

# THE LINGUISTIC CASE FOR THE AIOLIAN MIGRATION RECONSIDERED

## ABSTRACT

Ascribing the presence of speakers of Lesbian in the northeast Aegean during historical times to the migration of Aiolian tribes from mainland Greece receives no support from linguistics. Migration is not the only or even primary way in which languages and dialects may spread. Moreover, on reexamination, the idea of an Aiolic dialect group falls apart. Boiotian, separated by the First Compensatory Lengthening from Lesbian and Thessalian, appears as a conservative dialect, most closely related to West Greek. In turn, Lesbian and Thessalian are both archaic branches of Greek that share no demonstrable common innovations. They are best viewed as two separate relic areas of a relatively unaltered early Greek.

To pass from this legendary world—an aggregate of streams distinct and heterogeneous, which do not willingly come into confluence, and cannot be forced to intermix—into the vision afforded by Herodotus, we learn from him that in the 500s B.C. the whole coast-region from Dardanus southward to the promontory of Lektum (including the town of Ilium), and from Lektum eastward to Adramyttium, had been Aeolised, or was occupied by Aeolic Greeks—likewise the inland towns of Skêpsis and Kebrên.<sup>1</sup>

This paper grew out of the research of Brian Rose, as set out in the preceding article in this issue of *Hesperia*.<sup>2</sup> As head of the post-Bronze Age excavations at Troy, Rose had long accepted the scholarly consensus in

1. Grote 1888, vol. 1, p. 305, referring to Hdt. 1.149–151.

2. Rose 2008. My thanks are due to Brian Rose, Don Ringe, Ronald Kim, and the anonymous reviewers for *Hesperia* for discussion and clarifications.

Certain conventions and abbreviations common in historical linguistics are used in this article. An asterisk \* marks an unattested or reconstructed form. A dagger † marks a form that we

might expect from the rules but does not occur. The sign > means “develops to” (and the sign < means “develops from”) an earlier form by regular sound changes. The sign -> means “is replaced by,” i.e., develops from an earlier form by analogy, replacement, or some other nonphonological process. A dash - marks morpheme boundaries. *h*<sub>1</sub>, *h*<sub>2</sub>, and *h*<sub>3</sub> stand for the *ε*-, *α*-, and *ο*-coloring laryngeals, respectively. Capital letters

mark any (or an unknown) representative of that class. So *C* = any consonant; *H* = any laryngeal; *K*<sup>w</sup> = any labiovelar; *P* = any labial; *R* = any resonant (*l*, *r*, *m*, *n*); *T* = any dental; *V* = any vowel. An apostrophe (*C'*) marks palatalization. Glosses are given in single quotes (‘moon’). Phonological rules or changes are written with a slash / to indicate the environment and a blank \_ to show where the phoneme stands: for

which Iron Age settlements in the northeastern Aegean were founded by colonists from an Aiolic-speaking area in mainland Greece. When he examined the archaeological remains, however, he found no good evidence for this scenario, and was forced to conclude that the *communis opinio* was incorrect. He asked me to contribute a discussion of the linguistic situation. As I reexamined the data, it became clear that the standard view of an Aiolic dialect family is faulty, and I too have been forced to conclude, almost reluctantly, that our earlier ideas cannot be supported.

## THE TRIPOD

The theory of an Aiolian migration rests on three legs: archaeological, historical, and linguistic (Fig. 1). For the first, Rose concludes: "At no time during the early 1st millennium do we have evidence for attacks, for the arrival of a new population group, or for any substantive change in ceramic production."<sup>3</sup> Other scholars have noted, if not been bothered by, the lack of archaeological evidence. Gschnitzer, for example, writes: "The migration to Asia Minor, which we could assume was a consequence of the drive for colonization, has apparently not yet been successfully dated archaeologically; it must have occurred before the corresponding, but equally undated, migration of the Ionians."<sup>4</sup> Coldstream expresses a similar view: "These Aeolians, according to literary sources, had migrated from their former homes in Boeotia and Thessaly at least as early as the parallel movement of Ionians; yet the archaeological record casts very little light on them before the late eighth century. . . . At present we have no reliable archaeological evidence concerning the coming of the first Aeolians to Lesbos."<sup>5</sup>

Nor do the conflicting legendary accounts of the colonization of Aioli supply convincing support. Though such accounts have been accepted as sober history by some, Rose has shown how these and other mythical accounts developed and were adapted in the course of the 6th–5th centuries B.C. for a variety of cultural purposes.<sup>6</sup> In particular, the genealogical accounts are merely attempts to connect local aristocracies to the royal family of Mycenae or a putative ancestor Aiolos, who serves as a convenient father

example,  $K^w > T/_e$  reads as "a labio-velar becomes the corresponding dental in the environment before *e*." Language abbreviations: Ark. = Arkadian; Att.-Ion. = Attic-Ionic; Boiot. = Boiotian; Cret. = Cretan; Cyp. = Cyprian; Dor. = Doric; Eng. = English; Germ. = German; Hom. = Homeric; Lak. = Lakanian; Lesb. = Lesbian; Myc. = Mycenaean; Pamph. = Pamphylian; PGrk = Proto-Greek; PIE = Proto-Indo-European; SGrk = South Greek; Skt. = Sanskrit; Thes. = Thessalian. Common abbreviations of grammatical terms (e.g., nom., acc., sing., pl.) are also used.

3. Rose 2008, p. 420.

4. Gschnitzer 2002, cols. 227–228. I fail to follow the author's use of "must have" here. He gives his reasons: "as they extended their territory to the north to the coast of the A[eolians] (Smyrna previously Aeolian; Phocaea on the edge of the Aeolian hinterland; Aeolian substrate in the northern Ionian dialects)." I am not sure I see how any of these indicates priority of settlement. The linguistic evidence is useless since most scholars explain various features of Lesbian by recourse to *Ionian* influence on it (see below).

5. Coldstream 2003, pp. 262–263.

6. Rose 2008, pp. 401–404. Hammond (1975) uses Thucydides' account to produce dates supposedly accurate to within a decade: Trojan War, ca. 1200 B.C.; Thessalian invasion, ca. 1140; Aiolian migration to Lesbos, ca. 1130; Dorian invasion, ca. 1120. Thessalians and Boiotians are imagined as a part of an invading group of Northwest Greeks, originating in Epiros. Northwest Greek and Doric are treated correctly as sub-families of West Greek, which, however, Hammond (1975, p. 703) holds to be closely related to Mycenaean.

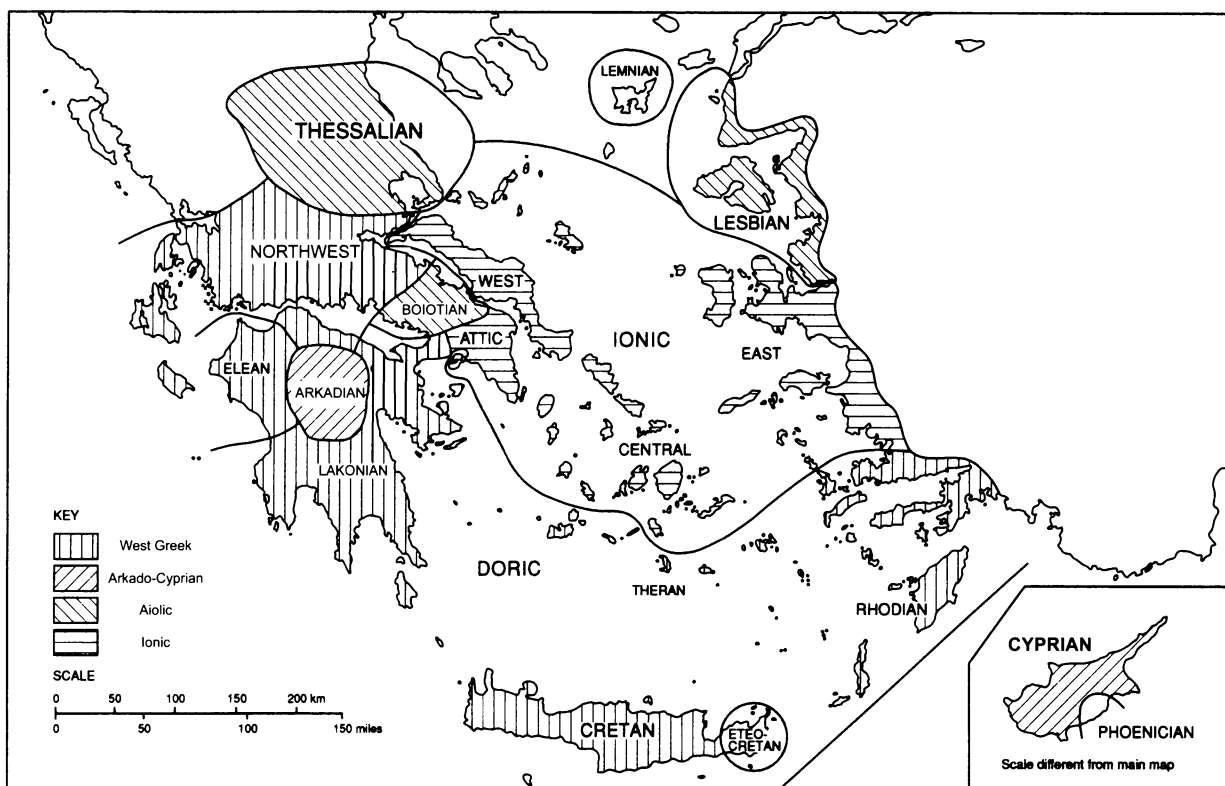


Figure 1. Distribution of traditional dialect groups in the eastern Mediterranean. After Hainsworth 1982, p. 859, map 28

figure for the unaffiliated, and cannot be used to infer actual tribal, genetic, or linguistic affiliations. Meyer in 1893 rightly summed up: “One is forced to conclude that all Greek tribes that were not Doric or Ionic were designated ‘Aiolic.’”<sup>7</sup>

Undue piety toward the classical sources is gently corrected by Cook: “The connexion with Orestes, which alone gives a precise dating, carries no conviction.” As he further notes, “the Greek antiquarians . . . had a *horror vacui*. . . . Stories like this were duly translated into a chronological system.” He sensibly concludes: “The schematic prose traditions of the migrations to the East Aegean after the Trojan War seem in general to have been compilations of the fifth century B.C.”<sup>8</sup> Under that clear light, many pretty but fanciful maps showing the paths and even the exact dates of a complex series of migrations, invasions, and sackings must disappear.<sup>9</sup>

As Grote reminds us in the passage quoted at the beginning of this article, after such mythological history and reconstructions, there is only a single fact. As attested by Sappho and Alkaios, at around 600 B.C.—we

7. *RE* I, 1893, col. 1031, s.v. Aioles (E. Meyer). Gschnitzer (2002, col. 228) points out, “Regarding the statement of the scholars of antiquity that the A[eolians] had once settled in certain areas of Greece, there is, in contrast [to Thuc. 3.102.5], not much to go on. This is because on the one hand they are connected with the appearance of the

mythological personal name Aeolus, the earliest bearer of which was probably secondarily interpreted as the progenitor of the A[eolians], and on the other hand with the theories concerning the division of the Greeks into a few large tribes whereby the name A[eolian] covered everything that could not be ascribed to the Dorians or the Ionians.”

8. Cook 1975, p. 777.

9. E.g., Hammond 1976, p. 142. An adapted version of this map is still presented, albeit as a “conjectural reconstruction,” in introductory works such as Cartledge 2002, p. 45. See also similar maps in Grant 1994, pp. 12–13; Morkot 1996, p. 47.

can push Grote's date back a bit—people on Lesbos were speaking a distinctive Greek dialect, one that modern linguists consider to be related to the dialects of Boiotia and Thessaly (Fig. 1). The only surviving leg of the tripod, then, is the idea that in Thessalian and Boiotian we have a case of a unified dialect area split by latecomers, in this case the Doric speakers of Northwest Greek, with Lesbian as an outlying province.<sup>10</sup> That is the subject of this paper.

## THE QUESTION OF AIOLIC

Chadwick has observed that “the ancients, from Hesiod on, distinguished three families of Greek-speaking peoples: Dorians, Ionians, and Aeolians. Modern scholars accepted this as a rough basis, for the Doric and Ionic dialects were plainly recognizable. . . . Aeolic was less easily identified.”<sup>11</sup> There is indeed a problem with the Aiolic dialect, and it needs reexamination.

In antiquity, Αἰολεύς, Αἰολικός, and derivatives referred only to the inhabitants of Aiolis proper (Lesbos and the adjacent shores of Asia Minor) and their speech.<sup>12</sup> The use of “Aiolic” to refer to a family made up of Aiolian proper, Thessalian, and Boiotian is a modern creation by Ahrens in 1839.<sup>13</sup> In this article, I use the term “Lesbian” to refer to the dialect of the island and Asia Minor, “Aiolic” to refer to the conventionally accepted family of dialects, and “Aiolian” to refer to the conventionally accepted tribes.

Cook gives a good statement of the standard argument from linguistics: “There is at present no good ground for disputing the belief that the Greek cities of the Southern Aeolis (on the Asiatic mainland) were foundations of the Dark Age. In later times the dialect of Lesbos and the Aeolis bore a close resemblance to Thessalian and Boeotian, and in the fifth century B.C. the Aeolians of Lesbos and Cyme recognized a kinship with the Boeotians. The new settlers may well have come mainly from these regions.”<sup>14</sup>

10. This scenario is cited as a standard example in linguistic textbooks; see, e.g., Hock and Joseph 1996, pp. 346–365.

11. Chadwick 1956, pp. 38–39. See Hes. fr. 9 MW: “Ἕλληνας δ’ ἐγένοντο φιλοπολέμου βασιλῆος / Δῶρός τε Εὐθόος τε καὶ Αἰόλος ἱπποχάρμης (The sons of war-loving king Hellen were Doros and Xouthos and Aiolos the chariot-fighter). Xouthos is the ancestor of the Ionians. See also Chadwick 1975, p. 811, where he refers to the ambiguous position of the Aiolic group. Hainsworth (1982, p. 861) also notes that difficult problems are posed by the development of Aiolic.

12. Rose (2008, pp. 402–403) discusses the contradictory claims that an area of mainland Greece was called Aiolis at some earlier point. Hdt. 7.176.4: Thessaly, probably specifically

Thessaliotis; Thuc. 3.102.5: Aiolis located at Kalydon and Pleuron, on the Aitolian coast; Apollod. 1.7.3: Aiolos was king of the regions about Thessaly and named the inhabitants Aiolians; Paus. 10.8.4: the Boiotians, who in more ancient times inhabited Thessaly and were then called Aiolians; Diod. Sic. 4.67.2: “what was then Aiolis and is now called Thessaly.” The scholia on Pindar (*Ol.* 1.162, 164) report that the Aiolians inhabited Thebes, but this is no more than a guess to explain why Pindar talks about the Aiolian mode of music (τινὲς δὲ φασιν ὅτι ἄνωθεν Αἰολεὺς τὸ γένος ὁ Πίνδαρος); cf. Schol. *Nem.* 3.136, which refers to the Aiolians settling in Thebes. Further afield is Hdt. 7.197, which locates Athamas, son of Aiolos, in Alos in Akhaia.

In sum, a vague idea existed that somewhere in the north an area was

once called Aiolis, but whether Thessaly, Boiotia, Akhaia, or Aitolia is unclear. All of these seem to be back-projections. So Meyer (*RE* I, 1893, col. 1030, s.v. Aioles) wrote dryly that “the only people who bore this name were the Aiolians of Asia Minor from Lesbos, Kyme, etc. These traced themselves back to an eponymous Aiolos, who as the father of the Aiolian heroes Athamas, Kretheus, etc., naturally must have lived in Thessaly.” He goes on: “however, undoubtedly the home of the Aeolians is to be sought here.”

13. Ahrens 1839–1843, vol. 1, p. 3. See also Thumb and Kieckers 1932, pp. 49–50, §60.

14. Cook 1975, p. 777. He gives no source for the supposed kinship and I am unable to find one: Mela 1.90, Vell. Pat. 1.4.4, and *Vita Homeri* 1.2 give no support. Strabo 13.3.6 shows

This scenario, however, is not without its troubles. Cook also notes that the Homeric tradition recognized Greek occupation of Lesbos before the Trojan War.<sup>15</sup> His rightly cautious conclusion is that one cannot assume that the Dark Age migrations were the first Greek or Aiolic settlement of Lesbos, but only that Greek settlement there is not likely to have occurred before 2300 or after 1000 B.C. The two scenarios, however, are never reconciled. We seem to have Greeks (presumably Aiolic speakers) on Lesbos before the Trojan War, but we need a second migration from around Thessaly and Boiotia to people the Asian mainland.

In sum, as Rose has shown in the preceding article, the case for this supposed prehistoric migration rests almost entirely on the linguistic evidence of the three dialects, which are thought to be closely related. We have then two questions before us: Is the presence of three related but geographically separated dialects best explained by the migration of speakers from the one dialect area to the other? And are the dialects in fact related?

## HOW LANGUAGES SPREAD

To answer the first question, three basic points need to be made: (1) there is no necessary connection between population groups and language; (2) there is no necessary connection between material culture and language; (3) there is no necessary connection between changes in language and changes in population.<sup>16</sup>

The first two points are obvious, if often ignored. Once they are accepted, however, we are forced to state quite firmly that all claims to link language to material culture in prehistory are forms of special pleading.<sup>17</sup>

The third point deserves a little elaboration. Before the modern period, all changes in a language or dialect proceeded from face-to-face encounters. However, mass movement of peoples over long distances is not the only mechanism of such encounters.<sup>18</sup> A new language or dialect can, of course, arrive with new speakers of that language or dialect. This scenario,

that any notion of kinship in historical times was just an outgrowth of Hesiod's tale of his father migrating from Kyme to Boiotia (and not the other direction): Hes. *Op.* 635–638.

15. *Hymn. Hom. Ap.* 37. Achilles had sacked Lesbos (*Il.* 9.129 = 9.271) and his booty included a woman bearing a Greek name and patrilineage, Diomede daughter of Phorbas. Incidental characters, however, usually have Greek names (Hainsworth 1993, *ad loc.*) and there is a Trojan Phorbas as well (*Il.* 14.490). Odysseus has a wrestling match on Lesbos with a Philomeleides (*Od.* 4.342–346 = 17.133–135). His people are there contrasted with the Akhaïans and, for what it is worth, with the Hellenes by Hellanikos of Lesbos (*FGH* 4 F10).

16. See Pejros 1997, pp. 155–156: “A direct correlation between the two accounts [linguistic and archaeological] is theoretically impossible . . . the sole link between them is the community itself. . . . Members of two communities can speak the same language(s) yet have totally different material cultures, or having similar material cultures they can speak absolutely different languages. Change in one characteristic does not necessarily imply changes in others.” Mallory and Adams (2006, pp. 449–453) discuss in detail the theoretical limitations of what they call “retrospective” and “prospective” archaeology.

17. Crossland 1973, p. 7, is a good example. Cf. Chadwick 1975, p. 815: “We must advance warily, for there is no direct connexion between the cul-

tures distinguished by the archaeologist and the linguistic groups distinguished by the dialect-historian. There is for instance no archaeological feature which can be used as a certain test for Dorian occupation. None the less . . .” A common ploy is to reject any modern evidence, on the (often unstated and always incorrect) grounds that “things were simpler back then.” Once historical examples are rejected, however, all that remains are unprovable prehistoric reconstructions. The danger of telling ourselves “just-so stories” is clear.

18. For a theoretically sophisticated discussion of the roles that both the “human vector” and the “social vector” may have played in the spread of Indo-European, see Mallory and Adams 2006, pp. 456–460.

with the Roman Empire and the *Völkerwanderungen* of the Dark Ages as implicit models, underlies most reconstructions of prehistory. Historical linguistics has long displayed a prejudice, even before Max Müller and his Aryan invasion, for military invasion as its primary model.<sup>19</sup>

In an important review, Nichols distinguishes three mechanisms by which languages spread: language shift, demographic expansion, and migration. The mechanisms differ primarily in the number of mobile people involved in the language spread:

Language shift is normally in response to the presence of at least a few influential immigrants; demographic expansion involves some absorption of previous population rather than extermination; and migration leads to language shift (either to or from the immigrants' language). The terms *language shift*, *demographic expansion*, and *migration* refer to the predominant contributor with no claim that it is exclusive. Almost all literature on language spreads assumes, at least implicitly, either demographic expansion or migration as [the] basic mechanism, but in fact language shift is the most conservative assumption and should be the default assumption. There is no reason to believe that the mechanism of spread has any impact on the linguistic geography of the spread.<sup>20</sup>

This last remark can be turned around: equally, linguistic geography can offer no information on the mechanism of language spread.

Though a nucleus of people speaking a form of Greek presumably came to Lesbos from somewhere, at some time, the numbers need not have been large and the forms of language spread are more various than simply one population displacing another. We can use Nichols's outline to make a few important points.

*Language shift.* Languages and dialects can spread into a new area without any major change in the population. Languages may be replaced in the course of only a few generations by the influence of prestige dialects and languages, by shifts in territorial boundaries (so the slow loss of Balinese to Bhasa Indonesia), by exchange networks (so the recent spread of Hausa or the ancient spread of Aramaic), or by extensive bilingualism—in short, by cultural rather than physical imperialism.<sup>21</sup>

19. See Chapman and Hamerow 1997 and Chapman 1997 for general accounts of the rise, fall, and rise of migration and invasion as preferred models in archaeology. For linguistic history, see especially Olender 1992. For the troubled history of the Aryan invasion hypothesis, see Bryant 2001. Warriors bent on conquest still seem the best answer to Schlerath (1981, p. 199) and Meier-Brügger (2003, p. 68).

20. Nichols 1997, p. 372. Bellwood (2005, p. 191) claims that "historical data indicate that language shift alone, without population movement or some degree of dispersal by the population

carrying the target language, has never created anything remotely equaling those vast intercontinental genetic groupings of languages with which we are here concerned. . . . Imperial conquest by itself, without large-scale and permanent settlement by members of the conquering population, generally imposes little apart from loan words in the long term. Trade also is generally of little significance as a factor behind large-scale language spread." Whether these observations are applicable to the spread of Greek or a dialect of Greek across the Aegean is uncertain. His own data, in any case, do not support this

statement. He cites the loss of Latin except "in those regions close to the heart of the empire favored for intensive settlement by Latin speakers" (p. 192). Latin, however, was not "lost," it simply changed, and the "heart of the empire" extended from Portugal to Romania.

21. See Renfrew 1987, pp. 120–144, for an account directed at archaeologists. Essential reading are the two literature reviews of Nichols 1997 (though I put no trust in glottochronology) and Bellwood 2001 (who is skeptical of all factors except migration; see n. 20, above). For an excellent account

*Demographic expansion.* Changes in the actual populations of speakers may occur without mass migration. Dixon points to a number of known reasons for one group of speakers to fade or flourish: *natural causes*, such as drought, flood, earthquake, disease; *material innovations*, such as new tools, weapons, means of transportation, techniques in production or in agriculture; *social causes*, such as state formation, changes in hierarchy, revolution, and especially religion; and *linguistic factors*, such as prestige and complexity.<sup>22</sup>

*Migration.* Even when language change is associated with population change, invasion is not the only option: a new group of speakers may arrive by peaceful migration or slow infiltration, and each process might or might not leave traces in the archaeological record. Further, the new arrivals might drive out any former inhabitants, live in contained settlements, or intermarry.<sup>23</sup> In short, migrations and invasions can and do occur, sometimes with catastrophic effects on the preexisting languages, sometimes with little effect at all, but to presuppose migration or invasion in the absence of clear historical or archaeological data is a methodological error.<sup>24</sup>

Furthermore, we have been talking primarily about the spread of language. Dialects within a language are much more likely to develop by the spread of innovations (isoglosses) than by population change. Dialect contact can, of course, occur by migration (witness, for example, the sudden arrival of Anatolian Greek in the mainland following the population exchanges of the 1920s), but change comes more often in the form of diffusion of an innovation in speech from larger population centers to smaller ones and thence to more rural areas (the so-called gravity model), with the extent and rate of change heavily influenced by “the phenomenon itself, communication networks, distance, time, and social structure.”<sup>25</sup>

In earlier periods of historical linguistics, the presence of a feature deemed characteristic of one dialect in another was usually explained by population movements. However, as Cowgill wrote optimistically some 40 years ago, “the realization that innovations can spread across existing dialect boundaries has led to soberer views of prehistoric migrations.”<sup>26</sup>

of language spread in Africa, distinguishing trade (which can be accomplished by pidgins and simplified “trade languages”) vs. a cultural “generalized exchange,” see Nettle 1996, esp. p. 412. For the influence of prestige dialects, see Dixon 1997, pp. 22–25, 79–80, 104–114, 145–148.

22. Dixon 1997, pp. 22–24, 75–83. For the spread of Arabic, see Versteegh 1997, esp. pp. 71–72, 93–98, 102–113.

23. The Normans offer a good example of a group who completely replaced their language (from Old Norse to Gallo-Romance) within perhaps two generations, with no discernible traces in the archaeological record.

24. Rhodes (2006) studied the interactions of Cree and Ojibwe-Potawatomi in the Great Lakes region over

500 years, noting that “every logically possible type of language spread is attested in this area, all but one involving only hunter-gatherers. In this area we find migration into unoccupied territory, migration with one population replacing another, and then a number of spreads with intermingling populations both with migrators switching to the local language, and with migrators’ language supplanting the local language, and finally there are instances of languages moving without migration, i.e., language shift.”

Modern consensus seems to favor a “punctuated equilibrium” model, explicitly based on Gould’s model of evolution and speciation (e.g., Dixon 1997, pp. 67–86; Aikenvald and Dixon 2001, pp. 9–11). See Janda and Joseph 2003,

pp. 50–58, for the intellectual history. Watkins (2001, pp. 48–49), however, questions its applicability to Indo-European: “To speak of punctuation by ‘invasion’ prejudices the issue rather severely; the Indo-Europeanization of Italy and many other areas seems to have taken place both gradually and in dribbles.” China provides a woeful laboratory of mass migrations and invasions in historical times: the linguistic effects are surveyed by LaPolla 2001.

25. Wolfram and Schilling-Estes 2003, p. 727; see the entire article for an excellent overview. Hock and Joseph (1996, pp. 346–365) set out the details and problems of dialect geography clearly, and use “Aiolic” as one of their examples.

26. Cowgill 1966, p. 78.

## THE ORIGIN OF AIOLIC

The question of the “origin” of Aiolic, therefore, is already somewhat misstated. It is closely tied to the question of the “coming of the Greeks,” which is in turn tied to where each scholar pictures an Indo-European *Urheimat*.<sup>27</sup> A west-to-east, mainland-to-island, migration theory is largely the unexamined residue of the old “Three Wave” theory, which views the introduction of Greek as a series of migrations from the north into mainland Greece of first Ionians, then “Akhaians” (including the ancestors of the Aioliens), and finally Dorians.<sup>28</sup> The exclusive focus on the mainland leaves the Greek presence in northern Anatolia and along the coast to be explained by later population movements, usually in the form of “refugees” from the “Dorian Invasion.”

In truth, we have no idea where the Greeks came from, or even if that is the proper question to ask. As Nichols points out, the Balkans can be and have been entered from the northwest, that is, Central Europe (so in historical times, Slovene, Serbo-Croat); from the northeast, the Pontic steppe (so Bulgarian), and from the east, Anatolia (so Turkish, and Roman). She aptly summarizes: “For no ancient language of the Balkans do we have evidence as to whether it entered from Asia Minor or from the steppe to the north. . . . In short, there is no compelling evidence, either linguistic or archaeological, for bringing Greek to its attested location either from the north or from Anatolia.”<sup>29</sup>

The Aiolic migration theory is based on many unexamined presuppositions. The histories of language spread are vastly more complicated than a succession of invasions, and we can point to at least three different factors that must be determined in order to explain the presence of the Lesbian dialect in the northeast Aegean: the original linguistic situation, the process of language spread, and the source of Lesbian. For each factor a number of possibilities exist. Here we must admit that we have no strong evidence for any of these. We do not know the original linguistic situation, the process of language spread, or what form of Greek was first spoken on Lesbos and the adjacent coast. I thus propose the following possibilities for consideration:

### A. Situation

1. The earlier inhabitants spoke any one or any number of non-Greek languages. They then adopted some earlier form of Greek (Proto-Greek) as their language of choice, which evolved into Lesbian locally.
2. The earlier inhabitants spoke any one or any number of non-Greek languages. They then adopted an already evolved Lesbian as their language of choice.
3. The earlier inhabitants spoke some other dialect of Greek. They then adopted Lesbian as their dialect of choice.

### B. Process. The earlier inhabitants, speaking whatever language or dialect, adopted Lesbian through

1. language shift, involving a change in a political or cultural elite;

27. See Mallory 1989 for an excellent survey; also Mallory 1997. For a shorter, more theoretical approach, see Mallory and Adams 2006, pp. 442–463. See also Schlerath 1981 on theoretical issues. For historical overviews critical of invasion as an *a priori* explanation, see Häusler 1998 and 2003, though I cannot accept his conclusion that Proto-Indo-European was always present, spread over the vast areas occupied by Indo-European speakers in historical times. See the criticisms of Mallory (1989, pp. 254–257). The same assumption of migration/invasion has dominated the notion of “the coming of the Aryans” (see n. 19, above). So, too, in “the coming of the Celts”; see James 1999, Collis 2003. Morse (2005, pp. 179–180) sums up: “Archaeologists are now debating whether it is useful to say that the Celts in fact came to Britain. . . . If research into pre-Roman Britain were to start again from scratch, it is hard to imagine that the term Celtic would play a significant role.”

28. First clearly articulated by Kretschmer (1909); see also Chadwick 1975, pp. 812–817.

29. Nichols 1998, pp. 249–250.



2. demographic expansion through changes in local population groups;
  3. migration, colonization, diffusion;
  4. invasion.
- C. Source. The earlier inhabitants, speaking whatever language or dialect, adopted Lesbian, by whatever process, from
1. mainland Greece across the Aegean;
  2. the Balkans across the Dardanelles;
  3. inland Anatolia.

One could easily point to other factors and possibilities. It is obvious from the foregoing list that, mathematically, we face a minimum of 36 scenarios (Aiolians invade the Troad from Thessaly/Boiotia; Proto-Greek arrives as a trade language from the north; a new prince brings Lesbian as a court language from the east, etc.). None of these scenarios has any linguistic superiority over the others.

Given the difficulties of connecting prehistoric linguistic and archaeological data, and given the multiplicity of possible scenarios, Chadwick's pithy comment may serve to sum up: "My own opinion, advanced with due caution but firmly held, is that the question, 'Where did the Greeks come from?' is meaningless."<sup>30</sup> Or, if not meaningless, the question is certainly ill formed and unanswerable. We should be thinking not about the coming of Greeks, but of *Greek*. Our specific questions are thus when and how did people first start speaking Lesbian Greek on Lesbos and the north coast of Asia Minor? Our honest answer to when can only be, sometime before 600 B.C., and the answer to how must be, we cannot be sure.

## DATA AND METHODOLOGIES

Our understanding of the relations between the dialects is complicated by the messy nature of the data themselves and of our analyses. Of the three branches of Aiolic, Thessalian is traditionally divided into two main areas, Pelasgiotis and Thessaliotis. At least five regions, however, need to be distinguished: Perrhaibia in the north; Pelasgiotis and Magnesia in the east; and Thessaliotis and Phthiotis in the West. Of these only Pelasgiotis (principally Larissa) is at all well attested. It may be suspected that "Thessalian" itself is merely a convenient covering term for a number of different dialects that share no common innovations.

Boiotian is rather well attested both literarily and epigraphically, but Lesbian is problematic. The fragments of Sappho and Alkaios, in addition to suffering the ravages of time and transmission, were subject to an Alexandrian standardization. Epigraphically, Lesbian is very poorly attested before the 5th century B.C., and mainland Lesbian is known from only a handful of inscriptions before the 4th century.

Interpretation of the linguistic facts on the ground is further muddled by three factors: (1) a loose use of terms such as "borrowing," "mixture," "substratum," and the like to explain differing isoglosses between dialects,

30. Chadwick 1973, p. 255.

as though each dialect visited a smorgasbord of features;<sup>31</sup> (2) a loose use of differing types of features to group dialects, so that phonological, derivational, inflectional, and lexical similarities are all thrown into the same hopper;<sup>32</sup> (3) a loose use of terms such as “older,” “conservative,” “innovative,” “progressive,” and so on, which leads to the view that a “conservative” dialect—which ought to mean nothing more than one with fewer significant phonological or morphological changes—is somehow “older” than a dialect with more sound changes. This usage in turn leads to the view that the “conservative” dialect is therefore ancestral to the “innovative” dialect.

This last belief often carries with it a further unexamined assumption that the “older” dialect must be the one to have stayed home, while the “innovators” migrated. This notion is central to the assumption that mainland Greece (Thessaly, Boiotia) must be the homeland from which Aiolic speakers fanned out to Lesbos and the Troad.<sup>33</sup> Such a pattern, however, is contradicted by numerous instances. An obvious example is American English. Migration was followed by the migrants’ language undergoing various innovations in isolation, but in fact American English is more conservative than British English in certain features. For example, in phonology American English has retained preconsonantal [r] (lost in standard British English) and [æ] in words such as *fast*, *ask*, *path*, *dance*, and so on. In morphology, American English retains *gotten* (vs. *got*, retained only in *ill-gotten*), *dove* (vs. *dived*), and so on. The same is true for Icelandic versus Norwegian, and the situation is commonly seen in isolated immigrant communities (e.g., Amish in the United States, Doukhobors in Canada).<sup>34</sup>

In trying to determine ancestral relationships among dialects or languages, three important principles should be borne in mind. Dialects and languages can differ in innovations (new sounds and forms), archaisms (sounds and forms retained in some but lost in others), and selections (choices between sounds and forms).<sup>35</sup> The first principle is that only shared

31. The basic notion behind invoking a substratum is to attribute features thought characteristic of one dialect (for example, -εσσι datives in Aiolic) but found in another (for example, in Northwest Greek) to the influence of the people who used to live there (so Schmitt 1977, p. 29). Thus, e.g., an Arkado-Cyprian substratum is invoked to explain anomalies in Lakonian and Cretan (García-Ramón 2002b, col. 1016). However, substrate effects (one population moving into another’s area and “overlying” the natives) cannot be distinguished from borrowings (populations in contact). Only independent evidence of movement allows us to determine the scenario. Further, even in cases of contact, exchange may occur through communication networks as well as geographical

proximity. See the strictures of Rix (1994, pp. 18–19). For a detailed criticism of the explanatory power of substrata in this context, see Hock and Joseph 1996, pp. 382–387; a pithy critique by Trask (2000, p. 329); and a case study of Castilian in Trask 1997, pp. 415–429.

32. This is a persistent bad habit. See, e.g., Risch 1955, p. 75, with a chart of 20 random isoglosses; Wyatt 1970, with a different 20 plus 29 other subrules to arrive at a final 25; Finkelberg 1994, for a different set of 20; and Finkelberg 2005, pp. 115–117, with a revised list of 21. Coleman (1963) tops the list with 51 features subjected to a correlation coefficient analysis. Each author combines phonological, derivational, inflectional, and lexical differences, and fails to distinguish rigorously

between innovations, retentions, selections, and independent parallel changes.

33. See, e.g., Wyatt 1970, p. 627; Méndez Dosuna 2007, p. 460.

34. Sihler, 2000, p. 173: “There is nothing mystical about this: innovations in the isolated group will be limited to those that arise locally. By contrast, a group in contact with other similar forms of speech will both make its own innovations and be influenced by changes originating elsewhere.” Retention is not, of course, a *necessary* feature of colonies; the point is merely that neither is “progress.” The phrase “colonial lag” coined by Marckwardt (1958, p. 80) has sometimes been misapplied; see Görlach 1987; Trudgill 1999.

35. See Rodríguez Adrados 1952 for a clear explanation; also Karali 2007, p. 389.

innovations show any relationship.<sup>36</sup> Shared archaisms cannot point to groupings nor can different selections from a common stock. The point can be made clear by a biological analogy. Both fish and cats retain their tails from the ancestral creatures; humans do not. That is not, however, a reason to class fish and cats (who share tails) together rather than cats and humans (who share the innovations of being mammals). Further, that differing selections cannot provide a reliable guide to grouping is perhaps one of the most often overlooked principles of dialectology. To take a linguistic example, Proto-Indo-European has two words for 'one': *\*sem-*, the regular ordinal and *\*oy-* probably meaning 'alone' or the like. Greek, Tocharian, and Armenian inherited *\*sem-* (Greek εἷς, Tocharian B *se*, Armenian *mek*; see below). All others chose *\*oy-* with various suffixes: Sanskrit *\*oy-kos* > *eka*; *\*oy-wos* > Avestan *aēuuō*, Old Persian *aīva*; *\*oy-nos* > Old Irish *óen*, Latin *ūnus*, Gothic *ains*, English *one*. But Greek and Tocharian are not sister languages any more than are Latin and English. Choice from among alternatives tells us nothing.<sup>37</sup>

Second, for a shared innovation to provide any evidence, the innovation must be truly shared, that is, it must be genetic. Again, a biological example can be provided: both birds and bats have wings. But a bird's wings are a completely different innovation than a bat's. Just so in dialects or languages, remarkably similar features are often due not to the spread of an isogloss, that is, by contact, but by parallel but independent innovations within each branch.

