To appear in *Language, history, ideology: The use and misuse of historical-comparative linguistics,* ed. by Hans Henrich Hock and Camiel Hammans. Oxford University Press (2022)

# What's in a name? Historical linguistics and the *Macedonia* name issue

Brian D. Joseph The Ohio State University

#### 1. Introduction

The "name issue" concerning the use of the toponym *Macedonia* by Greeks in Greece and by Slavs in what is now called the Republic of North Macedonia was for nearly three decades the subject of a bitter international dispute between the two nations, with both claiming "ownership" of the name and the right to use it.<sup>1</sup> In June 2018, a tentative agreement, known as the "Prespa Agreement", was reached whereby the Republic of Macedonia would be renamed as Republic of North Macedonia, and by 2019 this agreement was ratified by the parliaments of both nations, This issue is as multifaceted as one could imagine, with political, historical, economic, cultural, and ideological dimensions, yet those are not the focus of the present piece. Rather, my focus here is on yet another dimension that interestingly has not received as much attention as it should, especially among historical linguists, for it involves what amounts to an abrogation of the methodology of traditional historical linguistics in support of one side or the other in this *Macedonia* name issue. It is hard, as a result, therefore, not to see an ideological hand at play in the decision by some to skew the methodology in favor of a particular interpretation deemed desirable to one side in the conflict.<sup>2</sup>

Some background to the story of this international disagreement is needed to set the stage for the historical linguistic considerations. In particular, the basic political issue had to do with who – Greeks or Slavs (or both, or neither) – had the "right" to use the toponym *Macedonia*<sup>3</sup> and related forms such as the noun or adjective *Macedonian*. One reason it was an issue is that there has been a traditional geographic and administrative unit in Greece with the name *Macedonia* (in Greek, Μακεδονία [makeδονία]) and even now, after various administrative reforms in the past thirty years, there are three that include that name (Eastern Macedonia and Thrace, Central Macedonia, and Western Macedonia). The existence of this name in Greek geography and administration meant, as far as the Greeks were concerned, that any other nation was precluded from using that name. Nonetheless, the country to the north that used to be a province within Yugoslavia also had *Macedonia* as its official name, occurring in its constitution; this nation, prior to the Prespa Agreement, was known as the *Republic of Macedonia* (in Macedonian,

<sup>&</sup>lt;sup>1</sup> A useful brief recap of the dispute can be found in a 2 August 2018 article by Danilo Gjukovikj in the Washington Post, viewable at <a href="https://www.washingtonpost.com/news/monkey-cage/wp/2018/08/02/after-27-years-greece-and-macedonia-have-resolved-the-contentious-naming-dispute-heres-how/?noredirect=on&utm\_term=.d6471dfe7d19</a> (last accessed 15 June 2021). A more in-depth and scholarly collection of different articles and sources on the dispute can be found in Casule 2012, which contains, among various useful historical and political articles, a specifically linguistic one, Friedman 2012.

<sup>&</sup>lt;sup>2</sup> For examples of ideology driving the course of Greek scholarship, see Joseph 1985 regarding linguistic practice and Herzfeld 1982 regarding folklore studies.

<sup>&</sup>lt;sup>3</sup> Throughout this article, the name in question is given in its English spelling, < Macedonia >, except where there is reference to specific languages with a different spelling. The relationship among the various pronunciations of the name is discussed in §5 below.

Републлика Македонија [repúblika makedónija]). Hence, the "name issue": Can the Macedonian state and its citizens use a name that the Greeks see as belonging to them?

It is not clear that there is a cogent sense of "belonging" that informed the Greek position. On the one hand, it depends on a notion of "ownership" of words that may be hard to justify scientifically and legally. On the other hand, there are international parallels, within Europe even, to exactly the situation the Greeks object to: *Luxembourg* is both a province in southern Belgium and a sovereign country, the Grand Duchy of Luxembourg. Still, the key point is that from the Greek perspective, this was a valid reason for objecting to the use of the name by any entity other than Greece.

What complicated the issue further is that there is also an inescapable historical dimension to it, in that the term Macedonia itself has a long history. Specifically, it is tied historically to a tribe of the central Balkans from ancient times, now known largely from the reign of Philip II of Macedon (mid  $4^{th}$  century BC) and the later exploits of his son, Alexander the Great. While it is clear that under Philip's reign, Attic Greek was adopted as the language of the Macedonian court, the nature of the language it replaced, an Indo-European language that can be referred to as "Ancient Macedonian", is hotly debated, with the terms of the debate muddied by the relative scantiness of data on Ancient Macedonian, the language of the empire that Philip of Macedon and later Alexander were in charge of in ancient times. In addition, there are ambiguities in the Greek historiographical record as to whether the Ancient Macedonians were Greeks or not and whether their speech was intelligible to Greeks; Katičić (1976: 100-116) offers a valuable overview of the ancient record, and notes, for instance, that some ancients, e.g. Demosthenes, considered the Macedonians to be  $\beta\acute{a}\rho\beta\alpha\rho\sigma\iota$  ([barbaroi]) 'barbarian, i.e. non-Greek'.

The modern naming issue thus devolved into more than the question of who has the "right" to use the term *Macedonia* (and derivatives) in naming a region and/or state. It also entailed who – if anyone – has the right to lay claim to Alexander and his exploits and to the Ancient Macedonian language. Thus both sides looked to the ancient evidence, and especially the dialectal affiliation within Indo-European of Ancient Macedonian, for support of their position.

It is at this point that historical linguistics enters the dispute and becomes relevant. In particular, it can be argued that even with limited data, strict application of essential tools of historical linguistic research – the Comparative Method, dialectological principles (e.g. subgrouping via significant shared innovations), and Occam's Razor – yields a result that neither side could be happy with or proud of. Yet both persisted in "interpreting" the results in an ideologically tinged way, thus leading to what amounted to a perversion of good historical linguistic practice.

My goal in the discussion that follows is not to introduce new data or to offer new interpretations for existing data, but rather to take the data that was available and brought into the fray and to consider how it has been dealt with, for that is where it is possible to see that proper historical-comparative methodology was not followed as it should have. The fact that the dispute

<sup>&</sup>lt;sup>4</sup> See Reimer 1995/2012 for a discussion of the "ownership" issue from the perspective of international law concerning cultural property including cultural intangibles like names and symbols.

<sup>&</sup>lt;sup>5</sup> The ancient testimony concerning the Greek or non-Greek character of the Macedonians is admittedly somewhat mixed – see Katičić 1976: 104-108 – and there are chronological issues to be taken into consideration, e.g. whether the particular ancient source in question is focusing on Macedonians before or after Philip's overt Hellenization program, as well as foundational issues such as what it meant then to be "Greek".

has now been resolved does not detract from the potential interest and importance of chronicling how historical linguistic methodology was skewed in the decades leading up to the Prespa Agreement.

## 2. Sources on Ancient Macedonian

Our knowledge of Ancient Macedonian comes in large part from glosses in Hesychius, a  $5^{th}$ -century AD grammarian, glossator, and antiquarian who was interested in lexical curiosities of earlier Greek and worked to compile them. He had access to texts and dialect materials that we do not necessarily have now, and he drew significantly on the alphabetical lexicon of Diogenianus, a  $2^{nd}$ -century AD grammarian and lexicographer, who in turn drew on the great lexicon of the  $1^{st}$ -century AD lexicographer Pamphilus of Alexandria. Included in the lexical curiosities Hesychius listed were several words that he labeled as coming from "Makeδóveç" ([makedónes]), i.e. the Macedonians of ancient times. There are also several proper nouns, in particular place names and personal names, that either are known from historical sources to be Ancient Macedonian or are presumed to be so.

This does not exhaust the list of material, but an important fact is that there are no fully verifiable clearly Ancient Macedonian inscriptions to work with. There is a curse tablet, the katadesmos ('spell') of Pella, a capital of the Macedonian empire where Alexander was born. This tablet is dated to the mid 4th century and shows some Doric Greek features. However, it also has some progressive features that are characteristic of Koine Greek, the variety of Greek that emerged - via dialect mixture, dialect leveling, and the effects of significant numbers of secondlanguage speakers of Greek – throughout the Greek-speaking world in Alexander's empire. including Greece itself. One such form is < IME > (line 6), which apparently stands for the 1sg present form of 'be', what in Doric would be ἡμί ([e:mí]) and in Attic εἰμί 'I am' ([e:mí]); if that is the right interpretation of this problematic form,<sup>6</sup> then the spelling of the first syllable with the letter iota (< I >) suggests a pronunciation that is more in line with what is found in the later Koine (hence the designation of the feature as "progressive"). Moreover, the <E > in the second syllable is reminiscent of the Post-Classical middle voice inflection of 'be', 1sg εἶμαι ([i:mɛ]) versus active inflection seen in Classical siµú ([e:mí])), again suggestive of a Koine form. Thus Koine influence cannot be completely ruled out in this inscription, so that it might not fully reflect the state of the language of the Macedonians prior to the adoption of Attic Greek during Philip's rule. Some scholars, e.g. Masson (2003) among others, have argued that the Doric character of the katadesmos shows that a Doric Greek dialect was spoken in Macedonia, and this may well be right. However, such a finding does not necessarily mean that that Doric Greek dialect was the Ancient Macedonian language (a position alluded to in Engels 2010: 94-95). That is, it would appear that the katadesmos does not conclusively reveal anything about Ancient Macedonian, as opposed to giving information on the extent to which some variety of Ancient Greek was in use in 4th-century BC Macedonia. The same can be said about studies based on Greek inscriptions from the territory of the Ancient Macedonians, such as Hatzopoulos 1987, 2000, 2006, 2007, Panayotou 1993, Crespo 2012, and Méndez Dosuna 2012; that is, it is not the case that they necessarily reflect the Ancient Macedonian language and culture that some

<sup>&</sup>lt;sup>6</sup> While Méndez Dosuna (2012: 140) is inclined to see < IME > simply as a mistaken form, among various "plain slips of no phonetic significance" in curse tablets more generally, it seems odd that this one word would show two misspellings, both of which take the form in the direction of the Koine.

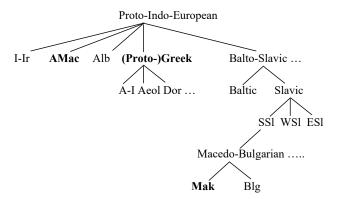
ancients, e.g. Demosthenes, referred to as non-Greek, but rather give information on the Greek of the region.8

Thus, it seems that one has to simply acknowledge that there is relatively little data to work with on Ancient Macedonian per se. This means that the assessment of each form becomes especially crucial, but also open to debate.

## 3. Modeling the relationship between Ancient Macedonian and Greek

Several hypotheses can be entertained as to how Ancient Macedonian fits in with regard to Greek and, for the sake of argument, the modern Slavic language Macedonian. Each hypothesis carries its own set of consequences for the "name issue". There are three models that can be considered, and they are described here and then illustrated in the tree-like representations that are common in historical linguistics ever since August Schleicher popularized such a model in 1853. In these diagrams, "AMac" is an abbreviation for Ancient Macedonian and "Mak" for the modern Slavic language, and the most important "players" in this drama are in bold:9

(1) The first type of relationship to consider is really no relationship, or at least no particularly close relationship, namely one in which Ancient Macedonian is on a par with Proto-Greek vis-à-vis Proto-Indo-European; in this model, Ancient Macedonian is a separate branch of the Indo-European family, distinct from the Greek branch, and with no particular connection to that branch, other, perhaps, than geographic. The tree representation of this relationship would look like this:



The second type of relationship would have Ancient Macedonian on a par with Proto-(2) Greek with each branching off from a node intermediate between Proto-Indo-European. That is, in such a model, Ancient Macedonian and Greek together form a separate branch distinct from the other branches of the family, a branch that can be referred to as "Hellenic", for the sake of terminological clarity - if "Greek" is used instead for the node

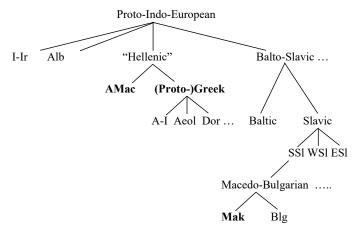
<sup>&</sup>lt;sup>7</sup> See footnote 16 for a consideration of Panyotou's position in this regard.

<sup>8</sup> I readily admit, however, that deviations from Attic Greek or the Koine seen in these inscriptions could reflect the effects of a non-Greek substratum (maybe Ancient Macedonian in the sense used here) as speakers shifted to Greek.

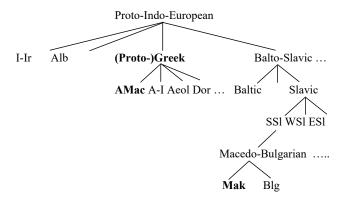
<sup>9</sup> Other abbreviations in the diagrams are: I-Ir = Indo-Iranian, Alb = Albanian, A-I = Attic-Ionic, Aeol = Aeolic, Dor

<sup>=</sup> Doric, SS1 = South Slavic, WS1 = West Slavic, ES1 = East Slavic, Blg = Bulgarian.

taking in AMac and (Proto-)Greek below, then one could call Ancient Macedonian a "Greek dialect", with a different sense, however, from the meaning of that phrase in (3):10



(3) Finally, a third type of relationship is one in which Ancient Macedonian is taken to be a dialect of Greek in the same way that Aeolic or Doric is a dialect of Greek; in such a model, Ancient Macedonian is on the same level vis-à-vis a "Proto-Greek" node in the tree as Aeolic or Doric. This seems to be what most scholars mean when they refer to Ancient Macedonian as a "Greek dialect", though one could use that designation also for (2), under some uses of certain terms, as indicated in the discussion immediately above. The tree representation of this relationship would look like this:



<sup>&</sup>lt;sup>10</sup> In this model, also, "Greek" as a term has unambiguous reference as the sub-branch that gives rise to Attic-Ionic, Aeolic, Doric, etc. One can contrast such terminological clarity with the rather clumsy ways in which Babiniotis (1992), adopting a model like (3), uses locutions like "Macedonian Greek" for Ancient Macedonian, and for "Greek" as in (2), "Greek with the exception of Macedonian", "the rest of Greek", and "other Greek".

