2), he had already been controlling Syracuse from Gela for a number of years. But it seems to me unlikely that he initiated the very handsome (and distinctively Syracusan) dolphin coinage of Syracuse, before he had moved his capital there in 485; thereafter until 480 the Syracusan coinage was probably not extensive, for Gelon seems to have retained Gela as his principal mint (coining didrachms) throughout his reign.

After 480 the output of Syracusan coinage increased enormously; bullion was available from the Carthaginian booty, from ransoms for prisoners, and from the 2,000-talent war indemnity. It is clear from Diodorus that the victors of Himera gained a great boost in prosperity, of which the surviving Sicilian temples are impressive testimony. The situation was radically changed by the death of Gelon in 478, for his kingdom was then divided between his brothers Hieron and Polyzalus.

Under Hieron the Syracusan coinage continued to be struck in great and uninterrupted volume; at Gela Polyzalus initiated a new coinage of tetradrachms, for the obverse of which he adopted the distinctively Syracusan quadriga, thus declaring himself an equal and an ally of Hieron; this coinage appears to have lasted throughout the reign of Polyzalus. We do not know in what circumstances the Deinomenid tyranny came to an end at Gela, but the date of its collapse there was probably not far from 466, when it collapsed at Syracuse; it is at this point between Groups II (Polyzalus) and III that Jenkins postulates an interruption in the coinage of Gela, which on my chronology may have been due to disturbances following the fall of the tyranny.

At Leontini, too, a coinage of tetradrachms, closely modelled on that of Syracuse, was started in the mid-seventies, probably by another member of

the Deinomenid family, who managed to carve a fief for himself out of Gelon's kingdom. Coinage continued there parallel to those of Syracuse and Gela, down to the middle or late sixties, when there was a similar change of regime at Leontini. This is marked by the abandonment of the Syracusan quadriga as a coin type, and its replacement from c. 460 by the head of the local god Apollo.

Throughout the period Syracuse remained the major mint, producing a huge series of tetradrachms which culminated c. 465/460 in the decadrachm/Demareteion issue. We do not know the occasion of this special issue but there are several possibilities in the very last years of the tyranny, or in the following years of civil war from 466 to 461. It is possible that at Syracuse, too, coinage was interrupted at this time, before it was resumed with the long series of issues now signed with the ketos, and minted by the democracy which succeeded the tyranny.

In this whole argument on the date of the Syracusan decadrachm, the traditional chronology rests on the account in Diodorus, which not even Williams is prepared to accept as a whole; few other positive arguments have been adduced in its favour, apart from a number of minor adjustments to make it more plausible. The lower chronology is based essentially on the evidence of the hoards, which does not seem to me to have been successfully impugned; no doubt further finds will in time either confirm or disprove the lower chronology.