The Second Compensatory Lengthening in Greek is a good example (Fig. 2). Final *-ns* (and so not subject to the First Compensatory Lengthening, see below), for example, in accusative plural *tons*, stayed as τόνς before vowels, but developed to τός before consonants. Older Cretan (the Gortyn Law Code, for example) keeps this distribution, but the τός forms are generalized in Thessalian (but not Lesbian or Boiotian) as well as in Arkadian, and within Doric in Theran, Kyrenaian, and Koan, but not elsewhere. All the other dialects generalize the τόνς form, which is either

36. So Wyatt (1970, pp. 560–561): "In this search only shared linguistic innovations can, though they need not, have evidential value. Shared retention of an archaism is not evidence whatsoever." Hainsworth (1982, p. 857) is willing to grant conservation a weak evidentiary value: "Put together as of equal importance were (a) all manner of innovation, (b) generalization of certain inherited features at the expense of others, and (c) conservation. These must be regarded as of descending order of importance. And shared innovation is indicative of genetic relation only if it conforms to the general pattern of isoglosses."

37. This problem still bedevils Greek dialectology. For example, Proto-Greek had a variety of ways to say 'if':

εἰ, αἰ, ἥ. The first, εἰ, is the locative of the pronominal *\*e-/o-* (cf. εἶτα): so spatially 'where,' temporally 'when,' conditionally 'if'; αἰ is the feminine of the same; ἥ 'where/when' the old instrumental (Rodríguez Adrados 1952, pp. 31–32; Meier-Brügger 1992, vol. 1, p. 67, E 305; Chantraine 1999, p. 316, s.v. εἰ); all have roughly the semantic development 'when you do this' → 'if you do this.' The differing distribution of Att.-Ion. and Ark. εἰ, Aiol. and Dor. αἰ, and Cyp. ἥ has been taken as an important, if disturbing, isogloss (Risch's no. 5 [1955, p. 75, chart]; but why does Aiolic agree with Doric? Why does Cyprian not agree with Arkadian?). Yet, Attic-Ionic inherited all three: εἰ the most generalized; ἥ with ἄν > ἔάν (rightly Schwyzler 1939–

1953, vol. 2, p. 680, n. 1, which alone adequately explains the long alpha; see the difficulties noted by Lejeune 1972, p. 232, §374, for the conventional explanation εἰ + ἄν); and αἰ in αἰ γάρ kept only in epic diction. Another obvious example is the difference, found on all these lists (Risch's no. 7 [1955, p. 75, chart]), of ὅ-τε (Att., Ion., Myc., Ark., Cyp.) vs. ὅ-τα (Lesb., Thes.) vs. ὅκα (Boiot., Dor.). Yet even within Attic-Ionic we have Att. εἰ-τα, ἔπει-τα, vs. Ion. εἰ-τε, ἔπει-τε. The same holds for the modals ἄν, κε, κα (Risch's no. 6 [1955, p. 75, chart]). All of these are various uses of different pronominal adverbs or particles, and each dialect selected one or more. None is a reliable basis for subgrouping.

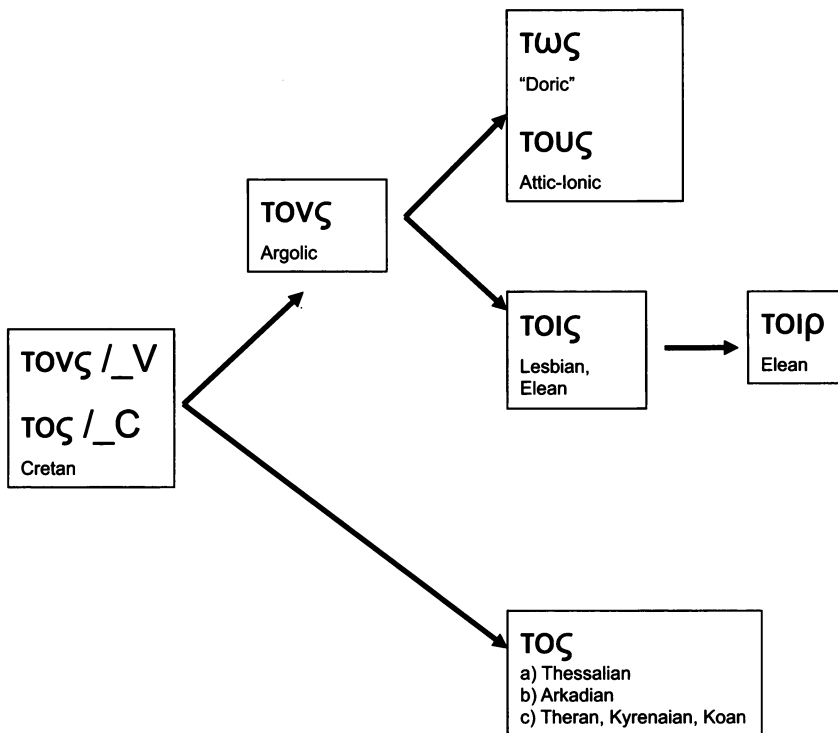


Figure 2. Chart of the Second Compensatory Lengthening

retained (as in Argolic) or undergoes the Second Compensatory Lengthening to τούς or τώς, or in Lesbian and Elean changes to τοίς (with a further final rhotacism in Elean to τοίρ!). Despite the similarity of result, no dialect spread, isogloss, dialect mixture, substratum, or migration unites Lesbos and Elis.<sup>38</sup> In short, a number of things that have been labeled isoglosses are nothing of the kind. They are independent but parallel innovations.

Third, as a corollary to the above, even genuinely shared innovations may not always provide an infallible guide to preexisting dialect geography. Sound changes and lexical or morphological borrowings between contiguous areas can be blocked by geographical features (e.g., mountain ranges, rivers). Equally so, they can proceed along a variety of communication paths leaving intervening (uninhabited or sparsely populated) areas relatively untouched.<sup>39</sup>

38. Or Thessalian, Arkadian, and scattered forms of Doric. Cf. Chadwick 1975, p. 806.

39. It is a failure to take these differing factors into account that vitiates much of Finkelberg's attempt to recreate a Greek "dialect continuum" (1994; 2005, pp. 109–139). Shared features are not necessarily a good guide to geographical proximity. Talk of "bridge" dialects, etc., is unhelpful unless each individual isogloss is given its due

weight. So Hainsworth 1982, p. 862: "Aeolic appears as a medley of West and East Greek. . . . It is thus an early example of a bridge dialect." García-Ramón 2002b, col. 1016: "'Proto-Aeolic,' which sprang up in Thessaly and had East- and, in particular, West-Greek features, underwent a series of probably post-Mycenaean changes there and then spread to Boeotia (around 1250) and Aeolis (around 1000)."

## THE GREEK DIALECTS

We now turn to the second main question of this paper: Are Lesbian, Thessalian, and Boiotian dialects related as members of an Aiolic family? Is there such a thing as "Aiolic" at all? Each of these dialects undergoes many independent innovations but there is no reason to group any two of them together as a higher node on a cladistic stemma. In short, I find no good evidence for Lesbian, Thessalian, and Boiotian having any common ancestor higher on a stemma than Proto-Greek itself.<sup>40</sup>

The picture is confused by a number of conflicting models of how the Greek dialects are related. Cowgill and Schmitt give excellent overviews of the history of the problem, which has its origins in theories that date well before the decipherment of Linear B and that have left deep furrows in the literature.<sup>41</sup> Risch's 1949 and 1955 articles and Cowgill's 1966 work remain fundamental to a clear understanding. The most important fact to emerge is that there existed a South Greek dialect group, including Mycenaean, Arkadian, Cyprian, and Attic-Ionic, marked by a very early assibilation of both *\*ti* as well as of *\*ty/t<sup>(b)</sup>y* > *\*ts*.<sup>42</sup> This assibilation was sufficiently early that it fed another change in South Greek of *\*ts* > *ss* > *s* (in all positions, even after short vowels), thus forming a group separate not only from Doric, but also from Lesbian, Thessalian, and Boiotian. Three important points should be made. First, *{t, t<sup>b</sup>} > ts / \_ {y, i}* is a single phonological rule.<sup>43</sup> Second, this early assibilation preceded (bled) the later Pan-Greek palatalizations, including cases of new or restored *\*t+y* (see below).<sup>44</sup> Third, Lesbian underwent a later and entirely separate change of *\*ti* > *si*, but not of *\*t<sup>(b)</sup>y* > *ss* > *s*.<sup>45</sup>

40. Ringe (pers. comm.) has performed a similar study on Arkado-Cyprian and found no secure shared innovations. South Greek appears to have split, therefore, into four different dialects: Myc., Ark., Cyp., and Att.-Ion. Wyatt (1970, p. 627) also doubts the existence of an Aiolic family. He, however, sees the dialects in purely sociological terms: "Indeed, we never can refer to Ae[olic] as a whole, and have instead always to think of L[esbian] T[hessalian] B[oiotian] as separate entities, L[esbian] a low-class P[roto-]G[reek] dialect which later moved into the innovating sphere of G[reek]; T[hessalian] a low-class P[roto-]G[reek] dialect which remained out of touch with the rest of the G[reek] world from the very earliest times; B[oiotian], a low-class P[roto-]G[reek] dialect which affected the conservatism characteristic of N[orth-]W[est] G[reek]." See also Wyatt 1973, p. 43.

41. Cowgill 1966; Schmitt 1977.

42. The South Greek dialect group is also called East Greek or sometimes Akhaian, but as these terms have been used in a variety of ways, it is better to adopt Risch's (1955, p. 70) and Cowgill's (1966, pp. 79, 93) label of South Greek. Because of the syllabary, the Mycenaean evidence is clear only for cases of *ti* > *si*, showing the palatalization and change to *-s(s)-* but not necessarily *ss* > *s*.

43. Failure to grasp this point, or the use of *-ti* > *-si* as a type of shorthand for the change (e.g., Hainsworth 1982, p. 860), can lead to severe misunderstandings. So Wyatt (1970, p. 563; cf. p. 566) writes: "Hence *-si* is an innovation. It is also clear that this innovation affected Cyprus, the pre-Dorian Peloponnese, Attica, and the Asia Minor coast. It is not certain that it affected all these areas at the same time, but the most reasonable hypothesis is that it did. If so, L[esbian] speech was already localized on Lesbos when this

change took place, and that, from the evidence of Mycenaean, must have been before 1200." That is, he is lumping Lesbian in with Mycenaean and others. However, since Lesbian shows only a change of *ti* > *si*, and not *\*t<sup>(b)</sup>y* > *ss* > *s* found in South Greek, Wyatt (p. 568) is forced into a contradictory picture whereby Lesbian is already in Lesbos during the Mycenaean period, but also arrives in Lesbos after the change of *\*t<sup>(b)</sup>y* > *ss* > *s*.

44. That is, the change removed (bled) sources of *t* and *t<sup>b</sup>* that would have undergone the later palatalizations.

45. This, again, is usually ascribed to Ionian influence (e.g., Risch 1955, p. 71), as if the Lesbians had asked to borrow a cup of third-person singulars, but is in fact a regular, new sound change of *ti* > *si* in all positions that feeds the curious Lesbian treatment of the Second Compensatory Lengthening; so in third-person plural thematic: *\*-o-nti* > *-onsi* > *-oysi* > *-oisi*.

Some standard examples are:

- \**tóty-o-s* (cf. Lat. *tot* < *toti*) > \**totsos* > τόσος; but South Greek τόσος, Mycenaean *to-so-de* (τοσόνδε).
- \**Hyóty-os* > *hótsos* (Cretan ὄζος, spelling -*ts*-; later ὄττος) > Lesbian ὄσος; but Attic and Arkadian ὄσος.
- \**k<sup>w</sup>óty-o-s* > \**k<sup>w</sup>ótsos* > Lesbian πόσος (versus Boiotian ὀ-πόττος, Cretan ὀ-πόττος); but South Greek πόσος.
- \**méd<sup>b</sup>-yo-s* (cf. Lat. *medius*) > Proto-Greek \**mét<sup>b</sup>gos* > \**metyos* > \**metso* > Lesbian μέσος (versus Boiotian and Cretan μέττος); but South Greek μέσος, cf. Mycenaean *me-sa-ta* ‘middle quality’ = μέσ(σ)ατος.
- With original \*-*ts*-.: \**pod-si* > Proto-Greek \**potsi* > ποσσί but South Greek ποσί.
- With original -*ss*-.: Proto-Greek \**genes-si* > γένεσσι (the analogical source then of the third-declension dative plural in -εσσι) but South Greek γένεσι.

Despite our tendency to think in a bifurcating manner, such a group implies nothing about the relationships of the other dialects to each other. A South Greek dialect does not imply a unitary “North Greek” dialect or any other situation.<sup>46</sup>

#### ·AIOLIC WITHIN THE GREEK DIALECTS

The Aiolic dialect family is said to be distinguished by a grab bag of features. Hainsworth provides a good example of the standard list<sup>47</sup> and its jumbled nature, quoted here:

1. labial reflexes of *k<sup>w</sup>*, etc.
2. perfect participle in -ovτ-
3. dative plural in -εσσι
4. gemination of liquids and nasals as reflex of -σν- etc. (not Boiotian)
5. ῥα = μία
6. patronymic adjective in -ιος

It is a much better procedure to take the lists in the handbooks, combine the significant features, and reorder them, dealing first with the phonological, then morphological, and finally lexical isoglosses. A more useful list would look like this:

##### *Phonological*

1. labial reflexes of *k<sup>w</sup>* even before *e*
2. \**r* > po/op

##### *Morphological*

3. dative plural in -εσσι
4. perfect participle in -ων, -ovτ-

##### *Lexical/derivational*

5. ῥα = μία
6. patronymic adjective in -ιος

46. Contra Risch 1955, p. 71; Chadwick 1956, p. 40; 1975, p. 811; Wyatt 1970, p. 626.

47. Hainsworth 1982, pp. 860–861. For similar lists, see Buck 1955, p. 147, §201; Scherer 1959, pp. 4–5; Schmitt 1977, p. 121; García-Ramón 2002a; 2002b, col. 1014; Méndez Dosuna 2007, pp. 461–463.

Hainsworth's no. 4—"gemination of liquids and nasals as reflex of -σν- etc.," with the very important qualification "not Boiotian"—needs special treatment, and is discussed below.

The problem is that none of these is especially strong as a case of shared innovation. Hainsworth notes that the last, use of the patronymic adjective, is an archaism.<sup>48</sup> Inherited from Proto-Greek, indeed Proto-Indo-European, it is useless as evidence. What he, and the authors of many handbooks, fail to note is that most of the other features are archaisms, too.

*Labiovelars.* The default (unconditioned) outcome of the labiovelars (still unchanged in Mycenaean) in all later Greek dialects is to a labial:  $*k^w > p$ ,  $*g^w > b$ ,  $*g^wb > *k^wb > p^b$  (in linguistic shorthand,  $K^w > P$ ). Many dialects, however, show a palatalization of labiovelars to dentals before *e* ( $K^w > T/_e$ ).<sup>49</sup> As the handbooks note, this change does not occur in Lesbian, Thessalian, and Boiotian. What has not been clearly noted, however, is that this change also does not occur in Arkadian and Cyprian.<sup>50</sup>

For Lesbian, Thessalian, and Boiotian, the situation is straightforward: the Proto-Greek labiovelars are preserved intact until late, when they simply turn into labials in all environments. Some standard examples are:

$*k^w$ :  $*pénk^we >$  Attic πέντε, but Lesbian and Thessalian πέμπε

$*k^wel-$ , Mycenaean *qe-ro-me-no* ( $k^wελόμενοι$ ), Doric, etc., τέλ-εται, but Lesbian πέλεται

$*k^wey-$ : Mycenaean *qe-te-o*,  $*k^woy-nēh_2 >$  ποίνη, but Πεισιδίκη, Boiotian Πισιδίκη (with *ει* > *ι*), Attic Τεισιδίκη, Thessalian ἀπ-πει-σάτου, etc.

$g^w$ :  $*g^welbh-$  'hollow,' so Δελφοί 'the hollows,' but Boiotoan Βέλφοι

For Arkadian and Cyprian the situation is slightly more complicated. They too kept their labiovelars intact, but then each dialect underwent its own particular (and very late) palatalization and affrication. In Cyprian we find  $*k^w > ts$  only before *i*; so  $*k^wis > tsis$ , spelled *si-se*, later σις (vs. τίς).<sup>51</sup> Elsewhere Cyprian shows the regular labial development (even before *e*): future  $*k^wei-s- >$  πείσει, spelled *pe-i-se-i* (Att. τείσει).

Arkadian also preserves the labiovelars until its own separate palatalization before *both* high vowels, *i* and *e*. The earliest inscriptions used a special sign *ϝ* (a form of *san* apparently), transcribed *ś* or *σ*, which spelled only  $*k^w$  before front vowels (*i* and *e*), so *οśει* = *ὄ-τω*, *śινα* = *τινα*, *ειśε* = *εῖ-τε*, and so on.<sup>52</sup> Later spellings such as *ῶζις* = *ὄσ-τις* show that this too was some kind of affricate, probably *ts*.<sup>53</sup> After these two palatalizations, the surviving labiovelars in Cyprian and Arkadian, as elsewhere in Greek, became labials.<sup>54</sup>

48. Hainsworth 1982, p. 862. See also Méndez Dosuna 2007, p. 462.

49. We are almost certainly dealing with a palatalization before front vowels generally, preceded by an early palatalization before *i*. The situation, however, is complicated and cannot be discussed here, but it does not affect the point. Aiolic shares the early change of  $k^wi-$  > τίς (this change is post-Mycenaean—where the labiovelars are intact—but not shared with Arkadian or Cyprian);

the odd Thessalian κις has been abstracted from  $*ou-k^wis > *ou-kis$  with the usual loss of the labial co-articulation before or after *u* (cf.  $*ou-k^wid$  [the unaccented enclitic] 'no way' > οὐκ Hom. [line end] > οὐκ).

