12. Albanian

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1   Introduction

Constituting its own branch within the Indo-European family (henceforth "IE"), and thus on a par with Indo-Iranian or Anatolian or Celtic, etc., Albanian is sometimes considered the stepchild of IE linguistics, for various reasons. For one, it is the latest attested IE branch, with its first documentation being a 1462 one-line baptismal formula, and the first substantial text, the *Missal* of Gjon Buzuku, dating from 1555.[1] As a result of this late attestation, many details of its historical development and present form are shrouded in mystery or at least not obviously Indo-European. To see this, one need only consider the numerals '6' and '8', *gjashtë* and *tetë*, respectively, which despite their strikingly different appearance from, for instance, Latin *sex* and *octō*, in fact reflect the expected developments, by regular sound changes, from Proto-Indo-European (PIE) starting points with the shape **séḱs-tV-* and **oḱtṓ-tV-*.

Moreover, with Albanian, there is the complicating factor of influence from various languages that can make it difficult to determine what is inherited from PIE. Not only are there Albanian borrowings from Ancient Greek, Latin, Slavic, Turkish, and more recently, Italian and now English, as well as from neighboring Balkan languages — for some of these languages, in particular Latin (in a broad sense) and Turkish, in especially large numbers — but there is also structural convergence with other languages in the Balkans, especially Modern Greek, Macedonian, Aromanian, Romani, and to a more limited extent Turkish, and thus, by extension, with Bulgarian, Meglenoromanian, and Romanian. This convergence covers phonology, as in the voicing of nasal + stop clusters, e.g. *këndoj* 'sing' (a borrowing from Latin *cantō*), matching a development found in Greek and Aromanian; morphology, as in the merger of genitive and dative cases, matching a development found in Greek, Aromanian, Romanian, Macedonian, and Bulgarian; syntax, as in the doubling of direct or indirect objects by weak pronouns, matching a development found in Greek, Aromanian, Romanian, Macedonian, Bulgarian, and to some extent, Romani; and semantics, as in the creation of the admirative mood forms to mark nonconfirmativity, matching a development found in Macedonian, Bulgarian, and Turkish.

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[1]   After Albanian, Baltic is next in recency of attestation, with Old Prussian attested first in c. 1369 in the form of the "Basel Epigram".

2   Evidence for the Albanian branch

These difficulties notwithstanding, there are several innovations that define Albanian and set it off from all other branches of IE, including:

·   *s > [ɟ] (in IPA, but spelled <gj> in standard Albanian orthography), when in initial position before a stressed vowel, cf. *gjashtë* '6' < *séḱs-tV-* vs. *shtatë* '7' < *septḿ̥-tV-*. <gj> represents a voiced dorsopalatal stop, though with varied secondary outcomes dialectally. This change is unparalleled within IE.
·   *ḱ > [θ] (spelled <th>), a change found only also in Old Persian among other IE branches; e.g. *athët* 'harsh, sour' < *aḱ-* 'sharp' (cf. Skt. *aś-man-* 'stone').[2]
·   *ĝ(ʰ) > [ð] (spelled <dh>), also unparalleled within IE,[3] e.g. *udhë* 'way' < *uĝʰ-o-* (for the root, cf. Lat. *veh-ō* 'convey')
·   loss of word-internal voiced stops under certain conditions, as in *ujë* 'water' < PAlb. *ud-r-jā*
·   *ō > e, as in *tetë* '8' < *oḱtṓ-tV-*
·   *ē > o, as in *mos* 'not; don't!; lest' < *meh₁-kʷid* (cf. Gk. μή)
·   *-ni* as 2pl nonpast verbal ending, e.g. present indicative *ke-ni* 'you all have', imperative *ki-ni* 'you all have!', from a reanalyzed and repurposed adverbial *nū* 'now' (Rasmussen 1985)
·   a postposed definite article, as in *det-i* 'the sea' (literally 'sea-the').[4]

These characteristics give ample cause for treating Albanian as a separate branch within IE, even with the various complications in analyzing forms.

3   The internal structure of Albanian

Despite being its own branch within IE, Albanian is far from a linguistic monolith. In fact, there are major dialect divisions within the branch. The oldest and the most important division is a north-south one: the Geg dialect group occurs north of the Shkumbin river (roughly in the middle of present-day Albania), thus covering northern Albanian and the Albanian of the nation-states of the Republic of North Macedonia, the Republic of Kosova, and Crna Gora (Montenegro), while the Tosk dialect group occurs south of the river, and includes the Arbëresh diaspora communities of southern Italy and the Arvanitika diaspora communities in central Greece, Attica, the Argo-Saronic islands, and parts of the Peloponnese, as well as enclaves in isolated parts of Greek Epirus.

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2   On the development of *ḱ in the context of centum vs. satem languages, see §5.1.
3   The notation ĝ(ʰ) is meant to indicate that the PIE voiced aspirated stops and the voiced plain stops generally merged in Albanian; while this development is characteristic of Albanian, it is not particularly striking within IE, occurring as well, and thus presumably independently, in Anatolian, Balto-Slavic, Celtic, Iranian, and Tocharian.
4   This feature is found also in neighboring languages, especially Aromanian, Macedonian, and Romanian, suggesting that contact might be responsible rather than internal innovation within Albanian. However, Hamp 1982 argues that the ancient toponym *Drobeta* (in present-day Romania) reflects a Roman misinterpretation of a form *druwā-tā* 'the wooded (place)', with a postposed definite article, and suggests it reflects an old Albanian syntagm.

Dialect differences separating Geg and Tosk involve all levels of linguistic structure. In phonology, for instance, Geg has nasalized vowels whereas Tosk has lost nasalization (e.g. *âsht* 'is' (Geg) vs. *është* (Tosk) < **ensti* < PIE **h₁en-h₁esti*), maintains intervocalic *-n-* whereas Tosk denasalizes it to *-r-* (e.g. Geg *venë* 'wine' vs. Tosk *verë*), and has reduced nasal-plus-stop clusters to nasals whereas Tosk maintains the clusters (e.g. Geg *nimoj* 'I help' vs. Tosk *ndihmoj*). In morphology, Geg has participials in *-m-* (among other endings) whereas Tosk has mostly forms in *-uar* (e.g. Geg *harrum* 'forgotten' vs. Tosk *harruar*), and Geg forms its future tense with an inflected form of 'have' plus an infinitive (consisting of *me* with a participial) whereas Tosk uses an invariant (3sg) form of 'want' with an inflected subjunctive with the modal marker *të* (e.g. Geg *ke me shkue* 'you will go' (literally "you-have to gone") vs. Tosk *do të shkosh* ("it-wants that you-go")). In syntax, Geg uses its (uninflected) infinitive with *me* in complement structures where Tosk uses the (inflected) subjunctive with *të*, e.g. *filloj me shkue* 'I begin to go (literally "I-begin to gone") vs. Tosk *filloj të shkoj* (literally "I-begin that I-go"). