



*L. R. Palmer*

# STUDIES IN GREEK, ITALIC, AND INDO-EUROPEAN LINGUISTICS

Offered to  
LEONARD R. PALMER

On the Occasion  
of his  
Seventieth Birthday

June 5, 1976

Edited by  
ANNA MORPURGO DAVIES  
and  
WOLFGANG MEID

Innsbruck 1976

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Dear Professor Palmer,

This volume comes to you on your seventieth birthday together with the warmest wishes of all those who contributed to it. They would have been far more numerous if the editors had not had to yield to practical considerations and had not steeled themselves—however reluctantly—to be ruthless. As it is—and in spite of its 46 articles—the volume must only be a token of gratitude rather than a true return for the many books and articles which you have donated in the past to the scholarly world and which you continue to produce with unfailing regularity.

Your scholarly career led you among ever increasing honours from Cardiff to Cambridge, to Vienna, to Manchester, to London, to Oxford, and now back again to Austria. It seemed appropriate that these *Studies* should appear as a joint enterprise sponsored by the two countries which have most profited by your presence and your work and which have provided the necessary background for them. From 1971 Oxford's loss has been Innsbruck's gain, but more than forty years ago your scholarly work first started to bear fruit in Vienna, in close contact with such leading Greek specialists as P. Kretschmer and L. Radermacher and such a revolutionary linguist as N. Trubetzkoy. From Vienna you brought back to England first and foremost a wife, a remarkable scholar in her own right, but also that degree of expertise and maturity which soon allowed you to write your first two books; it may not be chance that one of them discussed the principles of modern linguistics and the other was concerned with post-Ptolemaic Greek. Now in Innsbruck your two latest books are completed or are about to be completed; once more the first deals with the principles of linguistics and the second with Greek, but while one embraces both synchronic and diachronic linguistics, the other tackles the whole history of ancient Greek. There has been no return to old work and old ideas, but progress and development.

In the meanwhile the flow of books and articles has been continuous. Shorter works have made important contributions to classical and Indo-European philology or to the study of such recondite languages as Hieroglyphic Luwian. *The Latin Language* has given students in Britain and elsewhere a chance to see that the classical languages are not monolithic units governed by unassailable rules, but have a history of their own which is nothing but enthralling for anyone who is led to it by the right guide. The more specialized work on Linear B into which you threw yourself in the early fifties with the humble devotion of a neophyte but the

sharpness and the expertise of a leading scholar soon made you into a world authority in this field, most often admired, frequently imitated, sometimes disliked because of your devastating habit of being right so often—never ignored. Then came archaeology. Suddenly we learnt that the Oxford Professor of Comparative Philology was no longer content with the study of language. This had led him to results which could only be supported or invalidated on the basis of archaeological evidence: never did archaeology have a more eager or enthusiastic student. This time your results were so different and so revolutionary that they became known even outside the scholarly world. In Oxford even shop assistants were eager to meet Professor Palmer 'the archaeologist'. The scholarly battle about the chronology of Knossos and its documents still rages, nor is this the place for a bulletin from the front, but no one—on whatever side he is—will deny that much good has come from your courageous attempt to reject all preconceived ideas, to take nothing for granted, to check all sources with dogged single-mindedness accompanied by sudden flashes of inspiration. Archaeology had to be excluded from these *Studies* for a very simple reason; if all those whose work had been influenced in one way or another by your own contributions had been invited to write something for it, this volume would have shared the destiny of the biblical loaves and fishes.

You once wrote: 'I have not everywhere been able to conceal the fact that I have opinions of my own'. You will forgive us if we now dare to contradict you. That sentence was an understatement and can only count as a pale approximation to the truth. It is just because you have always had opinions of your own and expressed them with the sharpness, the vigour and the originality of the true scholar that we have wanted to say 'thank you' on this very day, your seventieth birthday.

June 5, 1976

Anna Morpurgo Davies

Wolfgang Meid

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ANNA MORPURGO DAVIES

# The -εσσι datives, Aeolic -ss-, and the Lesbian poets

'The proportion formula is still  
indispensable to philological theory'.  
L. R. Palmer

1. It is well known that in the athematic declension Greek replaced the original ending of the dative plural (\*-bh-/m-?) by the ending of the locative plural<sup>1</sup>. The forms in -σι or -σιν (φύλαξιν etc.) which we know from Attic are in all respects parallel to the thematic forms in -οισι(ν) (λύκοισι etc.), which are originally locatives and which we find attested in early Attic and in a number of dialects. Yet in some dialects the athematic stems have replaced -σι with two alternative morphs: -εσσι, which is found in literary texts (above all Homer and the Aeolic poets) and in inscriptions (mostly Aeolic), and -οις, which occurs in epigraphical texts from the North-West-Greek dialects. The result is that we have datives like πάντεσσι and πάντοις<sup>2</sup>. The origin of the -οις forms is clear; they are modelled on the -οις datives of the thematic declension (such as λύκοις); the origin of the -εσσι forms is disputed. However, one thing is clear: the 'success story' of both endings is due to the fact that they both began with a vowel. The earlier -σι occurred in consonantal clusters which were not admitted in Greek, so that when normal sound rules operated, the regularity of the paradigm was altered (cf. Attic λέουσι from \*lewont + si). No such problems were created by -εσσι or -οις.

2. We must now explain the origin of -εσσι. Two theories have been formulated. According to the first -εσσι originated in the -s- stems (γένος, εὐγενής etc.) where it was etymologically justified (Dat.-Loc. pl. γένεσ + σι, εὐγενέσ + σι etc.) and from there it spread analogically to other stems of the athematic declension. This explanation, which is at least as old as Bopp's *Vergleichende Grammatik*<sup>3</sup>, was strongly criticized by Wackernagel at the beginning of this century<sup>4</sup>. He pointed out that in the early history of the -s- stems the -εσσι dative or locative plurals corresponded to an -εῖ dative or locative singular (< \*-es + i) and to an -εων genitive plural

<sup>1</sup> This paper has been a long time in the making — largely because I could not solve or even see clearly some of the general questions which it raises. Earlier versions were read in the United States at the invitation of the Department of Classics, Harvard University and the Department of Linguistics, Yale University, and in England at the Mycenaean Seminar of the Institute of Classical Studies, University of London. If the paper is now less faulty and above all less incomprehensible than it originally was this is no doubt due to the discussions which followed these occasions. Henry Hoenigswald and Andrew Goodson also read an earlier draft and pointed out obscurities, mistakes and omissions: I am grateful to them both.

<sup>2</sup> For the origin and diffusion of the -οις datives see M. Lejeune, *Observations sur la langue des actes d'affranchissement déliques*, Paris 1949, 126—31 (with the earlier literature).

<sup>3</sup> Cf. F. Bopp, *Vergleichende Grammatik des Sanskrit, Zend, Griech. etc.*, vol. I, Berlin 1833, 291f.

<sup>4</sup> J. Wackernagel, *IF* 14 (1903), 373—5 = *Kleine Schriften*, vol. II, Göttingen s. d., 967—9.

(< \*-es + *ōn*). There was no reason to segment -εσσι rather than -σσι in e. g. γένεσσι since clearly -e- was part of the stem and not of the ending. Moreover it was impossible to establish an analogical proportion which could account for -εσσι: „ἀγώνοις zu ἀγώνων nach λόγοις: λόγων versteht jeder; ἀγώνεσσι zu ἀγώνων nach ἔπεσσι: ἔπέων ist unbegreiflich“. Wackernagel proposed a different solution for the problem: „Nach Μοῖσαι: Μοῖσαισι, λύκοι: λύκοισι ergab sich Θῆρες: Θῆρεσσι von selbst, wenn anders, was man in jedem Fall voraussetzen muß, der Drang nach einer Ersatzform für Θηροί bestand. Später wurde -εσσι auf die Neutra, sogar auf die mit sigmatischem Stamm, übertragen“<sup>5</sup>. The obvious objection, viz. that while Lesbian had -αισι and -οισι datives, Boeotian and Thessalian had only -αις and -οις datives, was preempted by Wackernagel himself. At an early stage, he argued, all Greek dialects must have had -οισι<sup>6</sup>.

2.1. At present the problem remains open. Chantraine in his *Morphologie historique du grec* (Paris 1961<sup>2</sup>, p. 61) accepted the traditional explanation, adding, halfheartedly, that “en outre le couple θεοί, θεοῖσι favorisait la constitution d'un couple ἄνδρες, ἄνδρεσσι”. A number of text-books seem to adopt the same attitude.