50. Lejeune 1972, p. 47, §34.

51. That this was a change of inherited labiovelars is shown by the fact that it did not apply to inherited *t*, *k*, etc.

52. E.g., Mantinea, Buck 1955, p. 198, no. 17. The cases of  $*g^w$  come

from the glosses.

53. Lejeune 1972, pp. 50–52, §§38–40.

54. Later Arkadian shows the dental in all forms of ὄστις, as well as πέντε, ἐσ-δέλλ-οντες (βάλλω), ὀδερός. See Schmitt 1977, p. 86. This is due to influence from other dialects (see, e.g., Buck 1955, pp. 174–175), though it may also represent a regular development of the new  $*ts > t$ ,  $*dz > d$ .

What we dealing with, then, is a change that did *not* occur. Lesbian, Thessalian, and Boiotian escaped the palatalization of labiovelars before front vowels, as did Arkadian and Cyprian. We can imagine this palatalization as a change spreading through an already differentiated dialect continuum, affecting Attic-Ionic, Doric, and Pamphylian. Later, all the remaining labiovelars changed to labials. This, too, we can image as a change spreading through a dialect continuum or as a natural set of independent innovations in various branches.<sup>55</sup> The absence of the change is no more reason to group Lesbian, Thessalian, and Boiotian together (and add Arkadian and Lesbian) than the presence of the change is a reason to group Attic-Ionic, Doric, and Pamphylian together.

\**r* > *po/op*. When we reexamine the change of \**r* > *po/op* we find that the evidence is less overwhelming than the handbooks make it seem.<sup>56</sup> For Lesbian there are only six certain forms:

1. βρόχε(α) (Sappho 31.7) < \**mṛǵ<sup>h</sup>-u-*
2. ἄμβροτε (Sappho 5.5) < zero-grade \**h<sub>2</sub>mṛt-* (cf. \**h<sub>2</sub>mért-es-* > νημερτής)
3. ἄμβροσίας (Sappho 141.1) < \**h<sub>2</sub>mṛt-* (cf. Homeric βροτός, ἄμβροτος)
4. ἐμμόρμενον (Alk. 39a.7) < \**se-smṛ-men-on* (cf. Att. εἰμαρμένον)
5. βρόδον, and compounds (Sappho 2.6, 53.1, 55.2, 94.13) a borrowing from Indo-Iranian \**wṛd-*
6. στρότον (Sappho 16.1; Alk. 372.1, 382.2), and στρόταγοι (IG XII.2 5, etc.); proper names < \**str-tó-*

The first five all show a labial environment, but στρότον is good evidence for a regular development of \**r* > *po/op*.<sup>57</sup>

The evidence for Boiotian and Thessalian is very thin. Boiotian has only two forms: ἐ-στροτεύ-αθη and Στροτ- in proper names, which seems to be good evidence for a regular change of \**r* > *po*. The other form is found in the proper names with the root βρόχ-υλλος, etc., though proper names are always uncertain.

There are also only two forms cited for Thessalian, and only for East Thessalian at that, which shows βρόχυσ as a proper name and πετρο-ετειρίδα, 'period of four years.' Both are in a labial environment and so may indicate a conditioned reflex, though we cannot be sure, and it is doubtful that πετρο- really continues an unaltered zero-grade.<sup>58</sup>

55. The changes in Arkadian and Cyprian point to the latter.

56. For basic accounts, see Lejeune 1972, pp. 195–198, §§199–202; Sihler 1995, pp. 92–96, §§95–98. The original conditions determining \**r* > *po/op* probably depended on root shape and accent, but the pattern has been so disturbed by paradigmatic and analogical leveling in both directions that we cannot recover the rules. Further, there appear to be no good cases of \**j* in Lesbian, Boiotian, or Thessalian.

57. The other cases cited by Hamm

(1957, p. 28, §57.1), Scherer (1959, p. 19, §236.1, pp. 54–55, §245, p. 87, §255.2b), Schmitt (1977, pp. 70, 75, 80–81), and others are either not from \**r*, are uncertain, or are phantoms. So inf. τροπήν (Alk. 70.9) is not necessarily zero-grade aor. (Att. τροπεῖν) but is likely to be from τροπέω. So too βόρηται (Sappho 96.17) does not equal βαρεῖται, but is from βοράω built to βορά. γρόππατα (Balbilla) is a hyper-Aiolism, and shows the dangers of the interventions of the Alexandrian regularizers (cf. Alk. 129.27 γεγρά.[,

epigraphic γράφην, γράπτα, etc.). The forms cited from the grammarians are without identification, even if their etymologies were certain. So Hsch. κ 3669 (Latte): κοτερά· κρατερά, ισχυρά; μ. 1679 μορνάμενος· μαχόμενος. The sometimes-cited θροσέως and πτόρμος are found only in the third anonymous *Compendium peri dialéktōn* attributed to Johannes Grammaticus (ed. Hoffmann 1891–1898, vol. 2, pp. 215, 221).

58. Further, although πετρο- might continue directly a \**k<sup>w</sup>etwṛ-*, the



In sum, the change of  $*r > po/op$  is not compelling, since  $*r$  is a rather stable sound in Greek (there are clear traces of its survival in the scansion of Homer), and the same (or at least a similar) change occurs in Arkadian, Cyprian, and Mycenaean.<sup>59</sup> As Cowgill notes: "At most one can say that the contrast of  $op$  and  $\alpha p$  is not very important for grouping Greek dialects."<sup>60</sup> To put the matter differently,  $*r > po/p\alpha$  is a comparatively late change in various Greek dialects.<sup>61</sup> Further, there seem to be no cases of  $*r > po/op$  feeding any later sound change shared by Thessalian, Boiotian, and Lesbian.

*Dative plural in -εσσι.* The new dative plurals in  $-εσσι$  have caused difficulty. They are found not just in Lesbian, Boiotian, and Thessalian, but also in Pamphylian, and in varieties of Doric (Delphian and Lokrian in the north; Elean in the Peloponnese), plus outcroppings in Kyrenaian (colonized from Lakonia via Thera) and Corinthian colonies (but not at Corinth).<sup>62</sup> Their presence has been usually explained by an "Aeolic substratum," which is hard to justify for the Peloponnese, more difficult still for Pamphylia, and next to impossible for Kyrene.<sup>63</sup> In fact, the creation of  $-εσσι$  datives is an easy analogical change that occurs in various dialects, and as such is valueless as a basis for grouping.<sup>64</sup>

*Perfect participle in -ων, -οντ-.* A stronger case can be made for the substitution of a participle formant in  $*-o-nt-$  for the inherited perfect  $*-wos-/*-us-$ , which is found as full paradigm only in Lesbian, Thessalian, and Boiotian.<sup>65</sup> This is a bit mysterious, especially since the middle is kept unchanged, with  $-men-$  attached directly to the perfect root. Chantraine attributes it to the influence of the present meaning of the perfect, and certain forms with present endings in literary Doric and the inflection of the perfect as a present in Syracuse, Karpathos, and Knidos are probably due to this.<sup>66</sup> However, this fact is almost always misstated, since it is not just the participle but the perfect infinitive as well that is inflected the same

development of  $-tw-$  points rather to the influence of the ordinal  $*k^{w}etwóres$  (Skt. *catvāras*)  $> *petwores > *petrow-es$  with the same metathesis seen in Myc. *qe-to-wo-re*, spelling  $k^{w}etowes$ . Elsewhere Thes. shows only Στρατο- ( $< *str-tó-$ ) in names. These, however, might be due to Attic/koine influence. The handbooks sometimes cite Ἐποτο-κλίας (e.g., *Sammlung der griechischen Dialekt-Inschriften* 569.20) and similar forms, but this is not the direct outcome of a PGrk  $*r$  ( $*h_2rh_2-tó-$   $>$  PGrk  $\epsilon\pi\alpha-tó-$ . Boiot. likewise has a name in Ἐποτ-ίων.

59. This is one of the main reasons why some scholars take Aiolic and Arkado-Cyprian as an "Akhaian" sub-branch of Greek: e.g., Hoffmann 1891–1898, vol. 1, p. vii; Chadwick 1956, pp. 39–41; 1975, p. 810. For a review of the Ark.-Cyp. data that considers  $*r > po/op$  as conditioned on a preceding labial (specifically  $w-$ ), see Morpurgo 1968.

60. Cowgill 1966, p. 82.

61. There are traces of the  $*r$  stage in Homer: *Il.* 16.857:  $\delta\upsilon\ \pi\acute{o}\tau\mu\omicron\nu\ \gamma\acute{o}\omega\sigma\alpha\ \lambda\iota\pi\omicron\upsilon\sigma'$   $\acute{\alpha}\nu\delta\rho\omicron\tau\eta\tau\alpha\ \kappa\alpha\iota\ \eta\beta\eta\nu$ , where Ruijgh (1995, pp. 85–91) and West (1988, p. 156) are right: the scansion must reflect  $*an\tau\acute{\alpha}ta$ , before the epenthesis of  $-nr-$   $>$   $-ndr-$ , seen already in Myc. *a-di-ri-ja-te* =  $*\acute{\alpha}\nu\delta\rho\iota\acute{\alpha}\nu\tau\epsilon\iota$  '[inscribed] with the figure of a man'  $<$   $\acute{\alpha}\nu\delta\rho\iota\acute{\alpha}\varsigma$ ,  $-αντος$  'figure of a man,' instrumental pl. *a-di-ri-ja-pi* =  $*\acute{\alpha}\nu\delta\rho\iota\alpha\mu-\phi\iota$   $<$   $*\acute{\alpha}\nu\delta\rho\iota\alpha\upsilon\tau-\phi\iota$ . So  $*h_2nér > \acute{\alpha}\nu\eta\rho$ , but genitive  $*h_2nr-ós > *anrós > \acute{\alpha}\nu\delta\rho\acute{o}\varsigma$  (Sihler 1995, p. 212, §224). Also *Il.* 14.78 (verse initial)  $\nu\acute{\upsilon}\xi\ \acute{\alpha}\beta\rho\acute{o}\tau\eta$  (1x). This clearly is just a spelling attempt to account for a  $\nu\acute{\upsilon}\xi\ \acute{\alpha}\mu\beta\rho\acute{o}\tau\eta$  that does not scan (cf. the usual ending  $\acute{\alpha}\mu\beta\rho\acute{o}\sigma\eta\ \nu\acute{\upsilon}\xi$ ). This reflects a  $\nu\acute{\upsilon}\xi\ \acute{\alpha}\mu\tau\acute{\alpha}$  ( $<$   $*\eta-mr-tó-$ ).

62. Buck 1955, p. 89, §107.3; Morpurgo Davies 1976.

63. Finkelberg (1994, p. 19; 2005, pp. 129–130), the most recent to revive the idea, makes no mention of Pamphylian, Kyrenaian, or Wyatt's 1973 article, which effectively demolishes the notion.

64. See Morpurgo Davies 1976 for the mechanism. Wyatt 1973, p. 39: "There is no need to assume an Aeolic substrate in order to explain the spread of this highly useful allomorph of the dative plural." Ruijgh (1996, pp. 486–487) sees it as a simple borrowing from the neighboring dialects, with Corinthian later replacing its replacement.

65. Lesb.: masc.  $\lambda\epsilon\lambda\acute{\alpha}\theta-\omega\nu$ ,  $\pi\epsilon\phi\acute{o}\gamma\gamma-\omega\nu$ ,  $\gamma\epsilon\nu\acute{o}\nu-\omega\nu\tau\alpha$ , etc.; fem.  $\pi\alpha\rho-\epsilon\sigma\tau\acute{\alpha}\kappa-\omega\iota\sigma\alpha\nu$ ; inf.  $\tau\epsilon\theta\nu\acute{\alpha}\kappa-\eta\nu$ . Thes.: masc.  $\epsilon\pi-\epsilon\sigma\tau\acute{\alpha}\kappa-\omega\nu\tau\alpha$ , etc.; inf.  $\epsilon\acute{\zeta}\alpha\lambda\omicron\upsilon\kappa-\acute{\epsilon}-\mu\epsilon\nu$ . Boiot.: masc.  $\acute{\alpha}\nu-\tau\epsilon-\theta\epsilon\iota-\omega\nu\tau\alpha$ ,  $\acute{\alpha}\pi-\epsilon\iota\lambda\theta\epsilon\iota-\omega\nu\tau\epsilon\varsigma$ , etc. No pf. inf. attested.

66. Chantraine 1961, pp. 184–185, §211, p. 278, §329.

way as in the thematic verbs.<sup>67</sup> Since the perfect active moves in lockstep with the aorist active, I suspect that the answer lies in the third singular, where a proportional analogy could be established between the aorist and the perfect: ἔλιπ-ε : λιπ-ών : : λελάθ-ε : X = λελάθ-ων.

We find similar perfect thematic infinitives in various forms of Doric (Crete, East Argolis, Phokis, Island Doric: Kos, Nisyros). There is an isolated thematic perfect participle at Kyrene, and Delphi shows a similar spread of thematic forms in the infinitive, and in the participle but confined to the feminine.<sup>68</sup> This is the strongest evidence for a shared innovation, but the fact that other dialects succumb to the temptation of thematic forms for the perfect weakens the case somewhat.<sup>69</sup>

ἴα = μῖα. What the handbooks usually present as the sole lexical item defining Aiolic, ἴα in the place of μῖα found in other dialects, is the result of paradigmatic leveling. There are three points to bear in mind about ‘one’:

1. Though it is sometimes not clear from the handbooks, we have a full paradigm of εἶς, ἴα, ἔν (to give the Lesbian forms). That is, the feature is not really a lexical item at all, but a morphological one.<sup>70</sup>
2. A model from within a paradigm of μῖα, μιᾶς, etc., is hard to justify. García-Ramón and Ruijgh, for example, thought that the μ- of μῖα had been lost somehow to bring the paradigm into alignment with the vowel initial εἶς and ἔν. But there is no proportional analogical model; Attic and other dialects have no problem with the irregular paradigm; and it is difficult to see why an attempt to regularize the pattern would stop there and not produce, for example, εἶς, †ἔα, ἔν.<sup>71</sup>
3. The other common explanation—that we have the feminine of an ἰός meaning ‘that one,’ found in the Gortyn Law Code and a few other places—will not do.<sup>72</sup> The form is found only in the feminine (no †ἰός attested for Lesbian, etc.), and it is clearly not thematic (no †ἰᾶ, †ἰᾶν).<sup>73</sup>

The answer, therefore, is phonological and the basic outline was given long ago by Schmidt.<sup>74</sup> We are dealing with a paradigm that has been extensively remodeled. The PIE root *\*sem* (as in Latin *semel*, *\*som-ó-s* > ὁμός) had an original root noun paradigm with masculine *\*sēm* (extended grade) recharacterized as *\*sēms*,<sup>75</sup> and a proterokinetic *devi* feminine, with full-

67. Hodot 1990, p. 159: “Au parfait, l’adoption pour l’infinitif de la finale ‘thématique’ -ντ est correlative de l’emploi du suffixe -οντ- pour le participe.”

68. Thumb and Kieckers 1932, pp. 166, 181, 202, 275–276; Buck 1955, p. 199, §147a; Schmitt 1977, p. 48. One needs to be precise about the dialects in which finite forms of the perfect are inflected like the present, and those in which the infinite forms are inflected like thematics (presents and aorists).

69. There is a similar spread of the

aor. -ντ- to the perf. part. but only in the acc. sing. and pl. in Tocharian. See Adams 1981.

70. Attestations: Lesb. masc. εἶς in [ε]ἰς-κατείκοιστος (IG XII.2 82, line 17), etc.; fem. οὐδ’ ἴαν (Sappho 56.1; scansion uncertain), μηδεῖα (IG XII.2 82, line 12). Thes. fem. acc. ἰαν (IG IX.2 6, line 12); neut. εν (SEG XXVI 672, line 50). Boiot. masc. acc. ενα (Dialectorum Graecarum Exempla 485.43); fem. gen. ἰας (SEG III 359, line 10); neut. gen. ενος (ArchDelt 2, A’ [1916], p. 218, line 34).

71. García-Ramón 1975, p. 65; Ruijgh 1991, p. 601 (and cf. p. 674).

72. Chantraine 1999, p. 466, s.v. ἰός. Sihler (1995, p. 405, §389.1Aa) takes ἰός as built directly to the pronominal stem *\*i-*, seen in Lat. *is*, *ea*, *id*.

73. The single Homeric non-feminine form ἰῶ (neut.) is an in-house creation. See Ruijgh 1991, p. 601.

74. Schmidt 1898; see also Gippert 2004.

75. Giving us the usual paradigm: masc. nom. *\*sēm* → *\*sēms* > *\*hens* (ἐνς by Ostoff’s Law) > *hēs* (εἶς by the Second

TABLE 1. DEVELOPMENT OF PROTO-INDO-EUROPEAN *\*sém-ih<sub>2</sub>*

<i>Proto-Indo-European</i>	<i>Remodeling and Reduction</i>	<i>Proto-Greek</i>	<i>Pan-Greek</i>
(nom.) <i>*sém-ih<sub>2</sub></i>	<i>*sm-ih<sub>2</sub></i> >	<i>*smiya</i>	μία
(gen.) <i>*sm-yéh<sub>2</sub>-s</i>	<i>*sm-yéh<sub>2</sub>s</i> > <i>*syéh<sub>2</sub>s</i>	<i>*syās</i> > <i>*iyās</i>	iās > Hom. iñς
(dat.) <i>*sm-yéh<sub>2</sub>-ey</i>	<i>*sm-yéh<sub>2</sub>ey</i> > <i>*syéh<sub>2</sub>ey</i>	<i>*syāy</i> > <i>*iyāy</i>	iā > iñ
(acc.) <i>*sém-ih<sub>2</sub>-m</i>	<i>*sm-ih<sub>2</sub>-m</i> >	<i>*smiyan</i>	μῖαν

grade nominative *\*sém-ih<sub>2</sub>* and a zero-grade genitive *\*sm-yéh<sub>2</sub>-s*. These were remodeled (with the zero-grade of the root generalized) as *\*sm-ih<sub>2</sub>* and *\*sm-yéh<sub>2</sub>s*. The nominative *\*sm-ih<sub>2</sub>* vocalized to *\*smiya* (the usual development in Greek), and this passed through *\*hmía* to *\*(m)mía* to become the familiar μία (see below for *\*sm* > *mm*).<sup>76</sup> The oblique cases, however, ran into trouble. The initial consonant cluster of *\*smiyéh<sub>2</sub>s* was simplified by a PIE sound change to *\*syéh<sub>2</sub>s* (and so not subject to Siever's Law),<sup>77</sup> which then became Greek *\*syās*. The intervocalic development of *-sy-* is to *-yy-* (*\*nas-yo-* > *\*nayyō*, ναίω, *\*tosyo* > τοῖο, etc.). We expect an initial *\*syās* to give *\*yyās*, which would vocalize (following the usual right-to-left iterative rule) as the attested iās, etc.<sup>78</sup> The development of PIE *\*sém-ih<sub>2</sub>* is summarized in Table 1.