As the discussion of each model suggests, (1) - (3) show a progression from Ancient Macedonian and Greek being totally separate in (1) and having no connection other than being Indo-European languages, to them being somewhat separate in (2) but with a tighter connection than any two random languages or branches in the tree, to them having no separation at all in (3) and instead being all under the same node at the same level of relatedness.

There are two details that are constant across the three models. First, all scholars who have considered the language to any extent agree that Ancient Macedonian is an Indo-European language and thus deserves a place, somewhere, on the tree diagrams in (1) – (3). This affiliation is guaranteed by the fact that there are several recurring and precise correspondences of form between Ancient Macedonian and other Indo-European languages, such as Greek (see §4 below for some examples), that cannot be due to chance, borrowing, or universality – the essence of the Comparative Method.  $^{11}$ 

The second constant detail in (1) - (3) is that there is no connection whatsoever between Ancient Macedonian (AMac) and modern Macedonian (Mak) other than their both being Indo-European languages; that is, at no point below the node for the proto-language do they branch off from the same node. The insistence by some in the Republic of Macedonia on claiming the legacy of Alexander the Great suggests a belief on the part of some in such a connection. This belief makes it possible to see the first way in this unfortunate "saga" in which the science of historical linguistics is sacrificed to an ideological position. That is, it is clear that whatever the ultimate assessment of the relation of Ancient Macedonian to Greek, positing any connection between Ancient Macedonian and modern Macedonian, other than recognizing both as descending ultimately from Proto-Indo-European, is absolutely impossible from a scientific point of view; for the "two Macedonians" to be related in some particularly close way, there would have to be typologically unusual – i.e. significant – innovations that are shared between the lineage leading to Ancient Macedonian and the lineage leading to modern Macedonian. However, there are no significant innovations connecting Ancient Macedonian with any part of Slavic, let alone a language that is well below the node for Balto-Slavic. While it does seem that both Ancient Macedonian and modern Macedonian have [b d g] from Proto-Indo-European \*bh dh gh, 12 that same development is found in Celtic and in Iranian, indicating that it is typologically common; as such, it is not linguistically significant, even if innovative in both languages, and thus does not point to a special connection between them.

Thus one side in the "name issue" adheres to a flawed application of historical linguistic methodology in an attempt to establish a historical connection that cannot be sustained scientifically. Still, it is worth noting that for the most part, Greeks tend to like the position in (3), and talk about Ancient Macedonian as "a Greek dialect". But can this position be sustained? It too runs into some issues of a terminological and methodological nature. On the terminological side, as indicated by the discussion in (2) and (3) (and see also footnote 10), it can be asked what "Greek dialect" means: does it mean "on a par with Aeolic, Attic-Ionic, Doric, etc." or does it mean "stemming from a node that encompasses both Ancient Macedonian and the protolanguage for Aeolic, Attic-Ionic, etc."? On the methodological side, in support of (3), with its ideological "baggage", the method seems to have been applied in a problematic way. Thus, it is appropriate to take stock of the relevant data and to determine how these facts are to be interpreted, before turning to the issue of how the interpretations show a problematic application of the methodology of historical linguistics.

<sup>&</sup>lt;sup>11</sup> See Joseph 2016 on the elegance and power of the Comparative Method, echoing Watkins 1995.

<sup>&</sup>lt;sup>12</sup> Though see below, §4.1, for some dissenting views about Ancient Macedonian.

## 4. The relevant data and its interpretation

One key set of facts relevant to the issue of the affiliation of Ancient Macedonian vis-à-vis Greek involves the outcome of Proto-Indo-European voiced aspirates (\*bh dh gh). These facts have been the basis for much of the controversy on the linguistic side concerning the status of Ancient Macedonian. They are presented and discussed in §4.1. Another set of facts, involving intervocalic \*s, has gotten very little attention, even though in some ways they parallel the voiced aspirate facts; these facts are discussed in §4.2.

## 4.1 Ancient Macedonian $< \beta \delta \gamma >$

Uncontroversially for all scholars, Ancient Macedonian shows orthographic  $<\beta$   $\delta$   $\gamma$  > in words in which Ancient Greek has  $<\phi$   $\theta$   $\chi$  > where derivation from PIE \*bh dh gh is assured. These facts have been known for over a century, and are summed up well in Katičić 1976: 100-116. Although the scholarship on this whole issue is considerable, <sup>13</sup> several important and influential discussions are the studies by Kretschmer (1896), Hatzidakis (1934), and Babiniotis (1992). Some representative data is given in (4), with the relevant sounds highlighted in bold; " $\sim$ " stands for "corresponds to":

(4)	<u>AMac</u>	~	Greek	PIE Source	Gloss
	Βερε-νίκη		Φερε-νίκη	*bhere- (first part)	proper name
	ἀβροῦτες		<b>ὀφ</b> ρύες	*H <sub>3</sub> <b>bh</b> ru-	'eyebrows'
	δανέω		θανεῖν	*dh(w)en-	'kill'
	ἀ <b>δ</b> ραῖα		αὶθρία	*H <sub>2</sub> ai <b>dh</b> -	'clear sky'
	$\gamma$ όλα <sup>14</sup>		γολάδες	*ghol-nd-)	'entrails, intestines'

There is some controversy, however, as to how these orthographic characters are to be interpreted phonetically, in Ancient Macedonian and even in Greek; and decisions on that front have an impact on how these facts interact with the relationship question.

The straightforward phonetic interpretation is that Ancient Macedonian  $<\beta$   $\delta$   $\gamma>$  are to be taken as equivalent phonetically to their presumed ancient Greek values and thus as the voiced stops [b d g], and that ancient Greek  $<\phi$  0  $\chi>$  represent voiceless aspirated stops [ph th kh]. All of the studies cited above accept this phonetic interpretation for ancient Greek, sathly although there is a difference of opinion regarding Ancient Macedonian: for Kretschmer and Hatzidakis, the Ancient Macedonian  $<\beta$   $\delta$   $\gamma>$  represent voiced stops, while Babiniotis sees them

<sup>&</sup>lt;sup>13</sup> Katičić 1976 and Kalleris 1976: 355-356 are excellent bibliographic sources for the relevant studies up to their time. For more recent work and discussion of more recent studies, see Crespo 2012, Hatzopoulos 1987, 2000, 2006, 2007, and Méndez Dosuna 2012. I am deliberately leaving these more recent works out of the scope of my consideration of how historical linguistic methodology has been abused in this debate, as my sense is that they are studying the Greek of 4th-century BC Macedonia more than they are studying Ancient Macedonian.

 $<sup>^{14}</sup>$  By way of illustrating how tenuous some of the data is, and thus how cautious one has to be when drawing conclusions from the data, it must be acknowledged that this form with medial -λ- is a suggested reading for the  $\langle \gamma \delta \delta \alpha \rangle$  that actually occurs in Hesychius; the -δ- leads to problems of interpretation that the assumption of a -λ-helps to resolve, as discussed in Beekes 2010: 282, s.v.