I shall ignore here the general questions which arise, though among them there is a problem of considerable importance. What are the prerequisites which allow an analogical process to occur? Or, more basically, what is analogy? Are we willing to redefine it in this and similar cases as a process of redistribution of allomorphs?<sup>7</sup>

<sup>5</sup> The examples given are unfortunate: Μοῖσαι (rather than Μοῖσαι or Μῶσαι) is only Lesbian (and not Common Aeolic) and Θῆρες may never have been Aeolic (but see for this word and for φῆρες Szemerényi, *SMEA* I [1966], 34f. and 51f.).

<sup>6</sup> This is certainly correct and the Mycenaean evidence has shown that -oihi and -ois coexisted (with different functions) as late as the period of the Linear B tablets (see below note 28). It seems reasonable to suggest that in Common Aeolic too both morphs survived and reached a stage at which they were functionally interchangeable. Later on each dialect may have selected one of the two morphs and lost the other, with the exception of Lesbian which selected -οισι but (conceivably) retained -οις in the article, where it was syntactically unambiguous. However, it is possible that Wackernagel may have made his point for the wrong reasons: he refers in his article to Johannes Schmidt's posthumous attack against Osthoff's Law (*KZ* 38 [1905], 1—52), where it is argued that all occurrences of -οις in Greek are due to the generalization of an -οις by-form of -οισι which arose in proclitic position. At present it does not seem possible to accept Schmidt's theory, mainly because we must reject its starting point, viz. the assumption that the Lith. Inst. pl. *vilkais* etc. calls for an IE ending \*-ais rather than \*-ois (cf. e. g. C. S. Stang, *Vergl. Grammatik der Baltischen Sprachen*, Oslo s. d., 65, 70, 186). Wackernagel was also wrong when he argued that the presence of χρέμασιν in Thessaly (IG IX ii 257, 4 from Thetionium) instead of the expected χρέματεσσι proved that -εσσι was first created for the masculines and feminines and only later extended to the neuters. χρέμασιν is almost certainly due to external influence: cf. C. D. Buck, *CR* 19 (1905), 248 and especially M. Lejeune, *REG* 45 (1941), 68ff. Recently the same form has appeared in some proxenies from Pherae (Bequignon, *BOH* 88 (1964), 400ff. nos. 2,6; 4,5; 5,6) in conjunction with other non-Thessalian features.

<sup>7</sup> This type of definition seems to me implicit in most of the pre-Chomskian work done in Europe and in America: cf. for instance, J. Kurylowicz, *Acta Linguistica* 5 (1945—9), 121—38 and H. Hoenigswald, *Language change and linguistic reconstruction*, Chicago 1960, passim and esp. 30f. More recent work has either assumed that it could dispose of analogy by relabelling it 'simplification' (cf. R. D. King, *Historical linguistics and generative grammar*, Englewood Cliffs 1969, 127ff.) or has criticized some of the earlier definitions without necessarily replacing them with a better defined system (cf. e. g. P. Kiparsky, in J. M. Anderson and Ch. Jones eds., *Historical Linguistics*, vol. II, Amsterdam 1974,

If so, we should accept Wackernagel's point, since it is impossible to see how a morph -εσσι could be segmented in the -s- stems. On the other hand Wackernagel's own proportion would not fit within this definition: according to his hypothesis -εσσι is an entirely new creation. The discussion could — and should — carry us very far, but it is unlikely to help us solve the very concrete problem from which we started, and I turn now to some more factual observations<sup>8</sup>.

3. A few words should be dedicated to the evidence for -εσσι and its distribution. The earliest texts from which datives of the -εσσι type are known are the Homeric poems, to which -εσσι offers a convenient metrical doublet for the inherited -σι<sup>9</sup>. Outside Homer and outside the poetic language influenced by him, -εσσι occurs in Sappho and Alcaeus, in Corinna, and in the epigraphical evidence from the three Aeolic dialects (Boeotian, Thessalian and Aeolic of Asia Minor). Examples (though of a more sporadic nature) are also found in NWG inscriptions from Continental Greece, in the inscriptions of the colonies of Corinth, at Cyrene and in Pamphylia. There is almost general agreement that in Homer — and in the poetic language in general — -εσσι is an Aeolic feature<sup>10</sup>. If so, clues for the origin of -εσσι should be looked for in the proper domain of the ending, viz. the Aeolic dialects, and the Homeric evidence, though chronologically earlier, should take second place in comparison with that of the Aeolic dialects and the Aeolic inscriptions. We must ignore at this stage the sporadic instances of epigraphical -εσσι outside Aeolic; they raise a problem which cannot be tackled here<sup>11</sup>. We are then led to consider the earliest evidence available for the Aeolic dialects, that offered by the language of Sappho and Alcaeus.

3.1. In the works of the Lesbian poets we find, as expected, a number of -εσσι datives (like κυλίκεσσιν) as well as a certain number of -σι datives (like δρύσιν). The

257—73). It seems to me that in spite of the earlier hopes generative grammar (including generative phonology) has not solved all the problems and in particular has not been able to determine what causes morphological reanalysis and what determines the choice of one type of segmentation rather than another. Similarly the conditions under which rule generalization and rule simplification occur do not seem to me to be now much clearer than they were in the past: for an illustration of some of these problems see K. Hale in *Current Trends in Linguistics*, vol. 11, The Hague 1973, 401ff.

<sup>8</sup> I have discussed the more general problems in my Collitz lecture on “Analogy and Greek” presented to the Summer Meeting of the Linguistic Society of America in Tampa (Florida) on 25 July 1975. The interesting point is that if we accept Wackernagel's hypothesis we have here a case in which a new morph is created, and the creation can be described proportionally but not otherwise. On the other hand the final result may appear shocking because Wackernagel's assumption in a sense treats Greek as if it were an agglutinative language which created a new morph of plural by adding a preexisting morph (already endowed with this meaning) to the Nom. plur. morph. I hope to show in the published version of my lecture that this is not a unique case and that Wackernagel's suggestion cannot be rejected on this ground.

<sup>9</sup> The basic evidence for these datives in the Homeric poems has been collected by K. Witte, *Glotta* 5 (1914), 48—57.

<sup>10</sup> This was disputed by K. Strunk in his somewhat iconoclastic thesis about the Aeolisms of the Homeric language (*Die sogenannten Aeolismen der homerischen Sprache*, Diss. Köln 1957, 75—8), but see P. Wathélet, *Les traits éoliens dans la langue de l'épopée grecque*, Rome 1970, 252ff.

<sup>11</sup> Most recently these forms have been discussed by P. Wathélet, op. cit., 258ff. and especially by J. L. García Ramón, “El llamado sustrato Eólico, Revisión crítica”, *Cuadernos de Filología Clásica* 5 (1973), 260ff.

latter create a problem in themselves, but need not concern us here<sup>12</sup>. More important is that whenever we have a dative plural of an *-s-* stem of the γένος type, this never ends in *-εσσι* but always ends in *-εσι*. The evidence is not plentiful and it may be opportune to tabulate it here; if nothing is stated the trochaic quantity of *-εσσι* and the pyrrhic quantity of *-εσι* are guaranteed by the metre; a question mark indicates that the metre is not sufficient to establish the quantity<sup>13</sup>.

1. *-εσσι* datives:

a) Sappho: 2,14 κυλίκεσσιν; 31,11 δππάτεσσι; 64 (a) 4 ἀλίκεσσι (?); 70, 13 πάντεσσι[ (?); 96, 6—7 γυναίκεσσιν.

b) Alcaeus: 115 (a), 6 ὀρνίθεσσι; 208 (a) ii 6 βιμβλίδεσσι; 385 νέεσσιν (?); *Suppl.* 262, 20 ? χέρρεσσι.

c) *inc. auct.* 16, 1 πόδεσσιν; 21 ἀρμάτεσσ'; 22 Ἀριάδεσσι (?).

2. *-εσι* datives:

a) Sappho: 2, 10 ἄνθεσιν; 31,6 στῆθεσιν; 105 (c) 1 ὥρεσι; 126 στῆθεσιν (?); 158 στῆθεσιν.

b) Alcaeus: 10 B 5 στῆθεσι; 36, 6 ὀνείδεσιν; 283, 3 στῆθ[ε]σιν.

The distinction between the *-εσσι* ending of the athematic stems and the *-εσι* endings of the *-s-* stems was first observed by Lobel in 1925<sup>14</sup>; after that at least one new example of *-εσιν* (ἄνθεσιν) in Sappho has confirmed Lobel's rule. The figures are not large but the pattern is entirely consistent and calls for an explanation.

3.2. If, as is usually assumed, we argue that *-εσσι* is the only 'correct' Lesbian form both for the athematic declension in general and for the *-s-* stems in particular, we have to explain how *-εσι* came to appear in the text of the Lesbian poets in connection with the *-s-* stems only. Error of scribes or trivialization of grammarians are excluded by the metre. We may look for support or otherwise in the epigraphical evidence of the Aeolic dialects, but as we shall see, this is relatively unhelpful.