Each dialect then regularized the paradigm of μία, iās, iā (and so on) in its own way. Most generalized the form of the nominative, creating μία, μῖας, but Lesbian, Thessalian, and Boiotian generalized the oblique,

Compensatory Lengthening). The masc. and neut., too, have undergone paradigm leveling. Myc. shows the original *-m-* of the root, but all other dialects have spread the *-n-* of the nom. and neut. So gen. *\*smés* > *\*sem-ós* > *\*hemós* (seen in Myc. *e-me* = *hemei* dat.) > *henós* (ἐνός); neut. nom. acc. *\*sem* > *ēv*.

76. For the development after CR, cf. *\*trih<sub>2</sub>* > τρία; *\*pótn-ih<sub>2</sub>* (Skt. *patni*) > πότνια, *\*e-k<sup>w</sup>ih<sub>2</sub>-* > ἐ-πρία-το (cf. Skt. *kri-tá-*). See Peters 1980, p. 132, n. 80; Gippert 2004, p. 162. This is best viewed as the normal development according to Siever's Law; see Schindler 1977, p. 57; Peters 1980, pp. 127–132, esp. p. 132, n. 80; Ringe 2006, p. 16. Armenian shows the same change in *\*smiya* > *mi* 'one' (Darms 1976, p. 13; Peters 1980, p. 132, n. 80).

77. For Siever's Law, see n. 76, above. A similar loss of nasal is seen in *\*h<sub>2</sub>ék<sup>mō</sup>* 'stone' (collective 'sharp') but gen. *\*h<sub>2</sub>k<sup>mō</sup>-mn-és* > Vedic *ásman-* (stem), *ásnas* (gen.) (Gippert 2004, p. 161, with references), versus the treatment in *\*dékm<sup>t</sup>* > δέκα, *\*dekm<sup>t</sup>-ós* > δεκατός. This law helps account for a puzzling

detail of the inflection of the pronouns: nom. *\*sol/seh<sub>2</sub>*/*\*tod*, but dat. *\*tós<sup>m</sup>-ey*/*\*tós<sup>y</sup>-eh<sub>2</sub>-ey*/*\*tós<sup>m</sup>-ey*. As Ringe (2006, p. 55) notes: "It has long been suspected that the *-sm-* of the masc. and neut. sg. is a reduced form of 'one.' . . . If that is true, it should follow that the *-syeh<sub>2</sub>-* of the fem. sg. forms reflects the corresponding fem. of the numeral; the fact that the root-final *\*-m-* has been dropped rather than syllabified might then reflect an earlier pre-PIE phonological system (in which case this inflection would be very archaic), or the cluster might simply have been reduced by allegro phonology." Schmidt (1898, p. 399) did not directly tie the formant to the word for 'one,' but correctly demonstrated the phonology. See also Szeemerényi 1996, p. 206; Gippert 2004, esp. pp. 156, 161, nn. 6, 22, 25; Hackstein 2005, p. 178.

78. That is, there is no need to invoke Lesbian psilosis to explain the form. For *-sy-* > *-yy-*, see Lejeune 1972, pp. 132–133, §127. A development of *\*yy-* to *\*yi-* > *\*hi-* seems ruled out by the fact that it violates the usual voca-

lization rule (clearly stated by Ringe 2006, pp. 15–16). Further, a hypothetical *\*yiās* would have to be created fairly late within Greek itself to escape the usual development of *\*y-* > *ζ-* (the unconditioned outcome), since *h-* develops only from *\*Hy-*. This difference is not fully understood or incorporated in most treatments. Rix 1992, one of the most up-to-date handbooks, unfortunately has the situation reversed (pp. 60, 70, §§68, 80); see Peters 1976 for details. PIE contains (as far I can find) only one lexeme with *\*sy-*: *\*syuH-* 'sew,' Skt. *syū-tá-* 'sewn,' *syū-ma* 'strap.' In Greek we have ὑμῖν with rough breathing, but all Greek words with initial *υ* have rough breathing (the reason is unclear, but it may be a regular phonological change; Lejeune 1972, pp. 280–281, §320; Sihler 1995, p. 173). Here I suspect a loss of *y* similar to that seen in Vedic *sūtra*, and Lat. *suō*, *sūtus*, *sūbula* 'awl', that is, a regular development (loss) before *u* in Greek. Schmidt (1898) explained the initial vowel by the type of epenthesis he posited for ἰσθί, so *\*syās* > *\*isyās* > *\*iyās*.

creating ἰᾱ, ἰᾱς.<sup>79</sup> Again, agreement on paradigm leveling is not good evidence for subgrouping, since the spread of the ἰᾱ forms no more unites Lesbian, Thessalian, and Boiotian than the spread of the μῖᾱ forms unites Attic-Ionic, Pamphylian, and Doric.

To sum up so far, Aiolic appears to be a very conservative branch of Greek, distinguished primarily for the sound changes it does not undergo. In fact, Aiolic under scrutiny appears less a subfamily than a relic area, and Risch could find no sure isogloss separating Aiolic and West Greek before ca. 1200 B.C.<sup>80</sup>

### DIVISIONS WITHIN AIOLIC: THE FIRST COMPENSATORY LENGTHENING

We can go further. Rather than a unity, Aiolic is split by one of the earliest Greek sound changes, the First Compensatory Lengthening (1CL).<sup>81</sup> This is Hainsworth's no. 4 (see above, p. 444), with the telling point "not Boiotian," and therefore a poor candidate for a defining quality of Aiolic. A proper formulation of the First Compensatory Lengthening is crucial to understanding the development of the Greek dialects, and so requires a certain amount of space. Those whose eyes glaze over at linguistics (but have stuck with me so far) may wish to skip the following detailed presentation. The important fact to be borne in mind is that the forms attested in Lesbian and Thessalian with double resonants (e.g., Lesbian) represent the *original Pan-Greek stage*; all other dialects, *including Boiotian*, have undergone a *later* change, the First Compensatory Lengthening: so Boiotian and Doric σελλᾶνᾱ, and Attic-Ionic σελήνη. That is, once again, Lesbian and Thessalian are distinguished not by an innovation but merely by a failure to undergo a change seen elsewhere.

The presentations in most handbooks are necessarily scattered and fail to capture several general rules. The basic sequence of events in the First Compensatory Lengthening was that a resonant + *s*, *s* + resonant, or resonant + *y* all became double resonants in all dialects, but then in certain dialects  $\check{V}RR > \bar{V}R$ , which one can view as a compensatory lengthening or a simple shift of mora/assimilation.

More precisely, a vowel is lengthened as a result of the simplification of a following nonpalatal double resonant cluster.<sup>82</sup> In brief,  $\check{V}RR > \bar{V}R$ ,

79. For this original paradigm with nom. μῖᾱ, gen. ἰᾱς, see Schmidt 1898; Peters 1980, p. 132, n. 80 (crediting Eichner); Meier-Brügger 1992, vol. 1, p. 60; Hackstein 2005, pp. 178–179, who shows the same development in Tocharian A *si* and Tocharian B *sana*. This analysis differs somewhat from that of Meier-Brügger (1992, vol. 1, p. 60) and Gippert (2004, pp. 162–163), who start with free Lindemann's Law variants within the paradigm  $*sm-yéh_2s$  /  $*sm-iyéh_2s$ , which Meier-Brügger sees as developing to  $h(i)yās$  (with  $*smy > *sy$ ) /  $*(m)miās$ , respectively. The resulting ἰᾱς (with Lesbian

psilosis) and μῖᾱς then form analogical nominatives ἰᾱ and μῖᾱ. Lindemann's Law variants within Greek are doubtful, however, and we expect the PGrk  $*syās$  to follow the pattern of  $*dyéws > Ζεύς$ ,  $*dyém > Ζῆν(α)$ .

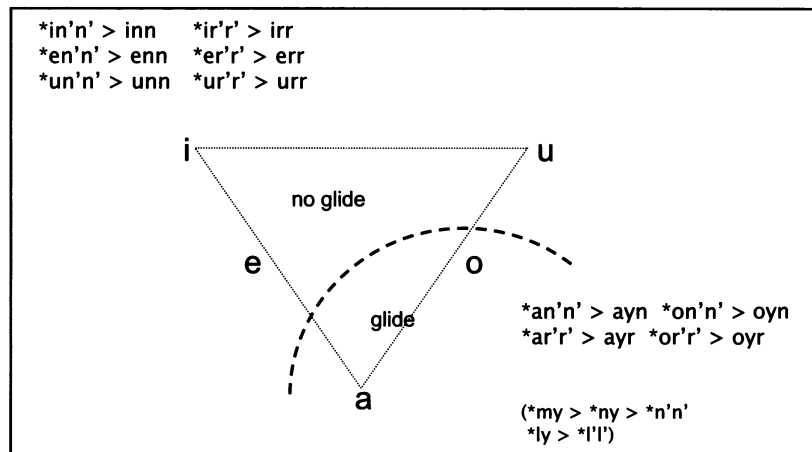
80. Risch 1955, p. 71.

81. So called because it precedes both the Attic-Ionic change of  $\acute{a} > \eta$ , and the Second Compensatory Lengthening, which applies to new (or unchanged) groups of  $-ns-$ . The formulations of Blümel (1982), as the most comprehensive treatment of Aiolic to date, deserve separate consideration and cannot be pursued

here. Unfortunately, some of his rules for the sound changes are prone to error, partially as a result of the use of a synchronic, generative framework, which does not distinguish between Proto-Greek and later, dialectal, sound changes. He fails to capture the generalization of the First Compensatory Lengthening and his complex explanations (pp. 78–79, 95–96, §§108–109) call for several different rules, none without their difficulties, which in fact produce incorrect forms.

82. This formulation of 1CL is based on that of my teacher Warren Cowgill (modifying Kiparsky 1967). Though

Figure 3. Chart of the depalatalization of resonant clusters



in cases of *mm* > *m*, *nn* > *n*, *rr* > *r*, *ll* > *l*, and *ww* > *w*, but not in cases of *\*yy* or *\*l'l'* (which comes from *\*ly* and later depalatalizes to *λλ* only after 1CL is over).<sup>83</sup> This change is found in all Greek dialects except Lesbian and Thessalian, which merely retain the Pan-Greek stage.<sup>84</sup>

There are three sources for these new double resonant clusters:

1. *\*Rs/sR* > *\*hR/Rb* > *RR* (either by metathesis or simple assimilation).
2. A depalatalized *-RR-* from *-Ry-*. For *Ry* > *R'R'*, what happens next depends on the preceding vowel. If the vowel is non-high and back (i.e., as unpalatal as possible), namely *a* or *o*, then a new diphthong is created: *\*an'n'* > *ayn*, *\*on'n'* > *oyn*, i.e., *\*n'* merely loses its nasality and turns into the homorganic resonant *y*, and the remaining *\*n'* is depalatalized. Similarly *\*ar'r'* > *ayr*, *\*or'r'* > *oyr*. But if the vowel is high or front (*i*, *e*, *u*), then *R'R'* depalatalizes > *RR* and either stays in Thessalian and Lesbian or elsewhere feeds the First Compensatory Lengthening (see Fig. 3). It is important to note that these two differing treatments of *R'R'* are present in all dialects and so are Pan-Greek.<sup>85</sup> Lesbian and Thessalian alone of Greek dialects simply maintain the resulting *-RR-*, but Boiotian shows the compensatory long vowels.<sup>86</sup>

never fully published, an outline can be found in Cowgill 1969 and in Crist 2001, pp. 76–77. The putative counterexamples are surface clusters of *RR*, most of which are easily explained. Many are from the treatment of *hR* in quasi-initial position: *#sR-* > *hR-* spelled FH, PH, etc., whence the rough breathing on ρ-. So *\*sróws* > *\*hpoφos*, > Hom. ρόος (ρῶς). In quasi-initial position, *hR-* is still present late enough to undergo a secondary change (at morpheme boundaries) to *-RR-*, but only after the 1CL is over. So: *\*srew-o-* > *\*hrewo-* > ρέω, but καταρρέω, etc. Note that several such forms in Homer are

likely to reflect the phonologically correct PGrk reflex; so: *\*e-srew-on* > ἔρρεον; *\*smeyd-* > μειδ-ιάω but φιλομειδής 'fond of smiles' (Sihler 1995, pp. 170–171, §171). The other class of putative counterexamples would be derivatives such as *\*γράφ-μα* > γράμμα, etc. There is good evidence, however, that these groups continued unassimilated until surprisingly late; so, e.g., Ion. ἐστεθμένοι dissimilated from *\*στεφ-μα*; cf. Hsch. στέθματα· στέμματα (I owe this example to Don Ringe; see Scherer 1959, p. 263). ἐννέα, of whatever source, shows considerable remodeling from PIE *\*newn̥*.

83. *\*ly* > *\*l'l'* > *λλ* in all dialects. So too *\*wy* and *\*sy* > *\*yy* in all dialects.

84. The state in Mycenaean is, of course, impossible to tell.

85. This change makes it clear that stops had already been depalatalized in PGrk. We never find any vowel umlaut or the like before the putative PGrk clusters of *āi*, etc., that Sihler reconstructs (1995, p. 192, §198), though something similar may have been a mid-stage through which the sound change passed.

86. García-Ramón 1975, pp. 44–46, §5.3.1.

3. The third source is the group *\*-ln-* (closely related in articulation), which becomes *-ll-* (crucially not palatal).<sup>87</sup> Note in particular that *\*-ln-* > *-ll-* feeding the First Compensatory Lengthening means that the law must be formulated as a reduction of *RR* and not simple loss of *s*, *b*, or *y*. Though some scholars have questioned the change of *\*ln* > *-ll-*, the evidence is clear.<sup>88</sup> Mycenaean nicely attests a stage where *\*-ln-* had already assimilated to *-ll-* (the evidence for *\*-rs-*, *\*-ry-* is clouded by the spelling system).<sup>89</sup>

Examples of the differing outcomes of the First Compensatory Lengthening are for the first source (*sR*):

*-sm-*

- \*h<sub>1</sub>es-mi* > *\*esmi* > *\*ehmi* > PGrk *emmi* preserved in Lesb. ἔμμι, Thes. ἐμμί, but Boiot. ἔμι in the archaic alphabet, Att.-Ion. ἔμι later spelled εἰμί (with the so-called spurious diphthong). In Cretan and other types of Doric, where ε and η were at the same height, the new long vowels are the same as inherited ē and ō and so spelled ἡμί.
- \*ns-* ‘we’ (cf. Germ. *uns*, Eng. *us*) in acc. *\*ns-mé* > *\*asmé* > PGrk *\*ammé*, preserved in Lesb. ἄμμε (with Lesb. recessive accent), but Boiot. and Dor. ἄμέ. In Att. then *\*amme* > *\*āme* > *\*ḡme*.<sup>90</sup>
- \*smer-* ‘appoint’: *o*-grade *\*smor-ya* > μοῖρα, pf. *\*se-smor-e* > ἔμμορε (Hom. with Lesb. psilosis) but pf. pass. *\*se-smr<sub>2</sub>-tai* > *\*hehmartai* > *\*hemmartai* (*RR*) > Att. *hē<sub>2</sub>martai* (1CL) = εἰμαρται. pf. pass. part. *\*se-smr<sub>2</sub>-men-on* > Lesb. ἐμμόρμενον, but Att. εἰμαρμένον (1CL).<sup>91</sup>

87. Lejeune 1972, pp. 153–154, §152.

88. See, e.g., Sihler 1995, pp. 212–213, §224.2b. Surface exceptions are due to analogy and later recomposition, e.g., πῖλ-ναμι. Slings (1975) provides a clear overview of the stages. See below for examples. Not all commonly offered evidence is secure, however. The only form Sihler discusses is στήλη, which is usually taken as from *\*stel-/stl-* ‘equip,’ so *\*stl<sub>2</sub>-neh<sub>2</sub>* > *\*stalnā* > Lesb. σταλλᾶ, Dor. στᾶλλᾶ, Att. στήλη. Risch (1974, p. 110, §39f) had already derived it from *\*sth<sub>2</sub>-sleh<sub>2</sub>* (*\*sth<sub>2</sub>-* ‘stand’), with the infrequent *-sla* suffix, seen in Lat. *\*skand-sla* > *scāla*. However, pointing to *\*stl<sub>2</sub>-na-* is Old Saxon *stollo*, showing both the zero-grade and an *n*-stem. Further, though a connection with the root for ‘stand’ is appealing, the semantics are less attractive: *-sla* appears to be an instrumental formant (‘that by which one climbs’).

89. So *o-pe-ro* = ὀφέλλων/ὀφέλων, since an *\*ōfélων* would be spelled †*o-pe-no* by the usual conventions

(Bartoněk 2003, p. 146). Myc. does not normally indicate double consonants. Much depends on the interpretation of the *ro<sub>2</sub>* and *ra<sub>2</sub>* signs: *ro<sub>2</sub>* spells etymological *\*ryo* in the comp. *a-ro<sub>2</sub>-a-* = *aryoa* < *\*aroha* < *\*ar-yos-a* (cf. ἄρ-ιστος), etc., and secondary (syncopated) *-ryo-* in *po-pu-ro<sub>2</sub>* = πορφύρ(ι)ος, *tu-ro<sub>2</sub>* = τυρ(ι)ον, dim. ‘little cheese,’ as well as secondary *-lyo-* in *pi-ti-ro<sub>2</sub>-we-sa* = *ptilyo-we(s)sa* (no example of primary *-lyo-*). *ra<sub>2</sub>* spells etymological *\*rya-* in most cases, but spells etymological *\*-rs-* in the first aor. *a-ske-ra<sub>2</sub>-te* = *\*ager-sant-es* > *\*agerhantes*/*\*agerrantes* (cf. 3. sing. pres. *a-ke-re* = *\*ageryei*/*\*agerrei*; cf. Lesb. ἀγέρω, but Att. ἀγείρω). Again, an *\*agersantes* would be spelled †*a-ke-sa-nt-es* by the usual conventions. The *ra<sub>2</sub>* sign has been taken as spelling both *r<sub>2</sub>r* and *rr*, but this is unlikely, since not only is a separate sign for double consonants unparalleled in Linear B, but a sign for *rra* (*lla*, *rro*, *llo*) necessarily extending over a syllable break violates the principles of the syllabic

writing system. The likeliest explanation is that original signs for *rya/lya*, and *ryo/lyo*, whether from primary or secondary *\*rya* (< *\*riya*), etc., continued to be used even when *\*rya* had become *-rra-*, etc., and so was used for new *rra* from *\*rba* < *\*rsa*, in a way similar to the use of the Attic “spurious diphthong.” See Bartoněk 2003, pp. 105–106, 146–147, for the evidence.