<sup>&</sup>lt;sup>15</sup> Julian Méndez Dosuna, in various publications over the years (1991-1993, 2009, 2012), presents a dissenting opinion, however; in Méndez Dosuna 2012: 134, he states 'Contrary to the prevalent opinion, I am persuaded that, in the most favorable contexts, the spirantization of the aspirates and voiced stops was already under way in the classical period in some, if not most of the ancient Greek dialects'.

as voiced spirants (which he writes as b d g), thus with the Modern Greek values for these letters. Moreover, even though one would think that the nature of the relationship between the languages would be determined as an outcome of what the developments are, in some instances, scholars have made assumptions about the relationship; it follows from that that they differ too as to the intermediate stages needed in each account.

For Kretschmer, the development is as in (5a):

(5) a. PIE \*bh dh gh > AMac b d g   
 > Greek 
$$p^h t^h k^h$$

This differential development is consistent with model (1), where Ancient Macedonian and Greek are separate and distinct branches of Indo-European, and thus constitutes what Babiniotis (1992: 29-30) refers to as the "split theory". Interestingly, Babiniotis, in discussing this theory uses the designations "Greek with the exception of Macedonian" and "Other Greek" for the dialects that undergo the shift of \*bh dh gh to  $p^h t^h k^h$ , phraseology that presupposes the relationship in (2) or (3), even though that was not necessarily Kretschmer's view (see also footnote 10). In fact, Hatzidakis and Babiniotis both seem to adopt (2) or (3), interestingly, as their starting point, and thus derive the Ancient Macedonian outcomes from Proto-Greek  $p^h t^h k^h$ , differing only in how they view the transitions and the ultimate outcome. This in itself might seem like a breach of appropriate methodology, in that they begin with what might be considered a result and see how to get that result, rather than letting the chips fall where they may regarding the model's validity or lack thereof; however, it leads to other problems as well.

Thus, Hatzidakis sees the developments as unfolding as in (5b), while for Babiniotis, the developments took place as in (5c):

(5) b. PIE \*bh dh gh > Proto-Greek \*ph th kh > AMac b d g  
c. PIE \*bh dh gh > Proto-Greek \*ph th kh > AMac b d g (= 
$$v \delta \gamma$$
)

In each of these scenarios, the developments add up to a more complicated account, one that posits more entities – in these cases, more changes – than Kretschmer's account in (5a). They thus would seem to run afoul of Occam's Razor, a scientific evaluative principle that has its roots in Aristotelian parsimony (cf. Aristotle's *Analutikà Hústera* (Posterior Analytics)), and is often stated in Latin as *entia non multiplicanda sunt praeter necessitatem*, i.e. 'Entities [in an analysis] are not to be multiplied beyond necessity'. The *praeter necessitatem* 'beyond necessity' part of the principle essentially means that in comparing two or more accounts of the same phenomenon, this principle can be invoked only if all things are equal, for if the conditions were not equal, presumably there is, or should be, a necessity for a given posited entity.

A comparison of the scenario in (5a) with those in (5bc) shows that the latter scenarios involve more "entities", in this case, more intermediate stages and thus more changes than the account in (5a). The entities here are not just the number of stages, but also the nature of the changes involved: in each case, going from voiceless aspirated stops  $p^h t^h k^h$  to anything that is not a stop, not aspirated, and/or not voiced involves several changes in distinctive features. The featural changes and thus the basis for comparison are shown in (6), where boldface indicates a feature that has changed, "asp" stands for "aspirated", and "voi" stands for "voiced":

```
(6) \qquad \text{a. } [+\text{stop, } +\text{asp, } +\text{voi}] > [+\text{stop, } -\textbf{asp, } +\text{voi}] \quad (\text{AMac}) \\ \text{e.g. bh} \qquad \text{b} \\ [+\text{stop, } +\text{asp, } +\text{voi}] > [+\text{stop, } +\text{asp, } -\textbf{voi}] \quad (\text{Greek}) \\ \text{e.g. bh} \qquad \text{p}^{\text{h}} \\ \text{b. } [+\text{stop, } +\text{asp, } +\text{voi}] > [+\text{stop, } +\text{asp, } -\textbf{voi}] > [+\text{stop, } -\textbf{asp, } +\textbf{voi}] \quad (\text{AMac}) \\ \text{e.g. bh} \qquad \text{p}^{\text{h}} \qquad \text{b} \\ \text{c. } [+\text{stop, } +\text{asp, } +\text{voi}] > [+\text{stop, } +\text{asp, } -\textbf{voi}] > [-\text{stop, } -\textbf{asp, } +\textbf{voi}] \quad (\text{AMac}) \\ \text{e.g. bh} \qquad \text{p}^{\text{h}} \qquad \text{b} \\ \end{cases}
```

Thus, the scenario in (5a) has changes in two features, one each for Ancient Macedonian and Greek (cf. (6a)), whereas (5b) shows changes in three features in the progression from Proto-Indo-European through Proto-Greek and on to Ancient Macedonian (cf. (6b)), and (5c) has four changes (cf. (6c)). So the question that needs to be asked is whether these additional entities are posited praeter necessitatem 'beyond necessity', or whether they are simply a consequence of the assumption (embodied in (2) and (3)) that both Ancient Macedonian and Greek passed through a devoicing stage  $(bh > p^h)$ . <sup>16</sup>

What makes such a series of developments a "necessitas" for Hatzidakis is the Hesychian form κεβαλή (labelled as Macedonian)<sup>17</sup> and some apparent derivatives of this form in proper names, since the form seems to be related to Greek κεφαλή ([kɛpʰalé:] 'head', from PIE \*ghebhl- (cf. Old High German gebal 'skull'). The initial κ- is not the expected outcome in Macedonian of a PIE voiced aspirate, as seen in (4); however, in the roots in (4) there is only one aspirate, whereas in \*ghebh-l-, there are two aspirates, so that one presumably has to reckon with possible effects of Grassmann's Law, the sound change in Greek (and also Indo-Iranian and Tocharian) by which there was the dissimilatory loss of aspiration in the first of two aspirates in a root, as in τεῖγος ([teîkhos]) 'wall' from PIE \*dheigh- (cf. Sanskrit deha- 'body'). However, the outcome in κεβαλή is a voiceless (unaspirated) stop, κ-, in initial position – and the expected  $< \beta >$  medially - suggesting, for Hatzidakis, that there was indeed first devoicing on the way to Macedonian, giving the root form  $*k^hep^h$ -, and then a development of  $*k^hep^h$ - to  $*kep^h$ - (and then further, via \* $p^h > b$ , to the attested  $\kappa \epsilon \beta$ -). Still, this is just one form, and there are other possible explanations; as Katičić (1976: 112) observes, 'one cannot be sure that this Macedonian word was not reshaped on the Greek model while the real Macedonian form was γαβαλά, preserved in Hesychius without an ethnicon'. It can be noted further that it is not a strike against Katičić's suggestion that only the initial stop was "Hellenized" and not the medial, for in contact situations, it is the case that individual sounds in a cognate word can be affected without other sounds being affected; Brown and Joseph (2015) report on such "hybrid" forms in the presentday Greek of southern Albania, in which Greek-Albanian bilinguals occasionally substitute Albanian sounds for the expected Greek sounds in related words – one example out of many that can be listed is μεχανικός ([mexanikós]) 'mechanic' with -ε- for expected [i] in the first syllable