3.2.1. All Aeolic dialects offer ample epigraphic evidence for the *-εσσι* datives of the common athematic stems (ἄγώνεσσι etc.)<sup>15</sup>, but the position is different for

<sup>12</sup> Cf. for the evidence E.-M. Hamm, *Grammatik zu Sappho und Alkaios*, Berlin 1958<sup>2</sup>, 149f. P. Wathelet, op. cit., 257 follows I. Kazik—Zawadzka, *De Sapphicis Alcaicaeque elocutionis colore epico*, Wrocław 1958, 46f. in arguing that these forms are epic borrowings, but I am not persuaded by the argument that the presence of the ny ephelkystikon indicates Ionic influence (the same phenomenon happens with the *-εσσι* datives which are Aeolic). It is possible, of course, to interpret these forms as survivals of an earlier stage which preceded the period in which *-εσσι* took over completely. I shall argue later that *-εσσι* is a common Aeolic creation (cf. 4.), but I do not want to maintain that the new morph immediately ousted its predecessor in all types of inflection.

<sup>13</sup> The texts are quoted according to the numeration of E. Lobel and D. Page, *Poetarum Lesbiorum Fragmenta*, Oxford 1955 and of D. Page, *Supplementum Lyricis Graecis*, Oxford 1974 [*Suppl.*]. I have also consulted E.-M. Voigt, *Sappho et Alcaeus, Fragmenta*, Amsterdam 1971.

<sup>14</sup> E. Lobel, ΣΑΠΦΟΥ ΜΕΛΗ, Oxford 1925, pp. 1—li. It is worthwhile to quote the passage in extenso: "Dative plurals of neuter stems in *-εσ*, which one might have expected to find in the form *-εσσι(v)*, never have any form but *-εσι(v)*, as far as our present evidence goes. It is, therefore, more reasonable to suppose that all these datives have an original single *-σ-*, which is never doubled, than they have an original double *-σσ-*, which is always simplified". Cf. also Hamm, loc. cit. (in note 12).

<sup>15</sup> See e.g. Thumb—Scherer, *Handbuch der griech. Dialekte*, Heidelberg 1959, vol. 2, 35 (Boeotian), 66 (Thessalian), 98 (Lesbian). There are odd examples of *-εσι* instead of *-εσσι* (cf. e.g. Thumb—Scherer, 35 for Boeotian) but they are more likely to be due to

the dative plurals of the *-s-* stems. In Boeotian there seems to be no evidence for them, though obviously this may be due to our lack of an up-to-date collection of Boeotian inscriptions or to my incompetence in searching through epigraphical publications<sup>16</sup>. In the Aeolic of Asia Minor (Lesbos included) there is only one certain instance of a dative plural of an *-s-* stem: the form ἐπιφανέεσσι attested in a second century inscription from Aeolic Kyme (D 29) recently published<sup>17</sup>. This evidence should be used with caution; the inscription is written partly in dialect and partly in koine, but even the dialect parts show some spurious forms (such as κασίγνατος, with an hyperaolic α) which are obviously artificial. As for ἐπιφανέεσσι, if it is not an hyperaolicism, it is the first good evidence we have outside Homer for this type of dative — obviously an analogical formation which may be later than the creation of ἄγώνεσσι and the like. A rather shaky support for the form comes from an inscription of doubtful date from the region of Troy where ἐτ[έ]σσι could conceivably be restored as ἐτ[έ]σσι<sup>18</sup>.

Until recently Thessalian seemed to show no evidence for the dative plural of the *-s-* stems, but we now have an extremely interesting inscription from Metropolis in Hestiaiitis, the South-Western part of Thessaly<sup>19</sup>. The dialect in which the text

a mistake of the stone-cutter than to other causes: cf. for instance the choreic monuments from Orchomenos recently published by P. Amandry and Th. Spyropoulos, *BCH* 98 (1974), 171—242 where we find once ἄνθεσσι (no. 7,2) and 16 times ἄνθεσσι. A similar explanation must be possible for μῆνεσσι of IG XII ii 1.12—3 (from Mytilene) as already suggested by Jacobsohn, *Hermes* 45 (1910), 70 (there cannot be a missing *-σ-* at the end of line 12 since the text is stoichedon).

<sup>16</sup> Corinna offers good evidence for *-εσσι* (cf. Page, *PMG* 654 i 34 μου[ρ]ιάδεσσι, 655.3 Ταναγρίδεσσι) but no evidence for the dative plural of the *-s-* stems. One of the poetic fragments in Boeotian, which may or may not be by Corinna (see for the question M. L. West, *OQ* 20 [1970], 277—87 and for the text Page, *PMG* 690) has the form ἄνθεσσι, but unfortunately the reading cannot be confirmed by the metre. Page, *Corinna*, London 1953, 55 cannot have any definite reason to state that the spelling ἄνθεσσι (instead of ἄνθεσσι) is 'abnormal'.

<sup>17</sup> Cf. G. E. Bean, *Bulletin Türk Tarih Kurumu* 30 (1966), 525—37, and the independent publication by A. Hönle, *Arch. Anz.* 1967, 46—62 with the comments and corrections by J. and L. Robert (*REG* 81 [1968], 504ff.; *ibid.*, 82 [1969], 501) and by G. Dunst, *Z. Pap. Epigr.* 3 (1968), 156—70. In his edition Bean read ἐπιφάνεσσι, but this is certainly wrong as shown, inter alia, by the photograph which he publishes. — For a useful list of recent works on Lesbian inscriptions see S. Charitonidis, *Αἱ ἐπιγραφαὶ τῆς Λέσβου. Συμπλήρωμα*, Athens 1968.

<sup>18</sup> Cf. Hoffmann, *Griech. Dial.*, II, 174 no. 161.5 and Collitz, *GDI*, I, 118 no. 317. The inscription was first published by Le Bas-Waddington, *Inscr. grecques et latines*, Paris 1870, no. 1743 c, who stated that it was found at 'Yéni-Kéui' in the region of Troy; there may be more modern editions than those quoted but I have not been able to trace them. Except for the doubtful ἐτ[έ]σσι I do not see in the fragment preserved any form which is clearly Aeolic.

<sup>19</sup> For Thessalian in general cf. R. van der Velde, *Thessalische Dialektographie*, Nijmegen—Utrecht 1924, which is in part out-of-date, and the list of new inscriptions and new editions of old texts published by A. S. McDevitt, *Inscriptions from Thessaly*, Hildesheim 1970. The inscription from Metropolis has been published by B. Helly in *BCH* 94 (1970), 161—89 (cf. also the preliminary account by D. Theodoridis, *AD* 19 [1964], *Khron.* 265, pl. 307 and the comments by J. and L. Robert, *REG* 84 [1971], 446 no. 372).



is written is very different from that of Pelasgiotis, though it has some points in common with it, but what matters most is that in the second part of the third century B. C. we have actually written on stone a form  $\sigma\upsilon\gamma\gamma\epsilon\nu\acute{\epsilon}\sigma\sigma\iota$  (line 10); in other words we find here for the first time real evidence for the form which according to all text-books is that of the standard Aeolic dative and may be responsible for the creation of the  $\acute{\alpha}\gamma\omega\nu\epsilon\sigma\sigma\iota$  type.

It must be obvious by now that the epigraphical evidence cannot lead us to an useful generalization: one dialect offers no evidence, one dialect has an  $-\epsilon\sigma\sigma\iota$  form in a late inscription from an out-of-the-way region, and a third dialect has one  $-\epsilon\sigma\sigma\iota$  form, which is only paralleled in Homer, and which is certain to be an analogical creation.

3.2.2. We now return to Sappho and Alcaeus. The epigraphical evidence does not help us to establish the 'genuineness' or otherwise of the  $-\epsilon\sigma\iota$  forms ( $\acute{\alpha}\nu\theta\epsilon\sigma\iota\nu$  etc.) but we have already seen that they cannot be due to a mistake in the tradition. Are we to believe that they are instances of epic influence in the language of the two poets? In my opinion the answer must be negative. In the language of Sappho and Alcaeus epic influence of a phonological or morphological nature seems to occur (1) in well defined metrical contexts and poetic genres (e. g. in the so-called 'abnormal' poems of Sappho)<sup>20</sup>; (2) in recognizable formulae which are borrowed from the traditional poetic language; (3) in isolated morphs which alternate with the 'correct' Aeolic form and which serve a metrical or stylistic purpose. In the case of the datives (1) does not seem to be borne out by the texts, (2) certainly does not apply, while the regularity of the morphological fact speaks against (3). If so, we have to acknowledge the genuine character of these forms and we must explore the series of problems which they create. (a) How relevant is the existence of  $-\epsilon\sigma\iota$  datives of the  $-s$ - stems for the problem from which we started, the origin of the  $-\epsilon\sigma\sigma\iota$  datives ( $\acute{\alpha}\gamma\omega\nu\epsilon\sigma\sigma\iota$  etc.)? (b) How do we account for these  $-\epsilon\sigma\iota$  forms? (c) How do we explain the presence of both  $-\epsilon\sigma\iota$  (Lesbian) and  $-\epsilon\sigma\sigma\iota$  forms (Thessalian) from the same type of stems in the same group of dialects?