90. A good example of 1CL preceding (feeding) the Att.-Ion. change of *ā* > *η*. The new rough breathing seen in Att., Boiot., and Doric comes from 2. pl. ὅμε-. In Att. this *\*ḡme-* is recharacterized with the acc. pl. ending ἡμέ-ας > ἡμᾶς (Sihler 1995, p. 380, §369).

91. Note that Grassmann’s Law (dissimilation of aspirates) does not apply, that is, the assimilation *\*hR* > *RR* precedes Grassmann’s Law, which again shows that we are not dealing with the mere compensatory loss of *h* but the simplification of double resonants.

-sm-

\**p<sup>b</sup>áwes-no-* (cf. \**p<sup>b</sup>awos* > φάος > φῶς) > Lesb. φάεννος, but Boiot. Φάένος (later Φάεινος, following the Boiot. collapse of the diphthongs), Ark. Φαήνᾱ.

\**selas-nā* 'shiner' > Lesb. σελάννα, but Boiot., Dor. σελᾶνᾱ, "Att.-Ion. σελήνη.<sup>92</sup>

-sw-

\**nas-wo-s* 'dwelling' (cf. \**nas-yō* > ναίω) > \**nawwōs* > Lesb. ναῦος, but with 1CL: Lak. νᾶφος > Boiot. νᾶός, Ion. νηός > Att. νέως (with quantitative metathesis).

For -Rs- there are numerous examples in s-aorists, futures, and so on:

-ls-

\**angel-yō* > \**angel'l'ō* (in all dialects and so not 1CL) > ἀγγέλλω but first aor. \*ἀγγελ-σα > Lesb., Thes. ἀγγελλά-μενος, but Boiot. ἀγγελιαμένως, Att. inf. ἀγγεῖλαι (1CL with high vowel).

-ns-

\**men-sa-* > Thes. part. gen. pl. συμ-μεννάντ-ουν, but Boiot. μεινάτω, Att. ἔμειν-ε.

\**mēns-os*: gen. 'month' > Lesb. μῆνν-ος, Thes. μεινν-ός; in the 1CL dialects the lengthening applies vacuously to the long vowel, but they show the simplified RR, so: Boiot. μειν-ός, Att. μην-ός.<sup>93</sup> The -nn- forms show that Rs must have passed at least to Rb (> RR) before Pan-Greek Ostoff's Law applied.

It is especially important to note here that the First Compensatory Lengthening is crucially ordered after the change of sonant \*r > ρα. So \**tḡs-ro-Hon-* 'possessing fear' > \**tḡs-rōn* > \**trabrōn* > \**trarrōn* > τράρων > τρήρων.<sup>94</sup>

For the second source, Ry, there are many examples in Lesbian (though fewer attested in Boiotian). For the treatment after a/o:

\**g<sup>w</sup>ṛi-yō* (Lat. *venio*) > PGrk \**g<sup>w</sup>amyō* > \**g<sup>w</sup>anyō* > \**g<sup>w</sup>an'n'ō* > Pan-Greek βαίνω.

\**smor-ya* > \**h<sup>w</sup>mor'r'a* > Pan-Greek μοῖρα.<sup>95</sup>

\**g<sup>b</sup>r-yē-* > \**k<sup>b</sup>ar-ye-* > \**k<sup>b</sup>ar'r'e-* > χαίρει.<sup>96</sup>

But after e:

\**awer-yo-* > \**awer'r'ō* > Pan-Greek \**awerrō*, which remains in Lesb. ἄέρρω, but > Boiot., Att. αἶρω (1CL).

92. The initial σ- is an old and unsolved problem, possibly influenced by linguistic taboo.

93. Att. back-forms nom. μῆν. Ion. shows original nom. \**mēns* > \**mens* (Ostoff's Law) > *mē<sub>2</sub>s* = μείς by the Second Compensatory Lengthening.

94. A further example is suggested by Lejeune's derivation (1972, p. 122, §115) PGrk \**kṛs-ro-s* ('head,' 'in charge,' cf. full grade \**kērs-na* > κέρνα) > \**krabros* > \**krarros* > Att. ναύ-κρᾶρος

> ναύ-κληρος. However, see Nussbaum 1986, pp. 24, 167, 221, 244–245, for the preform of PIE \**kṛh<sub>2</sub>-s-r-ō-* > \**krāsro* > \**krārro* > -κρᾶρος > -κληρος, with 1CL applying vacuously.

95. The comparative \**ar-yos-a* (cf. ἄρ-ιστος), Myc. *a-ro<sub>2</sub>-a* (\**aryosa* > \**aryoha* > \**aryoa*) [see above, n. 89], seems to show that Myc. is still at the stage of \**aryo-/ar'r'o-/arro-*, before the diphthong has formed (i.e., we have *a-ro<sub>2</sub>-a* = *aryoa* and not the expected

\**ayro-* spelled presumably \**a<sub>2</sub>-ro-a* or the like). The problem is that the expected \**arōn* does not show up anywhere. Instead we have Att. ἀρείων with some type of extensive remodeling (Sihler 1995, p. 362, §354.4b). A similar recombination might also account for the Myc. form.

96. Again crucially ordered after \**r* > *ap* but before 1CL, which it bleeds.

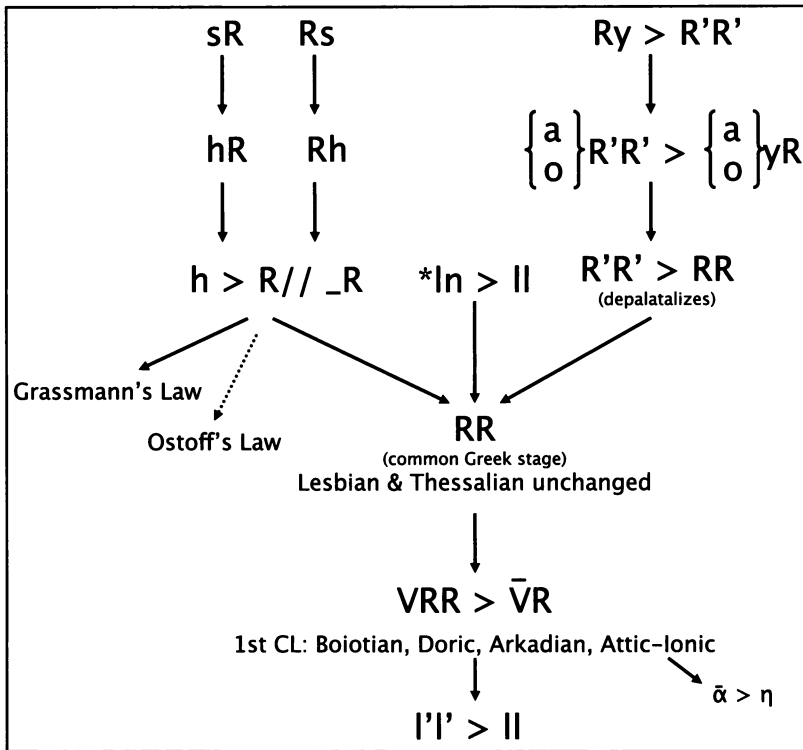


Figure 4. Chart of the First Compensatory Lengthening

\**kten-γō* > \**kten'n'ō* > Pan-Greek *ktennō*, remains in Lesb. κτέννω, but κτήνω Dor., κτείνω Att. (1CL; not attested for Boiot.).

Compare after *i*:

\**krin-γō* > \**krin'n'ō* > Pan-Greek *krinnō*, remains in Lesb. κρίννω > κρίνω Att. (1CL; not attested for Boiot.).

For the third source, *-ln-* clusters, there are excellent examples from inherited and remodeled nasal presents:

PIE \**h<sub>3</sub>b<sup>h</sup>él-* ‘owe’ forms a Greek nasal present \**op<sup>h</sup>el-no-* > Lesb. ὀφέλλω, but Doric ὀφήλω, and Att.-Ion. and Boiot. ὀφείλω (1CL).<sup>97</sup>

PIE \**g<sup>w</sup>elh<sub>3</sub>-* ‘will, wish,’ \**g<sup>w</sup>elo-* > \**g<sup>w</sup>ole-* (a regular metathesis) in Ark., Cyp., Pamph., and West Ion. βόλομαι; with a nasal infix pres. \**g<sup>w</sup>l<sub>1</sub>-né-h<sub>3</sub>-* / \**g<sup>w</sup>l<sub>1</sub>-n-h<sub>3</sub>-* > \**g<sup>w</sup>l<sub>1</sub>-no-*, remodeled to a full-grade \**g<sup>w</sup>elno-* / \**g<sup>w</sup>olno-* on the thematic root present.<sup>98</sup> This in turn shows the various outcomes of \**-ln-* and labiovelars before *e*: Lesb. βόλλομαι, Thes. βέλλομαι, with retained *-λλ-*, but Att.-Ion. βούλομαι, Dor. δήλομαι, and Boiot. βείλομη (1CL).<sup>99</sup>

97. See the excellent summary by Slings 1975. For the initial laryngeal, cf. aor. \**e-h<sub>3</sub>b<sup>h</sup>l-e/o-* > ὤφλ-ov (Myc. *o-po-ro*), and the neg. νωφελής (Myc. *no-pe-re*); Beekes 1969, pp. 56, 225–256. These verbs cannot reflect \**-γo-* presents, since this would result in *-λλ-* in all dialects, and the only other

phonologically possible source would be a suffix in \**-se/so-*, which is impossible to justify morphologically or semantically (i.e., a desiderative); see Slings 1975, pp. 3–4: “I fail to see how anybody in waking condition would be able to term a verb meaning ‘to wish’ a ‘desiderative.’”

98. For the shape of the root, see Sihler 1995, pp. 498–500, §§453–454; Rix et al. 2001, p. 17.

99. Notice that Boiotian shares the Doric *e*-grade as well; βουλή, etc., are built directly to the verb. See Rix et al. 2001, pp. 208–209.



\**wel-* ‘roll,’ PIE \**w<sub>l</sub>-néw/nu-*, in Greek with secondary *e*-grade \**wel-new-* > Lesb. ἐλλέω, but Dor. φηλέω, Att. εἰλέω (1CL);<sup>100</sup> cf. the zero-grade \**sm-w<sub>l</sub>-nes-* ‘rolled together’ > Lesb. ὀόλλης (with \**l* > *ol* and Lesbian psilosis), and the zero-grade adv. in ὀλανέως (Hsch. α 2761 [Latte]). The *e*-grade form ἀελλής is attested at *Il.* 3.13 and underlies \**sm-wel-nēs* > \**hawellēs* > \*ἄειλής (with 1CL) contracting to Att. ἄλής.

The sources and outcomes of the First Compensatory Lengthening are summarized in Figure 4.

### THE POSITION OF BOIOTIAN

Explaining this striking difference as a later and independent change of *VRR* to long vowel plus *R* within Boiotian after it split off from a Proto-Aiolic cannot work.<sup>101</sup> The examples of the First Compensatory Lengthening in Boiotian come only from Proto-Greek *-RR-* clusters and there are apparently no cases of any secondary sources for double resonants undergoing this treatment. That is, a later Boiotian rule should apply without exception, and ἄλλός, for example, should give †ἄλόξ; the new assimilations, such as Πέλοπος-νῆσος > Πελοπόννησος, should have given †Πελοπώνησος, etc.

Further, since the First Compensatory Lengthening cuts Boiotian off from a putative Aiolic family, all the other features that are said to characterize Aiolic—the phonological changes of \**K<sup>w</sup>* > *P* in all positions, \**ʒ* > *po/op*; the morphological innovations of dative plural in *-εσσι*, perfect participle in *-ων, -οντ-, ἴα = μία*—must have been exceptionally early and have preceded the First Compensatory Lengthening. This is not a convincing scenario, and it seems to be ruled out by the fact that the First Compensatory Lengthening is crucially ordered after the change of \**ʒ* > *po/op* in other dialects.<sup>102</sup>

The conclusion seems to be clear that Boiotian belongs to a different group of Greek dialects than Lesbian and Thessalian, which do not undergo the First Compensatory Lengthening.<sup>103</sup> No early isoglosses separate it from West Greek until the innovation of labiovelars to dentals before *e* marks off Doric.<sup>104</sup> We may view Boiotian then as a conservative branch of Doric, although nothing prevents Boiotian from being a separate branch of Greek altogether.

### OTHER CLAIMED SUBGROUPINGS OF AIOLIC

The departure of Boiotian leaves just Thessalian and Lesbian. Is it possible that at least this group somehow forms a family? Again, there are no securely shared innovations, and I see no evidence for Thessalian and Lesbian having any common ancestor other than Proto-Greek itself.

García-Ramón, in the most detailed treatment of the question, holds that Boiotian split off from a Proto-Aiolic, which he rather tendentiously labels “proto-thessalien,” and that about a century later Lesbian migrated from “thessalo-lesbien.”<sup>105</sup> There are problems with this view, however, and he himself rightly points out that the lack of the First Compensatory Lengthening in Lesbian and Thessalian is not a reason to group the two

100. Rix et al. 2001, p. 675.

101. See García-Ramón 1975, p. 70, §6.2.1, who puts it down to a Boiotian simplification of geminates. Although he says the change cannot be dated, he nonetheless places it after ca. 1125, the date he proposes for Boiotian splitting off from “proto-thessalien” (p. 110).

102. I can find no examples of the First Compensatory Lengthening applying to \**ʒ* > *po/op* in Boiotian (but the *po/op* forms are very few).

103. Hainsworth (1982, p. 862) explains it by saying that “the gemination of liquids and nasals was too late to affect Boeotian,” that is, he takes the changes of \**sn* > *-nn-*, etc., to be a late Lesbian-Thessalian affair, failing to see that it is in fact Proto-Greek.

104. The usual marker for “West Greek” is the 1. pl. ending in *-μες*. It is sometimes stated that Boiotian shared *-μεν* with Lesbian, but the ending is not attested before the spread of koine (Scherer 1959, p. 18). Thessalian has only a single example (*-μεν*), from Larissa (*Dialectorum Graecarum Exempla* 590.13) dating to 214 B.C. Lesbian attests *-μεν* in the poets but, understandably, there are no epigraphic examples.

105. García-Ramón 1975, p. 80, basing the date on the fact that “les archéologues et les historiens s’accordent pour dater ca. 1000 la migration dite ‘éolienne,’” and citing Desborough 1972, p. 69. Here we see the danger: archaeologists base their dates on the reconstructions of linguists, who base their dates on the reconstructions of archaeologists.

together since this is merely a retained archaism from the Common Greek stage of *-RR-*.<sup>106</sup> As evidence of a shared period of development, he points to a number of common *new* features of greater or lesser importance.<sup>107</sup> His best evidence is the change of *\*-ts-* > *-ss-* (e.g., PGrk *\*met<sup>b</sup>-yos* > *\*metsos* > μέσσος) in both Thessalian and Lesbian, versus *\*-ts-* > *-tt-* in Boiotian (μέττος). However, the group *\*-ts-* is quite stable in the various dialects, and the same *\*-ts-* > *-tt-/ss-* variation is found in Attic and the Ionic of Euboea and Oropos (vs. the rest of Ionic), and in Cretan (vs. other forms of Doric).<sup>108</sup> Boiotian innovates by showing a progressive assimilation of the retained *\*-ts-* > *-tt-*, but *\*-ts-* > *-ss-* in Thessalian and in Lesbian is simply a case of parallel development, the regressive assimilation common in most Greek,<sup>109</sup> and not a shared innovation implying an original unity of Thessalian and Lesbian.<sup>110</sup>

García-Ramón's other cases are shakier still. He claims a common development of a consonantal *y* from *i* between *r* or *d* and a vowel in hiatus (*riV* > *ryV*).<sup>111</sup> First, note that a rule applying only to *r* and *d* is difficult to motivate. Second, the data show no parallel developments. Lesbian has only two special cases:

1. *diV-* > *\*dyV-* > *ζV-*, word initially only, in *διά* > *ζά*, and in *Δίονυσος* > *Ζόνυσος*. These forms are frequent in the poets, but the inscriptional form is *διά*.<sup>112</sup> This palatalization is not uncommon and shows up in Phokaia and Cyprus as well.
2. A limited number of cases of *ri* > *ry* > *rr*, but these are of two origins. One is by late syncope in the preverb *περί-*, so *περί-οχος* > *πέρροχος*, *\*περ<ρ>έχοισ'* (= Att. *περι-έχουσα*); the inscriptional form, however, is always *περί*.<sup>113</sup> The other is found only in the proper name *Πρίαμος* > *Πέρραμος* (Alk. 42.2, beside a metrically convenient *Πέραμος*, Sappho 44.16) and the month name *τῶ Ἀγερρανίῳ μῆνινος* (late 3rd century) = *Ἀγρίανιος*.<sup>114</sup> This points to a possible rule whereby *\*CriV* > *\*CryV-* > (*\*Cər'r'V-*, with a palatal *r'* that then colors an anaptyctic vowel) > *CerrV-*. In all other cases *-ri-* is retained.<sup>115</sup>

106. García-Ramón 1975, pp. 44–46, 69, §§5.3.1, 6.2.1.

107. García-Ramón 1975, pp. 81–91.

108. The *-ts-* stage is retained in Cretan until quite late (spelled *-ζ-* in older inscriptions): Schmitt 1977, p. 52, no. 5.M.12.