<sup>&</sup>lt;sup>16</sup> Panayotou (1993: 28, apud Crespo 2012: 127), referred to in §2, writes that the development of Proto-Indo-European voiced aspirates into voiced stops, as discussed here, 'did not characterize the entire Macedonian language but only the language of one of the tribes of the non homogeneous Macedonian nation before the time of Philip II.' I find the reasoning here somewhat problematic. If it is acknowledged that there is even one variety of speech used in ancient Macedonia that deviates significantly from Greek (in its conventional sense), then that variety can be identified as the Ancient Macedonian referred to in ancient sources, regardless of the status of Greek in some form or other (possibly a significantly Hellenized Macedonian) among other speakers in the region.

<sup>&</sup>lt;sup>17</sup> Katičić (1976: 112) gives the form as κεβαλά, whereas Beekes (2010: 662, 683) gives it as κεβαλή. Inasmuch as the final vowel is irrelevant to the point at issue here, my decision to follow Beekes is an arbitrary choice.

(cf. Standard Modern Greek μηχανικός ([mixanikós])) based on the parallel Albanian word *mehanik*.

Moreover, Hamp (1990-1991) has argued that  $\kappa\epsilon\beta\alpha\lambda\dot{\eta}$  is not to be connected with Greek  $\kappa\epsilon\phi\alpha\lambda\dot{\eta}$ , from a root \*ghebh-, but rather goes with Albanian qafe 'nape' and Medieval Welsh cun 'ruler' (from a metaphorical use of 'head'), from a root \*kep-; in that case,  $\kappa\epsilon\beta\alpha\lambda\dot{\eta}$  would be irrelevant for the question of the development of the PIE voiced aspirates, though it may well show a contamination of the outcome of the \*ghebh- root (perhaps  $\gamma\alpha\beta\alpha\lambda\dot{\alpha}$ ) and the \*kep- root. It seems best, therefore, not to put too much weight on  $\kappa\epsilon\beta\alpha\lambda\dot{\eta}$ , so that the "necessitas" for positing a devoicing development on the way to Ancient Macedonian evaporates.

For Babiniotis, the "necessitas" justifying the multiplication of developments is a linkage he sees with the developments of the PIE voiced aspirates in Italic and in Greek. That is, Italic shows \* $f \theta \chi$  as the outcome of PIE \*bh dh gh, and Babiniotis posits that this was the result of devoicing (e.g.,  $bh > p^h$ ) followed by spirantization (e.g.  $p^h > f$ ). He thus sees a parallelism between the later (post-Classical) Greek spirantization of Ancient Greek  $p^h t^h k^h$  into Modern Greek  $f \theta \chi$ , and the Italic developments on the one hand – noting further that Latin took Proto-Italic \* $f \theta \chi$  into voiced stops word-medially (e.g. nebula 'cloud' < \*nebh-olā, medius 'middle' < \*medh-ijo-s), presumably via  $f \theta \chi > v \delta \gamma$  and then  $v \delta \gamma > b d g$  — and the Ancient Macedonian developments on the other, since he accepts the view that orthographic <  $\beta \delta \gamma >$  for Macedonian represent voiced spirants. Thus he sees all these developments as being of a piece, with the PIE voiced aspirates devoicing and then spirantizing, whether they remained unvoiced or (re)voiced.

In all of these scenarios, the "necessity" is built on assumptions of a connection with other developments. In Hatzidakis's case, it is based on a reasonable assumption of a connection between  $\kappa\epsilon\beta\alpha\lambda\dot{\eta}$  and  $\kappa\epsilon\phi\alpha\lambda\dot{\eta}$ . He of course cannot be faulted for not adopting an etymological connection posited by Hamp several decades later, but the possibility of explaining the initial  $\kappa$ -of  $\kappa\epsilon\beta\alpha\lambda\dot{\eta}$  via a Hellenization of the form, even though articulated overtly by Katičić also only several decades later, could have been seen by anyone willing to admit Attic influence on Ancient Macedonian once Philip's Hellenization program got under way. Moreover, even though admittedly there is very little data to work with in assessing Ancient Macedonian, one always has to keep in mind the methodological principle embodied in the Latin maxim *unus testis nullus testis*, 'one witness (is equivalent to) no witness'; applied to  $\kappa\epsilon\beta\alpha\lambda\dot{\eta}$ , it means that the Grassmann's-Law interpretation of this form is no more compelling than Katičić's partial Hellenization account or Hamp's alternative etymology account.

In Babiniotis's case, the "necessity" is based on a presumed connection between the Italic developments and the Greek and Macedonian developments. However, despite interactions between Greeks and some Italic groups in Magna Graecia in archaic Greek times during Greek colonization of, e.g., southern Italy, and despite cultural connections between ancient Greece and ancient Rome in post-Classical Greek times, there are no particular shared innovations that link Greek and Italic linguistically. <sup>19</sup>

Taking all these counter-indications together, it seems that it must be admitted that it is very likely that "things are equal" in the various accounts in (5) and (6). That means that

**Commented [HH1]:** I have taken the liberty of rephrasing this part to make it easier to follow for our readers

BDJ: OK, thanks!

<sup>&</sup>lt;sup>18</sup> For what it is worth, such an explanation occurred to me independently before I read it in Katičić, and I do not pretend to have the linguistic acumen that Hatzidakis had.

<sup>&</sup>lt;sup>19</sup> Thus the relationship between Greek and Italic is like that modeled in (1); this situation can be contrasted with that for Italic and Celtic, where there has been on-going discussion for over a century about the possible existence of an Italo-Celtic subgroup within Indo-European (see Jasanoff 1997 for the latest viewpoint) or that for Greek and Armenian, where there has been considerable discussion as to a possible Helleno-Armenian subgroup within Indo-European (see Clackson 1995 for an overview and assessment of the issues).

Occam's Razor becomes relevant as an evaluation metric in comparing the different accounts, so that these differing accounts can be assessed according to number of entities that they posit. And, as indicated in the discussion above concerning (5) and (6), Occam's Razor would give the edge to (5a), inasmuch as it involves fewer featural changes than any of the other accounts in (5b) and (5c). Babiniotis himself seems to recognize this when he says, regarding going through an intermediate stage of devoicing from PIE \*bh dh gh to b d g (e.g., \*bh > \*ph > b), that such a development 'has a [sic] prerequisite the change of two crucial phonetic features, those of voicing and aspiration, and it cannot be effected at a single stage' (1992: 32).