3.3. If  $\acute{\alpha}\nu\theta\epsilon\sigma\iota\nu$  and the like are 'genuine' Lesbian forms it becomes impossible to argue that  $\pi\acute{\alpha}\nu\tau\epsilon\sigma\sigma\iota$  and the like owe their endings to the  $-s$ - stems.  $-\epsilon\sigma\sigma\iota$  cannot have been generalized from forms which ended in  $-\epsilon\sigma\iota$ . Obviously it could be argued that  $\acute{\alpha}\nu\theta\epsilon\sigma\iota\nu$  etc. represent a later development of an earlier  $\acute{\alpha}\nu\theta\epsilon\sigma\sigma\iota$  and that  $\pi\acute{\alpha}\nu\tau\epsilon\sigma\sigma\iota$  was formed at this earlier stage. But if so we would have to explain how is it possible that  $\acute{\alpha}\nu\theta\epsilon\sigma\sigma\iota$  became  $\acute{\alpha}\nu\theta\epsilon\sigma\iota$  while  $\pi\acute{\alpha}\nu\tau\epsilon\sigma\sigma\iota$  did not become  $*\pi\acute{\alpha}\nu\tau\epsilon\sigma\iota$ . This would be just conceivable in a *Kunstsprache*, but does not make sense in terms of the 'normal' Lesbian dialect<sup>21</sup>.

It follows that Wackernagel's rejection of the traditional explanation of  $-\epsilon\sigma\sigma\iota$  is proved to be right. It does not necessarily follow that Wackernagel's own explanation is correct but in a sense this goes by default. In some 150 years of scholarly work on the subject no other explanation has been suggested and no serious objection

<sup>20</sup> I use here the term first employed by E. Lobel, *op. cit.* (in note 14), *passim* and esp. p. lxxivff.

<sup>21</sup> If we argue that the 'genuine' Aeolic form is  $\acute{\alpha}\nu\theta\epsilon\sigma\iota$  and not  $\acute{\alpha}\nu\theta\epsilon\sigma\sigma\iota$  we are left with the problem of Homeric  $\acute{\epsilon}\pi\epsilon\sigma\sigma\iota$  and the like, since the normal Ionic form is  $\acute{\epsilon}\pi\epsilon\sigma\iota$ . Below (cf. 5.) we shall indicate the two possible solutions, but here we should stick to our original resolution and ignore the evidence of the epic language which admits of too many interpretations.

has been advanced against Wackernagel's theory<sup>22</sup>; in other words, a strong case may be made for it and in what follows we shall proceed on the assumption that  $-\epsilon\sigma\sigma\iota$  was created in the way suggested by Wackernagel<sup>23</sup>.

4. We have now moved a long way towards a solution of our original problem, but, as we have seen, new questions arise (cf. 3.2.). First of all, what is the origin of  $\acute{\alpha}\nu\theta\epsilon\sigma\iota\nu$  etc. in Lesbian? According to the communis opinio the expected form is  $\acute{\alpha}\nu\theta\epsilon\sigma\sigma\iota$ ; if we want to argue that  $\acute{\alpha}\nu\theta\epsilon\sigma\iota$  does in fact derive from  $\acute{\alpha}\nu\theta\epsilon\sigma\sigma\iota$  we must assume that at some stage a phonetic change took place and the geminate sibilant was simplified ( $-\epsilon\sigma\sigma\iota > -\epsilon\sigma\iota$ ). However this change did not affect the  $-\epsilon\sigma\sigma\iota$  ending of the consonantal stems so that it cannot have been a permanent feature of Lesbian; it must have been limited in time to a period *earlier* than that of the creation of  $-\epsilon\sigma\sigma\iota$ . When was this period? The new  $-\epsilon\sigma\sigma\iota$  morph predates Homer and is shared by all Aeolic dialects; there seems to be a case for arguing that it is a common Aeolic creation, i. e. that it did not arise independently in Boeotian, Thessalian and Lesbian<sup>24</sup>. It should follow that the change of  $-\epsilon\sigma + \sigma\iota$  to  $-\epsilon\sigma\iota$  in the  $-s$ - stems was common Aeolic too. If so,  $\acute{\alpha}\nu\theta\epsilon\sigma\iota$  and the like cannot be peculiar to Lesbian but at some stage must have been standard Aeolic formations. We have seen that the epigraphical evidence neither supports nor contradicts this view (provided we can explain the isolated  $\sigma\upsilon\gamma\gamma\epsilon\nu\acute{\epsilon}\sigma\sigma\iota$  from Metropolis in Hestiaiitis).

4.1. Our conclusion follows from the evidence given, but contradicts the communis opinio which maintains that Aeolic preserved IE  $-\epsilon\sigma\sigma\iota$  unaltered between vowels and which sees in  $\acute{\epsilon}\pi\epsilon\sigma\sigma\iota$  etc. attested in Homer the chief evidence for this view. This may be taken as an invitation to caution: before dispensing with the accepted view, we should try to reconsider once more the earlier history of the supposed Aeolic  $\acute{\epsilon}\pi\epsilon\sigma\sigma\iota$ .

4.1.1. Homeric forms like  $\acute{\epsilon}\pi\epsilon\sigma\sigma\iota$  have often been labelled as etymologically justified or inherited since they arise from the addition of a  $-\sigma\iota$  morph to an  $-s$ - stem. However, there is a sense in which the word 'inherited' may be wrongly used. We

<sup>22</sup> An objection which is often repeated is that  $-\epsilon\sigma\sigma\iota$  occurs in dialects which have no  $-\sigma\iota$  forms, but we have seen (cf. 2.) that Wackernagel himself had suggested the solution to that problem. More serious is the instinctive dislike which one may feel for a type of analogy which treats Greek as if it were an agglutinative language, but see above note 8.

<sup>23</sup> Wackernagel's theory has also found some recent support: cf. for instance C. J. Ruijgh, *Mnemosyne* 11 (1958), 120f. and the printed summary of L. García Ramón's dissertation, *Substratos y superestratos en los dialectos Griegos: Tesalia y el Protoeolio*, Madrid 1974, 26f.

<sup>24</sup> That the  $-\epsilon\sigma\sigma\iota$  datives belong to Common Aeolic is argued among others by P. Wathelet, *op. cit.* (in note 10), 260f. I am grateful to Dr. García Ramón for bringing to my attention the summary of his thesis (*op. cit.* in note 23), where he argues (p. 31) that the creation of  $-\epsilon\sigma\sigma\iota$  must be later than the separation of Boeotian from Common Aeolic since it was prompted by the loss of certain intervocalic clusters ( $-ts$ - etc.) which were still present in Common Aeolic. The point is important and deserves full consideration. Even so, I am not persuaded that Common Aeolic necessarily preserved all consonantal clusters which occurred before the  $-si$  ending of locative plural. It seems plausible to assume that  $*pant-si$  changed into  $*pansi$  before Boeotian separated from the other dialects and it is equally plausible that the distinction between voiced, voiceless and aspirate consonants of the same series was neutralized before  $-si$  even in Common Aeolic. If so, even at an early stage there would have been need for a morph which could replace  $-si$  — though it seems likely that the complete take-over by  $-\epsilon\sigma\sigma\iota$  happened independently in the individual Aeolic sub-groups or dialects.

have some evidence which shows that an original IE *-ss-* which occurred at a morphemic juncture was already simplified in the parent language itself; correspondences such as Greek *εἶ* 'thou art', Vedic *asi*, OP *ahiy*, Gathic *ahi* seem to imply that the expected *\*es + si* was simplified to *\*esi* at an early stage before the Greek change of *\*VsV-* to *-VhV-* and the similar Iranian change<sup>25</sup>. On the same grounds we should expect that an original *\*genes + su* was simplified to *\*genesu* at an early stage and traces of this simplification are in fact attested: cf. RV VIII, 4, 14 *apdsu* (from *apáh*), AV VI, 35, 2 *amhasu* (from *amhah*) and the equivalent *azahu* of Avestan. These are no more than traces, but because of this they are all the more significant; the bulk of the Indo-Iranian evidence speaks for an early restoration of *-ss-*. However, it seems probable that Greek inherited from IE forms like *\*esi* (cf. *εἶ*) and *\*genesu* or *\*genesi* at a stage which preceded the change of intervocalic *-s-* to *-h-* and its later disappearance<sup>26</sup>. If so, there is little doubt that Greek, just like Indo-Iranian, at some stage formed (or re-formed) new *-ss-* clusters at morphemic junctures; not only has Homer *ἔπessσi* and *ἔssσi* 'thou art', but *-ss-* forms of the future of the verb 'to be' (*ἔssσoμαι* etc.) are also attested in the Aeolic dialects and in Doric. Yet, if these forms owe their *-ss-* to restoration or analogical recreation there is no reason to suppose that they all arose at the same time: we are not dealing either with the survival of IE *-ss-* or with a sound change from *-s-* to *-ss-*.