109. The situation of Boiotian is more complicated than is commonly presented. It is usually said that original *\*T+s* > *-tt-* in Boiotian and Cretan Doric. However, Boiotian shows the Proto-Greek change of *\*-t-s* > *-ss* in final position; so *\*wanakt-s* > *\*wanakss* > *φαναχς* (Buck 1955, p. 227, no. 37.4). Further, Boiotian shows *-tt-* only in morphologically transparent cases: *κομιδ-σα-* (aor.) > *κομίττ[η]*, etc. It is hard to believe that the dat. pl. was ever

*\*pod-si* > *†ποτί* in Boiotian. It seems more likely that *\*-t+s-* > *-ss-* is general Greek and then *-T-s-* was restored in Boiotian in *s*-aorists, etc., where it then underwent the later Boiotian regressive assimilation to *-tt-*. See García-Ramón 1975, p. 84.

110. Furthermore, Thessalian is less uniform than usually presented. García-Ramón (1975, p. 83) correctly rules out the proper names *Κόττυφος*, *Φάϋττος*, etc., as of uncertain etymology. However, the very name of the Thessalians, *Πετθαλός* (< *Φετταλός*, found in Boiotian, beside Att. *Θεσσαλός*, and so indicating a labiovelar *\*g<sup>wh</sup>*), attested at both Larissa and Kierion, and *θάλαττα*, *πίττα*, cited as Thessalian, point to the presence of *-tt-* forms within both Pelasgiotis and Thessaliotis. Proper

names are often anomalous and the etymologies proposed by Heubeck (1984) and Weiss (1998, pp. 56–61), are not without difficulties. I doubt that the ethnonym is Indo-European.

111. García-Ramón 1975, p. 82.

112. Also *διά* in Sappho 1.12; Sappho vel Alk. *SLG* S276(1), col. 2, line 17. *κάρδια* > *κάρζα* is cited by *Etym. Magn.* 407.21 as Aiolic (not specifically Lesbian as sometimes stated), but this is of little value.

113. Hodot 1990, p. 150.

114. The grammarians cite as Aiolic (again, not specifically Lesbian) *μέτερρος* for *μέτριος*, *κόπερρα* for *κοπρία*, and possibly *ἀλλότερ(ρ)ος* for *ἀλλότριος*. For a full discussion, see Hodot 1974, pp. 126–128.

115. Hamm 1957, p. 25, §52.

Thessalian, on the contrary, shows a full set of double palatal consonants. The new  $*-yV-$  ( $< -iV-$ ) palatalizes and duplicates not only preceding resonants but stops as well (examples only for  $t$ ,  $d$ ,  $n$ ,  $s$ , and the rule may be confined to dentals), which are then spelled with or without an  $-i-$  to indicate the palatalization. Examples include, for  $-r(V)y-$ :  $\kappa\ddot{\upsilon}\rho\rho\upsilon\upsilon\alpha\varsigma$  =  $\kappa\ddot{\upsilon}\rho\rho\iota\omicron\upsilon\alpha\varsigma$ ,  $\acute{\alpha}\rho\gamma\ddot{\upsilon}\rho\rho\iota$  (gen. sing.) =  $\acute{\alpha}\rho\gamma\upsilon\rho\iota\omicron\upsilon$ ; for  $-l(V)y-$ :  $\pi\acute{\omicron}\lambda\lambda\iota\omicron\varsigma$  (gen. sing.) =  $\pi\acute{\omicron}\lambda\iota\omicron\varsigma$ ; for  $-t(V)y-$ :  $\acute{\epsilon}\xi\alpha\kappa\acute{\alpha}\tau\tau\iota\omicron\iota$  =  $\acute{\epsilon}\xi\alpha\kappa\acute{\omicron}\sigma\iota\omicron\iota$ ; for  $-d(V)y-$ :  $\iota\delta\delta\iota\alpha\upsilon$ ,  $\iota\tau\delta\iota\alpha\upsilon$  =  $\iota\delta\iota\alpha\upsilon$ ;<sup>116</sup> for  $-n(V)y-$ :  $\pi\rho\acute{\omicron}\xi\epsilon\upsilon\upsilon\iota\omicron\upsilon\alpha\varsigma$  =  $\pi\rho\acute{\omicron}\xi\epsilon\upsilon\iota\omega\alpha\varsigma$ ; for  $-s(V)y-$ :  $\acute{\epsilon}\kappa\kappa\lambda\epsilon\iota\sigma\iota\alpha$  beside  $\gamma\ddot{\omicron}\mu\alpha\sigma\sigma\omicron\upsilon$ .<sup>117</sup> We clearly have a late rule of  $\{R, T\} > \{R'R, 'T'T\} / \_y$  and the change is not a shared innovation with Lesbian.

For shared morphological changes, García-Ramón points to datives in  $-\epsilon\sigma\sigma\iota$ , although this is also Boiotian (and found elsewhere; see above, p. 447). He rightly concludes that this is an innovation in Boiotian, but fails to see that it therefore can imply nothing about a supposed period of shared changes in Thessalian and Lesbian.<sup>118</sup> To this he adds patronymics in  $-\epsilon\iota\omicron\varsigma$ , adjectives of material in  $-\iota\omicron\varsigma$ , and the  $\acute{\epsilon}\theta\eta\kappa\alpha\upsilon$  type of aorist, though all of these are common Greek. Boiotian innovates by showing the spread of the  $-\kappa-$  forms to the third-person plural aorist  $\acute{\alpha}\nu\text{-}\acute{\epsilon}\text{-}\theta\epsilon\iota\text{-}\kappa\text{-}\alpha\upsilon$  beside the new analogical  $\acute{\alpha}\nu\text{-}\acute{\epsilon}\text{-}\theta\epsilon\text{-}\alpha\upsilon$ , a feature not found in Lesbian or Thessalian. The mistake again is to treat a retained feature in two dialects as if it were a shared innovation.

The athematic conjugation of contract verbs in Lesbian and Thessalian, but not in Boiotian, is sometimes claimed as a common characteristic.<sup>119</sup> Hock and García-Ramón, however, rightly reject it as a shared innovation.<sup>120</sup> First, the same pattern is found in Arkadian and Cyprian; second, the athematic forms are found only in Pelasgiotis but not in Thessaliotis.<sup>121</sup> The data are complicated by a number of factors,<sup>122</sup> but the most important fact is that the familiar Attic class of contract verbs is a very mixed bag continuing both athematic and thematic formations.<sup>123</sup> For the  $-\acute{\alpha}\omega$  verbs, the principal sources are the following:

1. athematic factitives in  $*-h_2-$  built to thematic adjectives, such as  $*n\acute{e}\omega\text{-}e\text{-}h_2\text{-}mi$   $\rightarrow$   $\nu\acute{\epsilon}\acute{\alpha}\text{-}\omega$  'make new, renew a field by plowing';
2. thematic denominatives built to  $\alpha$ -stem feminines, such as  $\tau\ddot{\iota}\mu\acute{\alpha}\omega$  to  $\tau\ddot{\iota}\mu\acute{\eta}$ .

116. The rough breathing is anomalous.

117. See Blümel 1982, pp. 55–56, §64, for details, though his rule (under §64.4) of  $-Vr\gamma s-$   $>$   $-Vr'r's$   $>$   $Vss$   $>$   $Vs$  /  $\_C$  is better explained by simple syncope followed by assimilation.

118. García-Ramón 1975, p. 84.

119. E.g., Buck 1955, p. 148, §202.4. The data are exhaustively examined by Hock (1971); however, the results are vitiated by the fact that he believed that  $a+e$  contract to  $\bar{e}$  rather than  $\bar{a}$ , and by his incomplete understanding of the verbal system of PIE.

120. Hock 1971, p. 514; García-Ramón 1975, pp. 71–72, §6.2.3.

121. See Scherer 1959, p. 69, for

discussion of the forms.

122. These are as follows: in the literary texts (Sappho and Alkaios), (a) the usual vagaries of transmission, (b) the tendency of Hellenistic editors to impose a uniform 'Aeolic' color; in inscriptions, (c) the paucity of attestation in both Lesbian and Thessalian; in all texts, (d) the forms are very limited since in Lesbian at least, the 2. sing. and 3. sing. have been extensively remodeled so that we find  $\phi\acute{\iota}\lambda\eta\mu\iota$ , but  $\lambda\acute{\omicron}\tau\eta\varsigma$ ,  $\gamma\acute{\alpha}\mu\epsilon\iota$  (and so indistinguishable from regular thematic  $\phi\acute{\epsilon}\rho\epsilon\iota$ ); (e) furthermore, only a very few forms give clear evidence, since many of the forms in  $-a-$ , as well as many infinitives, imperatives, subjunctives, and middles

could be the result of regular thematic contractions (e.g.,  $\acute{\alpha}\rho\alpha\mu\alpha\iota$  could be from athematic  $\acute{\alpha}\rho\alpha\text{-}\mu\alpha\iota$  or equally from thematic  $*\acute{\alpha}\rho\alpha\text{-}\omicron\text{-}\mu\alpha\iota$ ). Blümel's attempt (1982, pp. 76–77, 168, 172–173, §§88, 182, 187) to explain the apparently thematic  $\phi\acute{\iota}\lambda\epsilon\iota$ , etc., by regular phonological developments (beginning with a type of Kiparsky's metathesis of  $-\bar{e}\text{-}t\acute{\iota}$   $>$   $*\text{-}\acute{e}y\text{-}t$   $>$   $*\text{-}\acute{e}i$   $>$   $*\text{-}e\acute{\iota}$ ) founders on inherited athematic  $\tau\acute{\iota}\theta\eta\sigma\iota$  in Lesbian (so that we should expect  $\tau\acute{\iota}\phi\acute{\iota}\lambda\eta\sigma\iota$ ) and the fact that, whatever its origins, the thematic ending in  $-\epsilon\iota$  is Pan-Greek.

123. For an overview, see Sihler 1995, pp. 513–514, §462.1; pp. 521–524, §§468–469; see also Ringe 2006, pp. 28–29.

There are even more sources for -έω verbs:

1. athematic statives in \*-éh<sub>2</sub>- made to zero-grade Caland roots, such as \*h<sub>1</sub>rud<sup>b</sup>-éh<sub>2</sub>-mi -> ἐρυθέ-ω 'be red'; \*b<sup>b</sup>il-éh<sub>2</sub>-mi > φίλημα -> φιλέω;
2. thematic denominatives in -e-yó-, built to thematic nominals, such as \*woik-e-yó- > οἰκέω;
3. thematic causative/frequentatives in -éyo-, with the root often in the o-grade, such as \*b<sup>b</sup>or-éyo- > φορέω;
4. plain thematics built to stems ending in y, w, or s (which then disappears between vowels), such as \*sréw-o- > ῥέω;
5. thematic denominatives in -yo- built to s-stems, such as \*teles-yo- > τελεγγο- > τελείω, later τελέω.<sup>124</sup>

In short, all the dialects have ample materials to build analogical forms and to regularize the varying paradigms. Most dialects (including Thessaliois) have chosen the more numerous thematics, but Arkadian, Cyprian, Lesbian, and Pelasgiotis show varying spreads of athematic forms. Lesbian shows inherited statives like φίλημα, beside denominatives like οἴκημι, and iterative causatives like φορήμεθα; but for the last two categories the forms remain thematic, e.g., ῥέοντα, ἐπιπλέοντα, and numerous attestations of forms of τελείω.<sup>125</sup> That is, at the time(s) the old thematics were recast as athematics (at least in some of their forms), ῥέω and τελείω were still in the form of \*ῥέφ-ω and \*τελεγγ-ω. The Thessalian data show only nine forms with clear athematic inflection, but διε-σαφεί-μενα seems to point to the spread of athematic forms to \*-es-yo- verbs as well.<sup>126</sup>

Equally, any attempt to link the mainland dialects, Thessalian and Boiotian, as a subgroup does not work, even though they are the only pair to which a version of a dialect geography applies.<sup>127</sup> Not only are Thessalian and Boiotian separated by the First Compensatory Lengthening, they share no common innovation. Of the three features commonly listed in handbooks,<sup>128</sup> Thessalian and Boiotian *ti* (medially and finally) is merely retained from Proto-Greek, while Lesbian undergoes a later sound change to *si*.<sup>129</sup> The spread of the athematic infinitive ending in -μεν to thematic stems (e.g., φέρ-ε-μεν) is found late in Boiotian, but in Thessaly apparently only in Pelasgiotis and Perrhaibia, while the other parts of Thessaly show \*-e-en > -ēn.<sup>130</sup> In short, the further away one is from Boiotia the more the thematic -ε-μεν seems to flourish. That the creation of such new forms does not indicate shared ancestry is shown by Cretan προφειπ-ε-μεν. Rather, Greek inherited a wide variety of infinitive formants and created still more; which of them were chosen or generalized varies greatly from dialect to dialect and provides no firm basis for grouping.<sup>131</sup>

124. Possible explanations of καλέω, etc., and the purely Greek -ό-ω class are outside the scope of this paper.

125. For the data, see Blümel 1982, pp. 172–178, §§187–191, pp. 222–223, §236; Hodot 1990, pp. 192–198.

126. Lesbian εὐεργετ-έ-ντ-εσσι beside Thes. εὐεργετ-έ-ς (< \*-nt-s) in the derived compound is unlikely to represent a directly inherited -es-yo- >

-εγγο- but simply Attic εὐεργέτης, εὐεργετέω subjected to the new patterns.

127. See, e.g., Rodríguez Adrados 1956.

128. Buck 1955, p. 148, §204, who notes that only one, the thematic inf. in -men, "which is Homeric, belongs to the Aeolic elements of these dialects"; Schmitt 1977, pp. 75–78.

129. Cowgill 1966, p. 80; Schmitt

1977, p. 76. See above, p. 443, n. 45.

130. Buck 1955, p. 122, §155.1; García-Ramón 1975, p. 66, §6.1.8; Schmitt 1977, p. 77, no. 18. Blümel's attempt to explain away the thematic forms is not convincing (1982, pp. 208–210, §§223–224).

131. See the list in Buck 1955, p. 122, §153. See Cowgill's clear remarks on principles of grouping: 1966,

The best candidate for a shared innovation is a puzzling change confined to the third-person plural verb endings, where  $\theta$  shows up in the place of  $\tau$ , so  $-\nu\theta\iota$  for  $-\nu\tau\iota$ ,  $-\nu\theta\omega$  for  $-\nu\tau\omega$ ,  $-\nu\theta\eta$  for  $-\nu\tau\alpha\iota$ , and  $-\alpha\theta\eta$  for  $-\alpha\tau\alpha\iota$ .<sup>132</sup> García-Ramón assumes the change is common Aiolic and explains its absence in Lesbian by the familiar move of postulating Ionic influence.<sup>133</sup> Rather, we clearly have a case of analogical spread, although the locus is uncertain. The usual explanation dates before both the decipherment of Mycenaean and the rise of laryngeal theory, where a hypothetical third-person plural  $*senti > *henti$ , which then anomalously threw its aspiration back to create  $\epsilon\nu\theta\iota$ , from which a new  $-\theta\iota$  ending was abstracted.<sup>134</sup> However, no such form existed. The PIE root began with the  $e$ -coloring laryngeal and the original Greek form was  $*h_1s-enti > *ehenti$ , nicely attested in Mycenaean  $e-e-si = e(h)ensi$ .<sup>135</sup> Blümel is almost certainly correct in locating the source in a secondary assibilation of  $-(n)ti-$  that spread by analogy in the verbal system.<sup>136</sup> It is difficult to assign such a secondary palatalization to a proto-Aiolic stage and the process is far from uniform in either Boiotian or Thessalian. This seems a straightforward case of dialect borrowing, and the same forms are found in Northwest Greek at Steiris in Phokis, over the pass through Mt. Parnassos.<sup>137</sup>

## CONCLUSIONS

We might summarize the linguistic data by arranging the dialects along a line with the most conservative on the left and those with a greater number of significant changes on the right:

Thessalian | Lesbian | Boiotian | Doric | South Greek

South Greek (Mycenaean, Arkadian, Cyprian, Attic-Ionic) shares the early assibilation of  $ti > si$  and  $*t^{(h)}y > ss > s$ , while Boiotian, Doric, and the historical dialects of South Greek share the First Compensatory Lengthening. In this lineup, we might consider Thessalian and Lesbian to be related conservative dialects, but nothing compels us to that view. Rather, it might be better to arrange them in a line corresponding roughly to their geographic position in historical times:

Thessalian | Boiotian | Doric | South Greek | Lesbian

In this arrangement, the two most conservative dialects appear not as related dialects but rather as relic areas in the far northwest and the far northeast. However, no arrangement can be used with any confidence to reconstruct prehistoric dialect geography.

p. 83. So, for example, Attic-Ionic, the northern part of Thessalian, Lokrian (Northwest Greek), Corinthian, Megarian, and Rhodian (Doric) all share the thematic inf. in  $-e-en$ , while Arkadian and most of the rest of Doric show  $-en$  added directly to the stem. See Sihler 1995, p. 608, §552.A.1.a.

132. Blümel (1982, pp. 155–158, §§171–173) surveys the evidence.

133. García-Ramón (1975, pp. 65–66, §6.1.7) writes: “On hésiterait en principe à ranger ce trait parmi les traits panéoliens,” noting its absence in Lesbian and the presence of Phokian forms.

134. Schulze 1933, p. 399; followed by Scherer 1959, p. 39, §237.14; Blümel 1982, p. 156, n. 148; Schmitt 1977, p. 71, no. 15. García-Ramón (1975, p. 65) prefers to see an analogy from

$-\mu\epsilon\theta\alpha$ ,  $-\sigma\theta\epsilon$ , but no proportional analogy can be made.

135. For details and further complications, see Sihler 1995, pp. 548–549, §492.

136. Blümel 1982, pp. 155–158, §§171–173. Cf.  $\text{Μελάνθ-ιος}$  beside  $\text{Μελάντ-ας}$ .

137. Schwyzler 1939–1953, vol. 1, p. 353, A.18, 43; García-Ramón 1975, p. 66.

In conclusion, ascribing the presence of speakers of Lesbian in the northeast Aegean during historical times to the migration of Aiolic tribes from mainland Greece receives no support from linguistics. Migration and invasion are not the only or even the most likely mechanisms by which languages and dialects spread. No solid evidence speaks for a spread (by whatever means) from the Greek mainland to the Troad, rather than the other way around, or for both Thessalian and Lesbian arriving from the north, or for both developing *in situ*.

Furthermore, upon close examination, the idea of an Aiolic dialect group itself falls apart. Boiotian is an archaic dialect, most closely related to West Greek, which underwent the First Compensatory Lengthening but retained \**ɾ* (with later independent change of \**ɾ* > *po*) and the labio-velars (with the default change to labials), and which underwent various later minor changes of its own. Lesbian and Thessalian are both archaic branches of Greek that did not undergo the First Compensatory Lengthening. They share no demonstrable common innovations, and nothing argues for a relationship between them. They are best viewed as two relic areas of a relatively unaltered early Greek.