Moreover, there are other methodological issues that can be raised with some of these accounts. For instance, Babiniotis (2012: 34-35) says that a change of \*bh > b (etc.) would lead to mergers, e.g. between φαίνω ([pʰaino:]) 'appear' (< PIE \*bh-) and βαίνω ([baino:]) 'go (< PIE \*gʰ-) – both becoming \*βαίνω – 'that would lead to a disorder in the arrangement of the phonological distinctions of Greek'. However, mergers do occur, and once-minimal pairs can indeed come to be homophones, as shown by the developments in the later Greek vowel system, where Classical < ι >, < η >, < υ >, < ει >, and < οι > all merged to [i], giving homophones like λοιμός 'plague' / λιμός 'hunger', λῦμα 'filth' / λῆμα 'desire', ἴλη 'crowd' / ὕλη 'wood' (with regular loss of h ('psilosis''), νίμμα 'water for washing' / νήμα 'thread', among many others. Moreover, constraining sound change by reference to avoidance of creating homophones runs counter to the Neogrammarian view of sound change as being exclusively conditioned by phonetic factors and nothing else.<sup>20</sup>

In addition, the sound shifts that are posited in (5b) and (5c) show a degree of unnaturalness; as Brixhe (1999: 58, apud Crespo 2012: 129) observes, they are possible but rather uneconomical. Moreover, one has to wonder what motivates them, as they are presented as unconditioned changes. At the very least, the shift of \*bh > b is understandable in terms of a possible inherent instability of sounds like \*bh; one can note that the PIE voiced aspirates are preserved as such only in Indo-Aryan among all the branches and sub-branches of the family. And, in some instances, several features seem to have changed simultaneously, again possible but not clearly motivated.<sup>21</sup>

Thus the accounts assessed here of Hatzidakis and of Babiniotis are problematic and seem to misapply historical linguistic methods in service of an assumption of a particular model of relatedness. Taking the Comparative Method seriously and using Occam's Razor as the basis for making decisions about the paths of development, and working with the data concerning PIE \*bh dh gh, one inevitably is led to the conclusion that the type of relationship modeled in (3) above is dispreferred and counter-indicated; Ancient Macedonian seems to have undergone a change that none of the Greek dialects (in the standard sense) did, and they underwent a change that Ancient Macedonian did not. Nonetheless, repeatedly, Greek scholars have generally opted precisely for (3), assuming a particular conclusion, it would seem, and seeing which scenario fits that conclusion rather than vice versa. Why do they do so? Even though one would hope that the accounts would reflect a sober scientific basis, it seems difficult to ignore the ideological angle here; that is, it appears that historical linguistic methodology has been bent in service of a political viewpoint, namely aiming to justify a conclusion that the Ancient Macedonians were Greeks and therefore that only the Greeks have a right to the name "Macedonian".

<sup>&</sup>lt;sup>20</sup> Admittedly, not all practicing historical linguists adhere to Neogrammarian principles, but for those who do, this failure to observe the ban on nonphonetic conditioning of sound change would be problematic.

<sup>&</sup>lt;sup>21</sup> There are some historical linguists, e.g. Picard (1994), who see sound change as always "minimal", i.e. one "basic phonetic process" at a time, so that the simultaneous change of two features, in such a model, would not be possible.

#### 4.2 Intervocalic \*s

As the presentation in §4.1 shows, a small number of forms concerning the outcome of the PIE voiced aspirates in Ancient Macedonian has generated a considerable amount of discussion and a rather large literature. The overall effect, however, as interpreted here, argues against the model in (3) and in favor of that in (1) or (2). As it happens, there is an additional development that has not gotten the attention that the voiced aspirates have but which nonetheless, under certain assumptions, shows a similar sort of outcome.

This further development is shown by one form, that, even with the caveat voiced by the Latin maxim cited above (*unus testis nullus testis*), is potentially very significant here. The form is admittedly somewhat disputed but can be given a coherent account that makes it relevant to the issues under consideration here.

The form in question is the entry ἄλιζα for Ancient Macedonian, which is given the gloss ἡ λεύκη τῶν δενδρῶν' 'white leprosy of the trees', taken by some scholars (see Katičić 1976: 110 n. 161) rather to stand for 'ἡ λεύκη τὸ δένδρον' 'abele (white poplar) the tree'. <sup>22</sup> If this interpretation is correct, then ἄλιζα can be etymologized as cognate with Russian *olĭxa* 'alder' and Old High German *elira* 'alder', and possibly Spanish *aliso* 'alder' too (proposed in Barić 1926: 221, and Kretschmer 1927: 305); it would thus be from a pre-form \* $alis\bar{a}$ . <sup>23</sup> If so, then ἄλιζα shows intervocalic -z- from PIE \*s. All of the Greek dialects (understood in the standard sense, that is Greek without Ancient Macedonian) show instead the loss of intervocalic \*s (presumably through a stage of h) where Greek has -O-, as shown by forms like γένεος ([geneos]) 'of a kind', from \*genes-os, or ἰερός ([hieros]) 'holy', from \* $isH_1ro$ - (cf. Vedic  $isir\acute{a}$ -'rushing, strong').

If this etymology is to be taken seriously, then how would the developments be accounted for? Kretschmer has an easy time of it, with a (1)-like model: Ancient Macedonian shows voicing of intervocalic \*s, and Greek shows loss. Hatzidakis and Babiniotis, by contrast, with their (3)-like model, would have to posit either the path in (7a) or that in (7b):

(7) a. s > z for all the languages and then  $z > h > \emptyset$  in the non-Macedonian languages/dialects

b. s > h for all and then h > z for Macedonian and  $h > \emptyset$  for the others

These developments are in principle possible, but involve some unlikely steps and in any case require far more in the way of "entities" than the straightforward development in a Kretschmerlike account, i.e. more changes; moreover, some of the changes, in particular h > z, are phonetically unnatural to the point of being unprecedented, and thus involve difficult assumptions. The upshot is that this form, if interpreted as suggested here following Barić and Kretschmer, shows that Greek dialects (excluding Macedonian) collectively underwent a change that Macedonian did not, and Macedonian underwent a change that they did not, that is, developments that are consistent with the model in (1) or (2), but inconsistent with the model in (3).

Commented [HH2]: I've added 'sttong' (Grassmann's *kräftig*, to make the semantic connection clearer

BDJ: OK, thanks!

 $<sup>^{22}</sup>$  The post-Classical loss of vowel length and weakness of final -n, especially before a consonant, makes this emendation a conceivable one.

<sup>&</sup>lt;sup>23</sup> Katičić (1976: 110, n.161) dismisses this etymology and preform as being 'based on a conjectural meaning'; he concludes that 'the Indo-European sound complex in the other cognate words ... is by no means clear enough to make such an explanation of the Macedonian word as evident as its proponents claim it to be'.

To my knowledge, the facts about intervocalic \*s have not been addressed in the way that the voiced aspirate developments have, even though the outcome is similar. While caveats such as those voiced by Katičić may be responsible for the silence, it is interesting that neither Hatzidakis nor Babiniotis mentions  $\alpha\lambda \zeta\alpha$  at all, not even to dismiss it.