4.1.2. We are now led to consider two alternative possibilities. First, Greek may have inherited *\*genesu* (or *\*genesi*) and kept it until the time in which intervocalic *-s-* shifted to *-h-*. If so, the different dialect groups would have known a form *\*genehi* rather than the supposed *\*genessi* and could have independently restored *-s-* or even *-ss-*<sup>27</sup>. Alternatively, it is possible that Greek inherited *\*genesu* or *\*genesi* but immediately restored *-ss-* on the analogy of the other forms of the stem and the other *-si* locatives, so that to all intents and purposes we would have to deal in Greek with a form *\*genessi*, as is generally assumed.

The first hypothesis allows us more freedom of movement, but we should remember that even so it cannot account for the discrepancy between the *ἔνθεσσιν* of the Lesbian poets and the *συγγενέσσιν* of late Thessalian. Whatever form replaced the supposed *\*genehi* in the Aeolic dialects, it must have been common at some stage to the whole of Aeolic, since it is impossible to suppose that the restoration of *-s-* in the dative-locative took place independently in e.g. Lesbian and Thessalian. On the other hand, according to this suggestion, there is no need to postulate a change *-ss- > -s-* in Aeolic (cf. 4. above).

The second hypothesis takes us back to the point from which we started: if Greek at an early stage replaced *\*genesi* with *\*genessi* Aeolic must have altered *\*genessi* to *γένεσσιν* by simplifying the geminate and this sound change must have taken place before the creation of *πάντεσσιν* and the like (cf. 4. above). A corollary of this view is that we should not expect to find any inherited intervocalic *-ss-* in the Aeolic dialects.

<sup>25</sup> Cf. e.g. M. Lejeune, *Phonétique historique du mycénien et du grec ancien*, Paris 1972, 101 and note 3; Wackernagel—Debrunner, *Altindische Grammatik*, I, 111; III 250f., 289f. For Avestan cf. H. Reichelt, *Avestisches Elementarbuch*, Heidelberg 1909, 55.

<sup>26</sup> This chronology is of course necessary to explain Ionic-Attic *εἶ* (*\*essi > \*esi > \*ehi > εἶ*).

<sup>27</sup> The starting point for the restoration of *-ss-* could be provided by forms like the Homeric *ἔχessσιν*, where *-s-* was preserved in preconsonantal position. That *\*-si* in post-vocalic position was altered to *-hi* has often been disputed, but is now proved by the Mycenaean evidence (see below note 41).

4.2. It is impossible to proceed any further unless we are somehow in a position to decide between the two hypotheses just considered. In order to do so it is now necessary to reconstruct the full picture of the events which led to the creation in Aeolic of the dative forms which we are discussing. In fact we are now obliged to reconstruct not one but two pictures, depending once more on which one of the two hypotheses we use as our starting point. The two pictures can then be tested for internal consistency etc. and it may be possible that within this larger framework one of them may be rejected and the other supported by more conclusive evidence.

In what follows we shall tabulate the facts as we see them. However, their interpretation may be easier if we mention here some assumptions which are common to both pictures. First, we assume that the *-essσi* datives of the consonantal stems (*πάντεσσιν* etc.) are a common Aeolic creation and were not built independently in the individual Aeolic dialects (cf. above 4.). Secondly, we assume that the *-essσi* datives were not built analogically on the datives of the *-s-* stems (cf. above 2. and 3.3.). Thirdly, we assume that Wackernagel's proportion (*-oi* : *-oiss* = *-es* : *-essσi*) is responsible for the creation of these datives (cf. above 2. and 3.3.). From our third assumption it follows that the existence of *-oiss* (in *λύχοισσιν* etc.) was a necessary condition for the creation of the new *-essσi* morphs (*πάντεσσιν* etc.). However the Mycenaean evidence makes it likely that the inherited morph *\*-oiss* (soon replaced by *\*-oiss*) went through a stage *-oihi* before the *-s-* was restored to yield the attested *-oiss*, and that this restoration occurred in a post-Mycenaean period<sup>28</sup>. If so, it also follows from our third assumption that the creation of *-essσi* was later than the restoration of *-s-* in *-oiss*.

We may now turn to our two tables<sup>29</sup>.

4.2.1. Table I:

	<i>-s-</i> stems	cons. stems	<i>-i-</i> stems	thematic stems
IE 1.	<i>*-essu</i>	<i>*(C)Csu</i>	<i>*-isu</i>	<i>*-oiss</i>
IE 2.	<i>*-esu</i>	<i>*(C)Csu</i>	<i>*-isu</i>	<i>*-oiss</i>
PGr. 1.	<i>*-esi</i> ( <i>*genesi</i> )	<i>*(C)Csi</i> ( <i>*pantssi</i> )	<i>*-isi</i> ( <i>*polisi</i> )	<i>*-oiss</i> ( <i>*woikoiss</i> )
PGr. 2.	<i>*-ehi</i> ( <i>*genehi</i> )	<i>*(C)Csi</i> ( <i>*pantssi</i> )	<i>*-ihi</i> ( <i>*polihi</i> )	<i>*-oihi</i> ( <i>*woikoih</i> )

<sup>28</sup> I have held for a long time that the correct interpretation of Myc. *-o-i* and *-a-i* was *-oiss* and *-aiss* (cf. e.g. C. J. Ruijgh, *Mnemosyne* 11 [1958], 111), but I am now persuaded that these morphs must be read as *-oi(h)i* and *-a(h)i* (more likely *-ā(h)i*); the reasons have been conveniently summarized by Lejeune, *RPh* 42 (1969), 219ff. (= *Mémoires de philologie mycénienne*, vol. III, Rome 1972, 253ff.; cf. also *ibid.* 155ff. where he has collected the evidence bearing on the chronology of the restoration of *-s-* in Mycenaean). In *Proc. Cambridge Colloquium on Mycenaean Studies*, Cambridge 1966, 223ff. Szemerényi has argued that the Mycenaean dat.-locatives ended in *-āi* and *-oi* and that the process which led to the creation of the later *-aiss*/*-oiss* and *-oiss* is more complicated than is normally suggested. If this were so, the main lines of our argument would not be necessarily affected.

<sup>29</sup> The headings Proto-Greek and Proto-Aeolic are obviously conventional and should not be taken too strictly in a family-tree sense. I have also avoided accepting or proposing any theory about the origin of the Greek dialects and their distribution in the second Millennium, though my suggestions, if correct, may have some implications for this problem too.

PAeol. 1.	*-esi (*genesi)	*-(C)Csi (*pantisi) <sup>30</sup>	*-isi (*polisi)	*-oīhi (*woikoihi)
PAeol. 2.	*-esi	*-(C)Csi <sup>30</sup>	*-isi	*-oisi
PAeol. 3.	*-esi	*-(C)Cessi (pantessi)	*-isi	*-oisi
Aeol. 1. of Asia	-εσι (ἄνθεσι)	-(C)Cεσσι (πάντεσσι)	*-isi OR *-iessi	-οισι
2.	-εεσσι (ἐπιφανέεσσι)	-(C)Cεσσι (πάντεσσι)	-ιεσσι (πολίεσσι)	-οισι (-οις)
Thess. 1.	? *-esi	-(C)Cεσσι	*-isi OR *-iessi	?
2.	-εσσι (συγγενέσσι)	-(C)Cεσσι	-ιεσσι	(-οις)
Boe. 1.	? *-esi	-(C)Cεσσι	*-isi OR *-iessi	?
2.	no evidence	-(C)Cεσσι	-ιεσσι	(-οις)

## 4.2.2. Table II:

	-s- stems	cons. stems	-i- stems	thematic stems
IE 1.	*-essu	*-(C)Csu	*-isu	*-oisu
IE 2.	*-esu	*-(C)Csu	*-isu	*-oisu
PGr. 1.	*-essi (*genessi)	*-(C)Csi (*pantisi)	*-isi (*polisi)	*-oisi (*woikoihi)
PGr. 2.	*-essi	*-(C)Csi	*-ihi (*polihi)	*-oīhi (*woikoihi)
PAeol. 1.	*-esi (*genesi)	*-(C)Csi (*pantisi)	*-ihi (*polihi)	*-oīhi (*woikoihi)
PAeol. 2.	*-esi	*-(C)Csi	*-isi	*-oīhi
PAeol. 3.	*-esi	*-(C)Csi	*-isi	*-oisi
PAeol. 4.	*-esi (*genesi)	*-(C)Cessi (*pantessi)	*-isi (*polisi)	*-oisi (*woikoihi)

For the developments in Aeolic of Asia Minor, Thessalian and Boeotian see above table I (4.2.1.).