Thessalians, Boiotians, and Aiolians proper (i.e., the inhabitants of Lesbos and the adjacent part of Asia Minor) were not part of an Aiolic tribe or dialect; they were simply various peoples who were seen to be neither Dorians nor Ionians.<sup>138</sup> In the absence of any archaeological or linguistic evidence for such a group, we are better off avoiding the term "Aiolic" altogether.

138. Cf. the sensible remarks of Meyer and Gschnitzer cited on p. 433 and in n. 7, above. One consequence of this research is that the whole topic of "Aiolisms" in Homer needs to be reexamined.

## REFERENCES

- Adams, D. 1981. "The Pre-History of Tocharian Preterite Participles," in *Bono Homini Donum: Essays in Historical Linguistics in Memory of J. Alexander Kerns*, ed. Y. L. Arbeitman and A. R. Bomhard, Amsterdam, pp. 17–24.
- Ahrens, H. 1839–1843. *De graecae linguae dialectis*, 2 vols., Göttingen.
- Aikhenvald, A. Y., and R. M. W. Dixon, eds. 2001. *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics*, Oxford.
- Bartoněk, A. 2003. *Handbuch des mykenischen Griechisch*, Heidelberg.
- Beekes, R. S. P. 1969. *The Development of the Proto-Indo-European Laryngeals in Greek*, trans. T. S. Preston, The Hague.
- Bellwood, P. 2001. "Early Agriculturalist Population Diasporas, Farming, Languages, and Genes," *Annual Review of Anthropology* 30, pp. 181–207.
- . 2005. *First Farmers: The Origins of Agricultural Societies*, Oxford.
- Blümel, W. 1982. *Die aiolischen Dialekte: Phonologie und Morphologie der inschriftlichen Texte aus generativer Sicht* (Zeitschrift für vergleichende Sprachforschung, Ergänzungshefte 30), Göttingen.
- Bryant, E. 2001. *The Quest for the Origins of Vedic Culture: The Indo-Aryan Migration Debate*, Oxford.
- Buck, C. D. 1955. *The Greek Dialects: Grammar, Selected Inscriptions, Glossary*, 2nd ed., Chicago.
- Cartledge, P., ed. 2002. *The Cambridge Illustrated History of Ancient Greece*, Cambridge.
- Chadwick, J. 1956. "The Greek Dialects and Greek Pre-History," *GaR* 3, 2nd ser., pp. 38–50 (repr. in *The Language and Background of Homer*, ed. G. S. Kirk, Cambridge 1964, pp. 106–118).
- . 1973. "Discussion" to V. I. Georgiev, "The Arrival of the Greeks in Greece: The Linguistic Evidence," in *Bronze Age Migrations in the Aegean: Archaeological and Linguistic Problems in Greek Prehistory*, ed. R. A. Crossland and A. Birchall, London, pp. 254–255.
- . 1975. "The Prehistory of the Greek Language," in *CAH<sup>3</sup> II.2*, Cambridge, pp. 805–819.
- Chantraine, P. 1961. *Morphologie historique du grec*, Paris.
- . 1999. *Dictionnaire étymologique de la langue grecque*, Paris.
- Chapman, J. 1997. "The Impact of Modern Invasions and Migrations on Archaeological Explanation," in *Migrations and Invasions in Archaeological Explanation (BAR-IS 664)*, ed. J. Chapman and H. Hamerow, Oxford, pp. 11–20.
- Chapman, J., and H. Hamerow. 1997. "On the Move Again: Migrations and Invasions in Archaeological Explanation," in *Migrations and Invasions in Archaeological Explanation (BAR-IS 664)*, ed. J. Chapman and H. Hamerow, Oxford, pp. 1–10.
- Coldstream, J. 2003. *Geometric Greece, 900–700 B.C.*, 2nd ed., London.
- Coleman, R. 1963. "The Dialect Geography of Ancient Greece," *Transactions of the Philological Society*, pp. 58–126.
- Collis, J. 2003. *The Celts: Origins, Myths, Inventions*, Stroud.
- Cook, J. M. 1975. "Greek Settlement in the Eastern Aegean and Asia Minor," in *CAH<sup>3</sup> II.2*, Cambridge, pp. 773–804.
- Cowgill, W. 1966. "Ancient Greek Dialectology in the Light of Mycenaean," in *Ancient Indo-European Dialects*, ed. H. Birnbaum and J. Puhvel, Berkeley, pp. 77–95.
- . 1969. "On Resonant Clusters in Ancient Greek," *Meeting Handbook, 44th Meeting of the Linguistic Society of America*, pp. 22–26 (abstract).
- Crist, S. 2001. "Conspiracy in Historical Phonology" (diss. Univ. of Pennsylvania).
- Crossland, R. A. 1973. "Linguistics and Archaeology in Aegean Prehistory," in *Bronze Age Migrations in the Aegean: Archaeological and Linguistic Problems in Greek Prehistory*, ed. R. A. Crossland and A. Birchall, London, pp. 5–15.
- Darms, G. 1976. "Urindogermanisch \*sēmi," *Münchener Studien zur Sprachwissenschaft* 35, pp. 7–32.

- Desborough, V. 1972. *The Greek Dark Ages*, London.
- Dixon, R. M. W. 1997. *The Rise and Fall of Languages*, Cambridge.
- Finkelberg, M. 1994. "The Dialect Continuum of Ancient Greek," *HSCP* 96, pp. 1–36.
- . 2005. *Greeks and Pre-Greeks: Aegean Prehistory and Greek Heroic Tradition*, Cambridge.
- García-Ramón, J. 1975. *Les origines postmycéniennes du groupe dialectal éolien* (*Minos* Suppl. 6), Salamanca.
- . 2002a. "Aeolic (Lesbian)," in *Brill's New Pauly* 1, cols. 231–232.
- . 2002b. "Greek Dialects," in *Brill's New Pauly* 2, cols. 1011–1018.
- Gippert, J. 2004. "Ein Problem der indogermanischen Pronominalflexion," in *Per aspera ad asteriscos: Studia indogermanica in honorem Jens Elmegård Rasmussen* (Innsbrucker Beiträge zur Sprachwissenschaft 112), ed. A. Hyllested et al., Innsbruck, pp. 155–165.
- Görlach, M. 1987. "Colonial Lag? The Alleged Conservative Character of American English and Other 'Colonial' Varieties," *English World-Wide* 8, pp. 41–60.
- Grant, M. 1994. *Atlas of Classical History*, 5th ed., Oxford.
- Grote, G. 1888. *History of Greece*, 4th ed., 10 vols., London.
- Gschntzer, F. 2002. "Aeolians," in *Brill's New Pauly* 1, cols. 226–230.
- Hackstein, O. 2005. "Archaismus oder historischer Sprachkontakt: Zur Frage westindogermanisch-tocharischer Konvergenzen," in *Sprachkontakt und Sprachwandel. Akten der XI. Fachtagung der Indogermanischen Gesellschaft, 17.–23. September 2000, Halle an der Saale*, ed. G. Meiser and O. Hackstein, Wiesbaden, pp. 169–184.
- Hainsworth, J. B. 1982. "The Greek Language and the Historical Dialects," in *CAH*<sup>2</sup> III.1, Cambridge, pp. 850–865.
- . 1993. *The Iliad, a Commentary* 3: Books 9–12, Cambridge.
- Hamm, E.-M. 1957. *Grammatik zu Sappho und Alkaios* (*AbhBerl* 1951:2), Berlin.
- Hammond, N. G. L. 1975. "The Literary Tradition for the Migrations," in *CAH*<sup>3</sup> II.2, Cambridge, pp. 678–712.
- . 1976. *Migrations and Invasions in Greece and Adjacent Areas*, Park Ridge, N.J.
- Häusler, A. 1998. "Archäologie, das Indogermanenproblem und der Ursprung der Hellenen," in *Die Geschichte der hellenischen Sprache und Schrift: Vom 2. zum 1. Jahrtausend v. Chr.: Bruch oder Kontinuität?* ed. N. Dimoudis and A. Kyriatsoulis, Altenburg, pp. 79–128.
- . 2003. *Nomaden, Indogermanen, Invasionen: Zur Entstehung eines Mythos* (Orientwissenschaftliche Hefte 5), Halle.
- Heubeck, A. 1984. "Zum Volksnamen der Thessaler," in *Kleine Schriften zur griechischen Sprache und Literatur*, ed. B. Forssman, S. Koster, and E. Pöhlmann, Erlangen, pp. 306–314.
- Hock, H. 1971. "The So-Called Aeolic Inflection of the Greek Contract Verbs" (diss. Yale Univ.).
- Hock, H., and B. D. Joseph. 1996. *Language History, Language Change, and Language Relationship: An Introduction to Historical and Comparative Linguistics* (Trends in Linguistics: Studies and Monographs 93), Berlin.
- Hodot R. 1974. "Les noms en -κράτης, -κρέτης, et -κέρτης dans l'onomas-tique de Lesbos," *Beiträge zur Namenforschung* 9, pp. 115–131.
- . 1990. *Le dialecte éolien d'Asie: La langue des inscriptions, VII<sup>e</sup> s. a. C.–IV<sup>e</sup> s. p. C.*, Paris.
- Hoffmann, O. 1891–1898. *Die griechischen Dialekte in ihrem historischen Zusammenhange mit den wichtigsten ihrer Quellen*, 3 vols., Göttingen.
- James, S. 1999. *The Atlantic Celts: Ancient People or Modern Invention?* Madison.
- Janda, R. D., and B. D. Joseph. 2003. "On Language, Change, and Language Change—Or, of History, Linguistics, and Historical Linguistics," in *The Handbook of Historical Linguistics*, ed. B. D. Joseph and R. D. Janda, Malden, Mass., pp. 2–180.
- Karali, M. 2007. "The Classification of the Greek Dialects," in *A History of Ancient Greek: From the Beginnings to*



- Late Antiquity*, ed. A.-F. Christidis, Cambridge, pp. 387–394.
- Kiparsky, P. 1967. "Sonorant Clusters in Greek," *Language* 43, pp. 619–635.
- Kretschmer, P. 1909. "Zur Geschichte der griechischen Dialekte," *Glotta* 1, pp. 1–59.
- LaPolla, R. 2001. "The Role of Migration and Language Contact in the Development of the Sino-Tibetan Language Family," in Aikhenvald and Dixon 2001, pp. 224–254.
- Lejeune, M. 1972. *Phonétique historique du mycénien et du grec ancien*, Paris.
- Mallory J. P. 1989. *In Search of the Indo-Europeans: Language, Archaeology, and Myth*, London.
- . 1997. "The Homelands of the Indo-Europeans," in *Archaeology and Language 1: Theoretical and Methodological Orientations*, ed. R. Blench and M. Spriggs, London, pp. 93–121.
- Mallory, J. P., and D. Q. Adams. 2006. *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World*, Oxford.
- Marckwardt, A. H. 1958. *American English*, New York.
- Meier-Brügger, M. 1992. *Griechische Sprachwissenschaft*, 2 vols., Berlin.
- . 2003. *Indo-European Linguistics*, trans. C. Gertmenian, Berlin.
- Méndez Dosuna, J. 2007. "The Aeolic Dialects," in *A History of Ancient Greek: From the Beginnings to Late Antiquity*, ed. A.-F. Christidis, Cambridge, pp. 460–474.
- Morkot, R. 1996. *The Penguin Historical Atlas of Ancient Greece*, London.
- Morpurgo, A. 1968. "The Treatment of *r* and *l* in Mycenaean and Arcado-Cyprian," in *Atti e memorie del 1° Congresso internazionale di micenologia* (Incunabula graeca 25), Rome, pp. 791–814.
- Morpurgo Davies, A. 1976. "The -εσσι Datives, Aeolic -ss-, and the Lesbian Poets," in *Studies in Greek, Italic, and Indo-European Linguistics Offered to Leonard R. Palmer on the Occasion of His Seventieth Birthday* (Innsbrucker Beiträge zur Sprachwissenschaft 16), ed. A. Morpurgo Davies and W. Meid, Innsbruck, pp. 181–197.
- Morse, M. A. 2005. *How the Celts Came to Britain: Druids, Ancient Skulls, and the Birth of Archaeology*, Stroud.
- Nettle, D. 1996. "Language Diversity in West Africa: An Ecological Approach," *JAnthArch* 15, pp. 403–438.
- Nichols, J. 1997. "Modeling Ancient Population Structures and Movements in Linguistics," *Annual Review of Anthropology* 26, pp. 359–384.
- . 1998. "The Eurasian Spread Zone and the Indo-European Dispersal," in *Archaeology and Language 2: Correcting Archaeological and Linguistic Hypotheses*, ed. R. Blench and M. Spriggs, London, pp. 220–266.
- Nussbaum, A. J. 1986. *Head and Horn in Indo-European*, Berlin.
- Olender, M. 1992. *The Languages of Paradise: Race, Religion, and Philology in the Nineteenth Century*, trans. A. Goldhammer, Cambridge, Mass.
- Pejros, I. 1997. "Are Correlations between Archaeological and Linguistic Reconstructions Possible?" in *Archaeology and Language 1: Theoretical and Methodological Orientations*, ed. R. Blench and M. Spriggs, London, pp. 147–157.
- Peters, M. 1976. "Attisch hiēmi," *Die Sprache* 22, pp. 157–161.
- . 1980. *Untersuchungen zur Vertretung der indogermanischen Laryngale im Griechischen* (SBWien 377), Vienna.
- Renfrew, C. 1987. *Archaeology and Language: The Puzzle of Indo-European Origins*, Cambridge.
- Rhodes, R. 2006. "Ojibwe Language Shift: 1600–Present," <http://lingweb.eva.mpg.de/HunterGathererWorkshop2006/participants.html> (accessed June 24, 2007).
- Ringe, D. 2006. *A Linguistic History of English 1: From Proto-Indo-European to Proto-Germanic*, Oxford.
- Risch, E. 1949. "Altgriechische Dialektographie?" *MusHelv* 6, pp. 9–28.
- . 1955. "Die Gliederung der griechischen Dialekte in neuer Sicht," *MusHelv* 12, pp. 61–76 (repr. in *The Language and Background of Homer*, ed. G. S. Kirk, Cambridge 1964, pp. 90–105).
- . 1974. *Wortbildung der homerischen Sprache*, 2nd ed., Berlin.
- Rix, H. 1992. *Historische Grammatik des Griechischen: Laut- und Formenlehre*, 2nd ed., Darmstadt.
- . 1994. "Latein und Sabellisch," *Incontri linguistici* 17, pp. 13–29.
- Rix, H., et al. 2001. *LIV: Lexikon der indogermanischen Verben*, 2nd ed., Wiesbaden.
- Rodríguez Adrados, F. 1952. *La dialectología griega como fuente para el estudio de las migraciones indoeuropeas en Grecia*, Salamanca.
- . 1956. "Achäisch, Jonisch, und Mykenisch," *IGForsch* 62, pp. 240–248.
- Rose, C. B. 2008. "Separating Fact from Fiction in the Aiolian Migration," *Hesperia* 77, pp. 399–430.
- Ruijgh, C. J. 1991–1996. *Scripta minora ad linguam graecam pertinentia*, 2 vols., Amsterdam.
- . 1995. "D'Homère aux origines proto-mycénienes de la tradition épique: Analyse dialectologique du langage homérique, avec un excursus sur la création de l'alphabet grec," in *Homeric Questions: Essays in Philology, Ancient History, and Archaeology*, ed. J. P. Crielaard, Amsterdam, pp. 1–96.
- Scherer, A. 1959. *Handbuch der griechischen Dialekte* 2, 2nd ed., rev., Heidelberg.
- Schindler, J. 1977. "Notizen zum Sieversschen Gesetz," *Die Sprache* 23, pp. 56–65.
- Schlerath, B. 1981. "Ist ein Raum/Zeit-Modell für eine rekonstruierte Sprache möglich?" *Zeitschrift für vergleichende Sprachforschung* 95, pp. 175–202.
- Schmidt, J. 1898. "Das Zahlwort μῑα, ἰα," *Zeitschrift für vergleichende Sprachforschung* 36, pp. 391–399.
- Schmitt, R. 1977. *Einführung in die griechischen Dialekte*, Darmstadt.
- Schulze, W. 1933. *Kleine Schriften*, Göttingen.
- Schwyzler, E. 1939–1953. *Griechische Grammatik*, 4 vols., Munich.
- Sihler, A. 1995. *New Comparative Grammar of Greek and Latin*, Oxford.
- . 2000. *Language History: An Introduction*, Amsterdam.

- Slings, R. S. 1975. "The Etymology of BOYΛΟΜΑΙ and ΟΦΕΙΛΩ," *Mnemosyne* 28, pp. 1–16.
- Szemerényi, O. 1996. *Introduction to Indo-European Linguistics*, Oxford.
- Thumb, A., and E. Kieckers. 1932. *Handbuch der griechischen Dialekte* 1, 2nd ed., rev. E. Kieckers, Heidelberg.
- Trask, R. L. 1997. *The History of Basque*, London.
- . 2000. *The Dictionary of Historical and Comparative Linguistics*, Edinburgh.
- Trudgill, P. 1999. "A Window on the Past: 'Colonial Lag' and New Zealand Evidence for the Phonology of Nineteenth-Century English," *American Speech* 74, pp. 227–239.
- Versteegh, K. 1997. *The Arabic Language*, New York.
- Watkins, C. 2001. "An Indo-European Linguistic Area and Its Characteristics: Ancient Anatolia. Areal Diffusion as a Challenge to the Comparative Method?" in Aikhenvald and Dixon 2001, pp. 44–63.
- Weiss, M. 1998. "Erotica: On the Prehistory of Greek Desire," *HSCP* 98, pp. 31–61.
- West, M. L. 1988. "The Rise of the Greek Epic," *JHS* 108, pp. 151–172.
- Wolfram, W., and N. Schilling-Estes. 2003. "Dialectology and Linguistic Diffusion," in *The Handbook of Historical Linguistics*, ed. B. D. Joseph and R. D. Janda, Malden, Mass., pp. 713–735.
- Wyatt, W. F., Jr. 1970. "The Prehistory of the Greek Dialects," *TAPA* 101, pp. 557–632.
- . 1973. "The Aeolic Substrate in the Peloponnese," *AJP* 94, pp. 37–46.

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