#### 4.3 Weighing the claims

Given the politically charged atmosphere associated with these facts and these different possible scenarios, it seems reasonable to conclude that a decision in favor of (3) – which flies in the face of both Occam's Razor and the Comparative Method and is problematic for other reasons, such as naturalness – is driven by ideology. That is, it appears that a particular outcome is desired and thus a means of reaching that outcome is constructed from the facts at hand. For that reason, it seems that usual historical linguistic practice here is being applied in an aberrant way, so as to serve the whims of ideology, rather than in a totally objective manner.

## 5. More potentially relevant methodology

By way of working toward a conclusion, I return to one way, mentioned at the outset, in which another method used in historical linguistics in a certain form can contribute to the debate. I start with the observation that all who are concerned about the use of the term *Macedonian* act as if the Greek term and the Slavic term are somehow the same, even though phonetically the Greek is [makeðonía] and the Slavic is [makedónija], thus with a fricative [ð] in the middle syllable in Greek where the Slavic has a stop [d], and with the stress on the penult in Greek but the antepenult in Slavic. There is also the overt glide [j] in the Slavic which is absent from the Greek. The fact of these differences is interesting in and of itself for a few reasons.

First, it raises a valid question as to what counts as "the same". The equating, by everyone involved it seems, of [makeðonía] and [makedónija], despite their differences, points to this as a case of what Culicover and Jackendoff (2012: 305) refer to as 'a fundamental, domaingeneral cognitive relation' of "same-except", in which 'entities in proximity to one another are judged to be the Same, Except for some part or property where they differ'.

Focusing on "sameness" is what makes the name issue so inflammatory. If either side were willing to admit that there is less sameness than meets the eye, the issue would become a nonissue.

A second point of specifically historical linguistic interest here is that it appears that the shared etymology of this proper noun and the similarities that the various language forms show in spelling seem to count for more than the differences in the judging of sameness. Both the Greek form and the Macedonian form derive from an earlier form, the Ancient Greek stem Μακεδον- in the place name Μακεδονία ([makedonía]) and the group name Μακεδόνες ([makedónes]). Importantly, as the phonetic representations show, neither language actually continues the place name unchanged. The toponym and group name are said to derive from the Ancient Greek adjective  $\mu$ ακεδνός 'tall, taper'. <sup>24</sup>

Similarly, the terms used elsewhere in European languages, such as French  $mac\acute{e}doin$  ([masedw $\~{\epsilon}$ ]) or English Macedonia ([mæsedówniə]), and so forth, are generally judged as somehow being the "same" word (actually, "same-except"), even though quite different in key consonants and vowels too. One has to wonder too if orthography and conventional

<sup>&</sup>lt;sup>24</sup> See below for more on the deeper etymology of *makedon*- within Ancient Greek.

transliteration practices (for the Cyrillic and the Greek alphabets) play a role too in the equating of these phonetically quite varied forms:

```
English [mæsədówniə] < Macedonia >
Greek [makeðonía] < Μακεδονία > // makedonia //
Macedonian [makedónija] < Македонија > // makedonija //
```

Trying to deal with these differences in conjunction with evident similarities summons up a method that linguists, especially, in recent years, computational dialectologists, have been using for measuring the difference between forms in an objective way. This is the so-called "Levenshtejn Distance" (LD), also known as the "string-edit distance". This is a measure of how many operations – limited to substitution, addition, and deletion – are needed to map between any two forms. For instance, the relationship between American English *idea of* and British English *idear of* would involve a mapping that yields an LD "score" of 1, the  $r \sim \emptyset$  difference being one of deletion or addition depending on the directionality one assumes; similarly, the difference between American [kart] and British [ka:t] would be 1, with r/r substitution being the relevant operation.

LD allows, therefore, for a direct comparison of forms and an evaluation of the degree of relationship between the forms under comparison. <sup>25</sup> It is interesting, and perhaps instructive, then, to see what LD shows with regard to the forms of *Macedonian* in various languages, in case it might provide a measure that could resolve the "same-except" dimension to the "name issue" discussed above. In particular, a comparison can be made of the forms from Ancient Greek, Modern Greek, Macedonian, and various Western European languages.

The Levenshtejn distance between the Modern Greek and the Macedonian forms is 4, reflecting the need for one consonant change, two stress-related changes, and one addition/deletion change:

```
Greek [m a k e ð o n í a]
Macedonian [m a k e d ó n i j a]
1 2 3 4
```

Between the Greek and the Macedonian forms and the English form, there is considerable distance, with each comparison registering a distance of 6, reflecting differences in the vowels, the consonants, and stress placement:

```
      English
      [mæsədówniə]

      Greek
      [makeðonía]

      12345678

      English
      [mæsədówniə]

      Macedonian
      [makedónian

      123456
      78
```

<sup>&</sup>lt;sup>25</sup> Importantly, I say 'between **forms'**; Levenshtejn distance is not a measure of **language** relatedness and so cannot be applied to the models in (1) - (3).

Furthermore, both Macedonian and Modern Greek can be compared to the Ancient Greek source; the difference in the [i]'s is due to the different realization of accent between the two stages of the language, with accent in Greek now being a stress accent whereas in ancient times it was a pitch accent:

AncGreek ModGreek	[m a k e d o n í a] [m a k e ð o n í a] 1 2
AncGreek	[makedoní a]
Macedonian	[makedónija]

This is essentially a tie, inasmuch as the -j- in the Macedonian could in principle be ignored as an automatic consequence of the transition from -i- to -a-. In that sense, then, both Modern Greek and Macedonian are reasonable reflections of the Ancient Greek starting point, and neither side can really claim to have a more faithful representation of the source.

Still, it is not clear that this means anything, especially since etymologizing *Makedon*- is tricky; as noted above, it seems to be related to Ancient Greek  $\mu$ ακεδνός ([makednós]) 'thin', but the implicit segmentation, especially in view of the by-form Μακέτης ([makéte:s]) 'Macedonian', is *make-dn*- ~ *make-don*-. That division, however, yields a base that does not appear to be a canonical Indo-European shape, with -*a*- vocalism and two syllables, and the suffix is unusual as a personal noun-formative. Thus Beekes (2010: 894, s.v.), echoing Fick (1905: 90), suggests a Pre-Greek origin for the word; the putative connection with Greek  $\mu$ ακρός 'long' would thus be wishful thinking on the part of scholars or else a folk etymology. It is ironic that this word that became such a flashpoint for Greekness as far as many Greeks are concerned might not even be a Greek word in terms of its deeper etymology.

### 6. Conclusion

My purpose in this chapter has not been to present anything new about Ancient Macedonian or to resolve the manifold issues that it raises, both regarding the past and regarding the present, but rather to offer a perspective on why some of the positions staked out by participants in the discussion have been taken.<sup>26</sup> By way of conclusion, therefore, it is useful to recall that the facts and interpretations discussed here make it clear that trying to decide which group of speakers of modern languages "owns" the Ancient Greek word – if such ownership makes any sense linguistically or legally in the first place – is fraught with problems, doomed by ambiguous evidence. As a result, there is no clear-cut outcome on that front. And, more importantly for the matter of how scientific principles are treated by various parties to this controversy, the evidence of how the facts have been interpreted suggests that the Macedonian name issue really does seem to be a case where it is legitimate to assign blame all around. In this conflict concerning the use of the name "Macedonia", from claims of a connection between Ancient Macedonian and

<sup>&</sup>lt;sup>26</sup> Although they may be evident from the way I have discussed the issues, my personal views on the status of Ancient Macedonian are irrelevant here. Nonetheless, even if my own position is wrong, perhaps refuted by some of the more recent work cited here that postdates the studies that were my main focus here (see footnote 13 above), the central point under consideration here is not vitiated, namely how historical linguistic methods have been abused by some participants in this debate.