4.3. Before we consider these two reconstructions in detail we should discuss the problems posed to both reconstructions by the different forms of dative plural of -s- stems in early Lesbian (ἄνθεσι), late Aeolic of Asia Minor (ἐπιφανέεσσι) and late Thessalian (συγγενέσσι).

4.3.1. If we assume that the earliest form in all these dialects was ἄνθεσι or the like, the later ἐπιφανέεσσι, even if it is not an hyperaerolism, presents no problems. In the Aeolic athematic declension by that period the -s- stems presented the only exception to the rule that the dative plural ended in -εσσι; a new dative plural was formed by the simple expedient of adding the morph -εσσι to the inflectional stem; this could be segmented e. g. in the gen. plural (-εων) or in other forms of the paradigm.

<sup>30</sup> It is possible that at this stage all or some of the clusters with original sequences of the type -CCs- had already been simplified (see above note 24).

4.3.2. Thessalian is more complicated. According to both our reconstructions συγγενέσσι cannot preserve the original form of the dat.-loc. plural of the -s- stems; it must be a new formation. The inscription in which it occurs (see note 19) is unique in its genre, and is the only extant document which gives us some real evidence for the dialect of Hestiatotis<sup>31</sup>. Unfortunately it is not earlier than the second part of the third century B. C. and it shows a number of peculiarities which make this dialect somewhat remote from the 'standard' Thessalian of e. g. Pelasgiotis. It would be easy to dispose of συγγενέσσι by arguing that it is an hyperaerolism, i. e. that it does not belong to Thessalian proper but is simply the result of an attempt to write in Thessalian made in a region where the original dialect was different. However, this may too be cavalier an attitude to take and other explanations are possible.

In Thessalian, as in Aeolic of Asia Minor, there must have been a period when our reconstructed \*genesi represented the only morphological type which had a dative plural ending in -εσι rather than in -εσσι. The tendency to replace it must have been strong. We do not know when and how this tendency was first yielded to, but we may expect that somehow it caused the introduction of -εσσι into the paradigm of the -s- stems. This may be sufficient for our purposes but we may also want to ask why this tendency did not produce the same results as in Aeolic of Asia Minor, viz. the creation of an -εεσσι form<sup>32</sup>. One possible suggestion is that συγγενέσσι is not due to straight analogy but to contamination (non proportional analogy) between the expected \*-γενεσι and the more numerous -εσσι forms. Alternatively we may provide a different answer, but in the absence of more definite evidence this is bound to be very speculative.

It is one of the features of Aeolic of Asia Minor that -e- is retained in hiatus before another vowel. In Southern Thessalian, on the other hand, -e- either contracted with the following vowel or — before -o- and -a- — was raised to -i-. The same inscription from which we have συγγενέσσι also offers θεός (< [theos]), γενίουν (< [geneōn]), and συγγ[εν]ίου. The exact pronunciation of forms such as those quoted is doubtful but there is a considerable amount of evidence which shows that before a front vowel and before [i] in particular most consonants were palatalized and geminated; the -i- was often absorbed so that spellings of the type ἀργύρροι (from ἀργυροί) were relatively frequent<sup>33</sup>. In the Metropolis inscription we find Ἰσωνία alongside with Πεδία and Περράνδρου so that the phenomenon is well documented there too. As far as the -s- stems are concerned this implies that the inflectional forms which showed an original -e- before a central or back vowel were likely to change it to -i- and sooner or later to absorb it in the palatalized consonants which preceded it. In other words synchronically it would be possible to treat these forms as if they belonged to stems which ended in a palatalized consonant, alternating perhaps with a non palatalized consonant in the nominative and dative singular

<sup>31</sup> Among other new forms the inscription shows an extraordinary change of final -ος and -ον to -εσ and -εσ, which is unparalleled elsewhere. I hope that I shall be able to discuss these forms elsewhere, and to argue, inter alia, that -ε- is simply a spelling for a schwa-like vowel in unstressed position. For the rest the text gives good evidence for the -εσσι datives of the consonantal stems even in Hestiatotis (cf. the form εἴνεσσι).

<sup>32</sup> I feel reluctant to suggest that -εεσσι is due to a contraction of -εεσσι into \*-ησσι and to a later shortening.

<sup>33</sup> I have mentioned some of the evidence in *Glotta* 46 (1968), 102f. though I may have given the wrong impression that palatalization was limited to nasals, liquids and sibilants, while it obviously concerned plosives as well.

(where the termination *-si* had contracted into *[-ē]*) and in the dative plural<sup>34</sup>. If so, there was no longer any reason to segment a form such as *\*γένεσι* into */gene + si/*; the obvious segmentation would have yielded */gen + esi/* with an abnormal ending which could be replaced by the regular *-εσσι*.

I stressed earlier that this explanation is only tentative; it is based on the assumption that forms of the *συγγενέσσι* type are later than the outset of the Thessalian change of *-εο-* to *-ιο-* and the consonantal palatalization which followed it. Any new piece of evidence may prove or disprove this point. However, the fact remains that it is possible to treat the divergences between the late Aeolic dialects as being due to relatively recent developments which broke the original unity.

4.4. We must now consider the earlier phases reconstructed in our two tables (cf. 4.2.1. and 4.2.2.). The main difference between the two reconstructions is that the second (Table II), differently from the first, assumes a change *-ss- > -s-* in the shift between Proto-Greek and Proto-Aeolic. If so, the first point to consider is whether such a change is in contrast with the available evidence.

As I pointed out earlier, it is traditionally assumed that the Aeolic dialects preserved an original *-ss-* after a short vowel<sup>35</sup>. This view is based on two types of evidence: the *-εσσι* morph of the datives of the consonantal stems and the verbal forms of the type *ἔσσομαι*, *ἐτελέσσατο*, etc., where *-s + s-* occurs at a morphemic juncture. We have shown that the *-εσσι* datives are a new creation and therefore are not relevant to the problem at hand. All they allow us to argue is that after their creation *-ss-* was not simplified to *-s-* in the Aeolic dialects. Obviously this does not prove that *-ss-* was not simplified at an earlier stage.

The verbal forms are in a different position but one point must be stressed. They cannot be compared with the datives of the *-s-* stems. The datives can be traced back to IE locatives, while neither the Greek sigmatic aorist nor the Greek future are entirely IE creations. We do not know for instance at what date the sigmatic aorist of Greek acquired its characteristic *-σα-* suffix. However, if both sigmatic aorist and sigmatic future are attributed to Proto-Greek, it should follow that Aeolic inherited these forms with an *-ss-* sequence. In terms of our table II this is not altogether impossible. Even if Aeolic inherited a supposed *(ἐ)τελέσσατο* and changed it to *(ἐ)τελέσατο*, *-ss-* could have been restored analogically at a later stage since at all times a proportion of the type *(ἐ)λύθην*: *(ἐ)λυσα* = *(ἐ)τελέσθην*: *X* (*X* = *(ἐ)τέλεσσα*) could be set up. In other words, the existence of *-ss-* aorists and futures where Proto-Greek had *-ss-* aorists and futures is not necessarily incompatible with the reconstruction of Table II where it is assumed that Proto-Aeolic changed *-ss-* to *-s-*. It remains to be seen, however, whether a study of the actual evidence can help us to see how plausible this view is.

4.4.1. Altogether Sappho and Alcaeus have six instances of *ἔσσομαι*, *ἔσσεται*, *ἔσσεσθαι* etc. (Sappho 50,2; 55,2; 56,2; 98b2; Alcaeus 67, 5; 305i5) and one of the imperative *ἔσσο* (Sappho 1, 28); in most of these cases the presence of *-σσ-* is guaranteed by the metre and in no case the metre gives evidence for *-σ-*<sup>36</sup>. The data for

<sup>34</sup> On this assumption the declension of e. g. *γένος* would be as follows: sing. NAV [genos], Gen. [gen'os], Dat. [genē]; plur. NVA [genē], Gen. [gen'ōn], Dat. [genesi] (later replaced by [genessi]); that of *εὐγενής* would be similar except for the following forms: Nom. sg. [eugenēs], Voc. sg. [eugenes], Acc. sg. [eugen'a], NV plur. [eugenēs], Acc. plur. [eugen'as].

<sup>35</sup> Cf. e. g. M. Lejeune, *Phonétique historique*, op. cit., 102.

<sup>36</sup> Cf. Hamm, *op. cit.* (in note 12), 22, 39. I have not listed *ἔσση* of Alc. 396 because the reading is too uncertain (the Mss. have *ἔσση* or *ἔση*).

the Lesbian equivalents of *τέλω* and its forms are tantalizing. Sappho has in the same poem and in fact in the same verse *τέλεσσαι* with *-σσ-* and *τέλεσσον* with *-σ-* (1, 26 and 1, 27). Other forms of the same verb appear alternatively with *-σσ-* and *-σ-* (Sappho 17, 5: *ἐκτελέσαντες*; 60,3: *τέ]λεσσον*?; 76, 2: *τε]λέσειε*; in Alcaeus 361 *τελέσει* is due to an emendation which seems certain). There is no suggestion that the *-σ-* forms occur only in the 'abnormal' poems of Sappho. Finally it should be mentioned that a 'non-etymological' geminate sibilant occurs at least once: Alcaeus, 368,1 has *κλέσσαι* where we should expect *\*κάλεσαι* from a disyllabic stem which did not originally end in a sibilant.

The picture offered by the epigraphical evidence is not identical but similar. All three dialects offer instances of *ἔσσομαι* with *-σσ-*<sup>37</sup>. Aeolic of Asia Minor and Boeotian have evidence for *-σσ-* forms of *-s-* stem verbs: cf. *τελέσσαις*, *ἐπιτελέσσωντι* etc.<sup>38</sup>. Moreover in these two dialects there are also frequent forms with 'non-etymological' *-σσ-*: cf. in Aeolic of Asia Minor *ὀμόσαντας* (IG XII ii 526 a 16), *λοσσάμενον* (IG XII Suppl. p. 38, 126, 4, 9), *καλεσσάτωσαν* (ibid., p. 45, 139 A 15, C 100; [142 B 13]), *παραικλέσσει* (ibid., p. 47, 140, 18), *ἐπαίνεσσαι* (ibid., p. 50, 143, 15), *παραικλέσσαι* (Hönle, *Arch. Anz.* 1957, 46ff., C 16); in Boeotian see *ἔσσώμοσσε* [ν (AD 14 [1931-2], 218ff. no. 4, 61), *συνκαλέσαντες* (Schwyzer, *DGE* 462 A 15)<sup>39</sup>.

The difference between poetry and inscriptions is that the former shows an alternation between *-σ-* and *-σσ-* forms both for the *-s-* stems and for the other stems. The inscriptions on the other hand show *-σσ-* in the *-s-* stems and alternations between *-σ-* and *-σσ-* in the other verbs. The facts could be explained by arguing that Aeolic preserved Proto-Greek (even if not IE) *-σσ-* and that this was analogically extended to some disyllabic stems. This fits with the picture of Table I and implies that we must explain the alternations between *-σ-* and *-σσ-* in Sappho and Alcaeus (*τέλεσσαι*, *τέλεσσον*) as being due to Homeric influence. However, within the framework of Table II, we could also assume that Sappho and Alcaeus represent an earlier linguistic stage than the later inscriptions and that they still preserve traces of the period in which *ἔσσομαι*, *ἐτέλεσα*, etc. were the 'regular' forms (derived from the earlier *ἔσσομαι*, *ἐτέλεσσα* etc.). The attested *ἔσσεται*, *τέλεσσαι* would then be due to the analogical restoration of *-σσ-*, which started before the time of Sappho and Alcaeus but was completed only after it. If so *κλέσσαι* etc. could be due to an analogical extension of the *-σσ-/σ-* alternation rather than to simple analogy with the *-s-* stems. Yet, it must be accepted that the evidence is inconclusive; it does not speak for or against the supposed sound change *-ss- > -s-* (see Table II).

4.5. Simplicity and economy of hypothesis support Table I (cf. 4.2.1.). According to that reconstruction we do not need to postulate an Aeolic sound change *-ss- > -s-*. However, one of the assumptions which it makes, seems to go against basic common

<sup>37</sup> Cf. e. g. IG XII Suppl. p. 3, no. 6.27 (*ἔσσονται*), Hönle, *Arch. Anz.* 1967, 46ff., C 10 (*ἔσσόμενοι*) for the Aeolic of Asia Minor; Schwyzler, *DGE* 462,5 (*ἔσσειν*) for Boeotian and IG IX ii 517. 11 (*ἔσσεισθαι*), 1229.39 (*ἔσσομέ[ν]αν*) for Thessalian.

<sup>38</sup> For the Aeolic of Asia Minor cf. e. g. IG XII ii 134.8 (*τελέσσαις*), 242.9 (*ἐπιτελέσαντα*), 498.22 and 500.14 (*συντελέσαντα*), IG XII Suppl. p. 14, no. 17.3 (*συντελέσσει*), p. 36, no. 528.22 (*ἐπιτελέσει*); for Boeotian see IG VII 2410.8 (*ἐπιτελέσσωντι*).

<sup>39</sup> The value of this evidence is not always certain. Some of the instances quoted from Lesbian inscriptions may be hyperaeolisms: I should not take too seriously, for instance, *ἐτεμωσεν* of IG XII ii, 256.3. However, what the forms with non-etymological *-ss-* prove is that some spreading of *-ss-* was going on at the time.

sense. Greek probably inherited a locative plural *\*genesu* and changed it to *\*genesi* at an early stage, since there is no trace of *-u* forms in any of the dialects<sup>40</sup>. If so, however, the locative singular *\*genes + i* and the locative plural *\*genesi* (from *\*genes + si*) must have been identical both before and after the change of intervocalic *-s-* to *-h-*. This is in marked contrast with the normal rules of Greek structure which do not allow for the morphological identity of singular and plural in the same case. Is this not a strong argument in favour of an early replacement of *\*genesi* by *\*genessi* at a Proto-Greek stage? (see Table II). Unfortunately, just as economy of hypothesis is not sufficient to decide the case in favour of Table I (linguistic history is often more complicated than we should like it to be), the fact that analogical change did not occur, though we should have liked it to, cannot decide the case against Table I. We are not yet able to predict with certainty that a particular instance of analogical change will be triggered off by a given cause.

4.6. From what precedes it would seem necessary to conclude that both reconstructions offered in 4.2.1. and 4.2.2. are plausible, but it is not possible to decide between the two. Should we then stop here and be content with having produced some data against the traditional explanation of the *-εσσσι* datives?

Perhaps we can afford to be less pessimistic. Strangely enough one of the points which so far seemed to count against the reconstruction presented in Table II, viz. the reconstructed Aeolic change *-ss-* > *-s-*, may now be employed as an argument in its favour. To do so, however, will require some lengthy discussion and an apparent digression.

4.6.1. The change of intervocalic *-s-* to *-h-* is normally attributed to the Proto-Greek period, though it is not easy to establish an absolute chronology. More difficult is to decide the chronology of the restoration of *-s-* in those morphemes which had been affected by the previous change of intervocalic *-s-* to *-h-*: presumably *\*polisi* yielded *\*polihi* and then the *-s-* was restored (πόλις)<sup>41</sup>. In the Dat.-Loc. plural of the *-i-* and *-u-* stems the restoration occurred before the time of the Linear B tablets (*ka-ke-u-si* etc.), and the same is true of the aorists and futures of those verbs whose stem ended in a vowel (*e-re-u-te-ro-se*, *a-ke-re-se*, *do-se* etc.). On the other hand Mycenaean still has *pe-i* (= [sphehi] or [spheih]) 'to them', and *-o-i*, i. e. [-oihi], is written for the later *-οισι* (from an earlier *\*oisu* → *\*oisi* > *\*oihi*)<sup>42</sup>. It seems that some at least of these restorations must have occurred independently in the various dialect groups, and it may be necessary to assume that all of them happened independently<sup>43</sup>.