Macedonian to claims of a particularly tight connection between Ancient Macedonian and Greek, there are no winners, and in fact, the methodology of historical linguistics is perhaps the real loser, taking an ideologically based beating by practitioners on both sides.

#### References

- Babiniotis, George. 1988-1989. Ē thésē tēs makedonikḗs stis arkhaíes ellēnikḗs dialéktous: To próblēma tēs katatákseōs tēs arkhaías makedonikḗs dialéktou. [The place of Macedonian among the Ancient Greek dialects. The problem of the classification of the Ancient Macedonian dialect.] *Glossologia* 7-8: 53-69.
- Babiniotis, George. 1992. The question of mediae in Ancient Macedonian Greek reconsidered. *Historical philology: Greek, Latin and Romance*, ed. by Bela Brogyanyi and Reiner Lipp, 29-40. Amsterdam/Philadelphia: Benjamins.
- Barić, Henrik. 1926. Miscellen. *Archiv za arbanasku starimu, jezik i etnologiju* 3: 213-221. Beekes, Robert (with the assistance of Lucien van Beek). 2010. *Etymological dictionary of Greek*. Leiden: Brill.
- Brown, Christopher G., and Brian D. Joseph. 2015. On hybrid forms in language contact: Some evidence from the Greek of southern Albania. *Albano-Hellenica* 6: 1-8. (Papers from the Second International Conference of Greek-Albanian Studies, Tirana, Albania, March 27-28, 2015, ed. by Aristotel Spiro.)
- Casule, Mircela D. (ed.-in-chief). 2012. The name issue revisited. An anthology of academic articles. Skopje: Macedonian Information Centre.
- Clackson, James. 1995. The linguistic relationship between Armenian and Greek. Oxford: Wiley-Blackwell.
- Crespo, Emilio. 2012. Languages and dialects in ancient Macedon. Ancient Macedonia: Language, history, culture, ed. by Georgios K. Giannakis, 121-131. Thessaloniki: Centre for the Greek Language.
- Culicover, Peter W., and Ray Jackendoff. 2012. Same-except: A domain-general cognitive relation and how language expresses it. *Language* 88: 305-340.
- Engels, Johannes. 2010. Macedonians and Greeks. A companion to ancient Macedonia, ed. by Joseph Roisman and Ian Worthington, 81-98. Malden, MA: Wiley.
- Friedman, Victor A. 2012. The so-called Macedonian name issue in the context of Modern Macedonian historiography, language and identity. In Casule (ed.-in-chief) 2012: 239-252.
- Hamp, Eric P. 1990-1991. Ancient Macedonian voiced and spirant obstruents. *Glossologia* 9-10: 7-8
- Hatzopoulos, Miltiades. 1987. BILARRA TELLOU? Zeitschrift für Papyrologie und Epigraphik 68: 237-240.
- Hatzopoulos, Miltiades. 2000. "L'histoire par les noms" in Macedonia. *Greek personal names: Their calue as evidence*, ed. by Simon Hornblower and Elaine Matthews, 99-117. Oxford: Oxford University Press.
- Hatzopoulos, Miltiades. 2006. *La Macédoine: Géographie historique Langue Cultes et croyances Institutions*. (Travaux de la Maison René-Ginouvès, 2. Collection dirigée par Pierre Rouillard.) Paris: Boccard.
- Hatzopoulos, Miltiades. 2007. La position dialectale du macédonien à la lumière des découvertes épigraphiques récentes. *Die altgriechischen Dialekte: Wesen und Werden (Proceedings of a conference, Freie Universität Berlin, 19-22 September 2001)*, ed. by Ivo Hajnal, 157-176. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.

Commented [HH3]: These will have to be reformatted eventually, so as to make formatting comatible with that of other contributions and publishers' guidelines

BDJ: I can fix these as needed - what are the guidelines?

- Herzfeld, Michael. 1982. Ours once more. Folklore, ideology, and the making of modern Greece. Austin: University of Texas Press.
- Jasanoff, Jay. 1997. An Italo-Celtic isogloss: The 3 pl. mediopassive in \*-ntro. Festschrift for Eric P. Hamp, vol. 1, ed. by Douglas Q. Adams, 146-161 (Journal of Indo-European Studies Monograph, 23.) Washington, DC: Institute for the Study of Man.
- Joseph, Brian D. 1985. European Hellenism and Greek nationalism: Some effects on Greek linguistic scholarship. *Journal of Modern Greek Studies* 3: 87-96.
- Joseph, Brian D. 2016. The Comparative Method: Simplicity + power = results. *Veleia* 33: 39-48.
- Kalleris, J. 1976. Les anciens macédoniens: Étude linguistique et historique, II. Athens: Institut français d'Athènes.
- Katičić, Radoslav. 1976. Ancient languages of the Balkans. The Hague: Mouton.
- Kretschmer, Paul. 1896. Einleitung in die Geschichte der griechischen Sprache. Göttingen: Vandenhoeck & Ruprecht.
- Kretschmer, Paul. 1927. Makedon. áliza. Glotta 15: 305-306.
- Masson, Olivier. 2003. Macedonian language. *The Oxford classical dictionary* (revised 3<sup>rd</sup> edn.), ed. by Simon Hornblower and Antony Spawforth, 905-906. Oxford: Oxford University Press.
- Méndez Dosuna, Julián. 1991-1993. On ⟨Z⟩ for ⟨∆⟩ in Greek dialectal inscriptions. *Die Sprache* 35: 82-114.
- Méndez Dosuna, Julián. 2009. Review of Minon 2007. Kratylos 54: 80-87.
- Méndez Dosuna, Julián. 2012. Ancient Macedonia as a Greek dialect: A critical survey on recent work. *Ancient Macedonia: Language, history, culture*, ed. by Georgios K. Giannakis, 133-145. Thessaloniki: Centre for the Greek Language.
- Panayotou, Anna. 1993. Phōnētiké kai phōnología tōn ellēnikón epigraphón tēs Makedonías [Phonetics and Phonology of the Greek Inscriptions of Macedonia]. *Ellēniké Dialektología* 3: 5-32.
- Picard, Marc. 1994. Principles and methods in historical phonology: From Proto-Algonkian to Arapaho. Montreal: McGill-Queen's University Press.
- Reimer, Larry. 1995/2012. Macedonia: Cultural right or cultural appropriation? In Casule (ed.-in-chief) 2012: 61-77 (originally published 1995, *University of Toronto Faculty of Law Review*).
- Watkins, Calvert W. 1995. *How to kill a dragon: Aspects of Indo-European poetics*. Oxford: Oxford University Press.