Let us now consider more closely the conditions which must be satisfied before a restoration of *-s-* in intervocalic position can occur. When intervocalic *-s-* changed to *-h-* this cannot have had a very disruptive effect on the system. Either *-h-* counted as an allophone of /s/, automatically selected in intervocalic position, or at the very least the contrast between /s/ and /h/, if these were phonemically distinguished

<sup>40</sup> The reasons for this change do not concern us here: most recently see M. Petruševski, *Mélanges G. Daux*, Paris 1975, 309–13 (with the earlier literature).

<sup>41</sup> See above note 28 with the references to Lejeune. If an earlier *\*oisi* yielded *-oihi* which was then remodelled into *-οισι*, it seems also likely that *\*polisi* changed into *\*polihi* before the final restoration of *-σι* (I ignore here the problems caused by the vocalism of Attic πόλις).

<sup>42</sup> See above notes 28 and 41.

<sup>43</sup> See below note 48.

(which seems improbable)<sup>44</sup>, was neutralized intervocalically. As long as this was the case it is difficult to assume that an analogical process which restored *-s-* between vowels could occur. On the other hand the analogical process would be much easier to understand if other changes had previously brought about the creation of a new intervocalic sibilant<sup>45</sup>. It seems likely that at an early stage Greek borrowed from the substratum or from the neighbouring languages words which in their classical form appear with an intervocalic *-s-*: δαμνῆος may be an example. Yet I find it difficult to suppose that these borrowings, which for a long period cannot have been entirely integrated in the language, were sufficient to provide the necessary model for the restoration of intervocalic *-s-*<sup>46</sup>. More important could be the phenomenon which altered *-ss-* to *-s-* after long vowel<sup>47</sup>: there is no evidence which allows us to attribute it to some dialect groups rather than to some others and the phenomenon could belong to Proto-Greek. Yet, even this change would only affect a very few forms (most examples of *-ss-* in this position derive from clusters of the *-ts-* type which survived as such for a long time and which are not relevant here). Some dialect groups had other sources of intervocalic *-s-*: Mycenaean, Attic-Ionic, Arcado-Cyprian, for instance, changed most occurrences of *-ti* to *-si*. Other sibilants arose in the pre-Mycenaean period from consonantal clusters, though it is not yet clear whether, for instance, Myc. *to-so* must be read as *toso-* or *tosso-*. Anyway, after these changes no phonological reason could prevent any longer the restoration of *-s-* in the dative plurals and the verbal forms.

4.6.2. We now turn to Aeolic. We have argued above (4. and 4.2.) that the creation of the *-εσσσι* datives (or locatives) in the consonantal stems belongs to Proto-Aeolic and presupposes the existence of *-οισι*, i. e. the restoration of *-s-* instead of *-h-* in the loc. plural thematic. We may now ask what the sources of intervocalic *-s-* in Proto-Aeolic are likely to have been. We have suggested that borrowings are not sufficient and that the change of *-ss-* to *-s-* after long vowel is also an unsatisfactory source. The other sources of intervocalic *-s-* simply do not concern Proto-Aeolic. Boeotian and Thessalian preserved *-τι*, so that it is unlikely that this sequence had changed into *-σι* in common Aeolic; the other consonantal clusters show different treatments in Boeotian and the remaining dialects so that they were probably still preserved as such in the common period. Yet we want to argue that the resto-

<sup>44</sup> This partly depends on two factors which are not entirely clear: the chronology of the change of initial (prevocalic) *\*i-* to *h-* and the treatment of intervocalic *\*i-*. It is usually assumed that *-V<sub>i</sub>V-* yielded *-VhV-* and that *-h-* was lost at a later stage, but I do not see that this can be proved.

<sup>45</sup> For the general point made here cf. e. g. B. Trnka, "On analogy", *Zeitschrift für Phonetik* 21 (1968), 345–51.

<sup>46</sup> The first draft of this article was completed when I read the preprint of an important paper about "Les consonnes palatalisées dans le grec du II<sup>e</sup> millénaire et des premiers siècles du I<sup>er</sup> millénaire" presented by Ernst Risch at the Sixth International Mycenaean Colloquium (Chaumont, 7–13 September 1975). Interestingly enough Risch argues that the restoration of intervocalic *-s-* in the aorists etc. became possible as soon as the Greeks borrowed some words with initial and intervocalic *-s-* from the substratum and other sources. It must be obvious from what was said above that, while I entirely agree with the point that the restoration must have occurred after the introduction into the language of a phonemic contrast between /s/ and /h/, I still do not think that the borrowings were sufficient to create this contrast.

<sup>47</sup> Cf. Lejeune, *Phonétique historique*, op. cit., 102.

ration of *-s-* occurred in Common Aeolic. If we could assume that in Common Aeolic *-ss-* had been simplified into *-s-* it would become clear how the restoration could have taken place. In effect this means to accept the reconstruction suggested in Table II (4.2.2.). According to it the change of *-ss-* to *-s-* would have yielded forms like *\*genesi*, which could have been a very suitable model for the restoration of *-s-* in the dat.-loc. plurals. Similarly, if we attribute to Proto-Greek or Proto-Aeolic aorists of the type *\*(e)telesse*, the change would have yielded forms like *\*(e)telese*, which could have been used as a starting point for the restoration of post-vocalic *-s-* in the sigmatic aorist. If so, the hypothesis in terms of which Table II is constructed, viz. the Aeolic change of *-ss-* to *-s-*, helps us to understand other features of the history of Greek and of Aeolic. In other words, we have gained a small piece of evidence which favours the reconstruction of Table II over that of Table I. For what concerns the change itself we may also add that it seems structurally conditioned: first intervocalic *-s-* changed to *-h-* and in a second moment intervocalic *-ss-* changed to *-s-*. We know that a similar change affected the Attic-Ionic dialects and there is scope for a further enquiry aimed at establishing whether what we labelled Proto-Aeolic should not in fact be attributed to Proto-Greek — but this belongs to another paper<sup>48</sup>.

5. We must now sum up. It seems probable that Wackernagel's explanation of the *-εσσι* datives is correct (cf. 3.3.). If so, this carries some consequences and one of them is that in all likelihood we must postulate a sound change from *-ss-* to *-s-* for common Aeolic (cf. 4., 4.2.2., 4.6.1. and 4.6.2.) or for the phase which preceded it. The instances of *-ss-* which we find in the Aeolic dialects were all created or recreated later than the change *-ss- > -s-* (cf. 4.4.1.). Some more specific consequences concern the dialect of the Lesbian poets: first, we are now able to analyse the datives of the *ἀνθεσι* type which occur in Sappho and Alcaeus as 'genuine' Aeolic forms. Secondly, we may also suggest that alternations of the type *τέλεσσαι* / *τέλεσσον* need not be due to Homeric influence (though this cannot be excluded) but may also be archaic features which were eliminated in the later phases of the dialect (cf. 4.4.1.). On the other hand while Homeric *πάντεσσι*, *πόδεσσι* etc. belong to the Aeolisms of the epic language, *ἔτεσσι*, *σῆθεσσι* etc. are in a different position. These forms must be either survivals from an extremely early layer of the epic language or — more likely — creations of the epic language due to the influence of the *πάντεσσι* type.

Finally there is a more general point to make. Wackernagel objected to the traditional explanation of the *-εσσι* datives that it presupposed an abnormal type of analogical change. At the time his own explanation seemed theoretically more satisfactory since it could be stated in proportional terms: *-σι : -οισι = -εσ : -εσσι*. We have seen that more recent work has treated analogy as a process of redistribution

<sup>48</sup> According to Risch's reconstruction (cf. note 46 above) the restoration of *-s-* in the aorists etc. is one of the first phenomena to occur in the history of Greek after the immigration into the peninsula. For my part I have put it somewhat later and have implied that it may have occurred independently in the various dialect groups. If Risch is right in his assumption that the restoration occurred early, and if, on the other hand, I am right in assuming that borrowings etc. cannot provide the necessary phonological conditions for the restoration, it follows that the change *-ss- > -s-* belongs to Common Greek — a solution which I should find entirely satisfactory, but which at the moment I cannot support with adequate evidence.

of allomorphs<sup>49</sup> and that Wackernagel's explanation does not fit this definition (cf. 2.1.). Yet the explanation seems to be correct. We must now wonder why is it that analogical proportions are both so unattractive for the modern theoreticians and so indispensable a tool for the practising historical linguist<sup>50</sup>.

<sup>49</sup> See above 2.1. and note 7.

<sup>50</sup> For an interesting discussion of some of the current misapprehensions about the proportional formula see L. R. Palmer, *Descriptive and Comparative Linguistics*, London 1972, 242ff. from where I have taken the sentence reproduced at the beginning of this article (ibid. p. 244). For a recent criticism of analogical proportions see Kiparsky, op. cit. (in note 7); I have discussed the status and the possible formalizations of these proportions in my Collitz lecture (see above note 8).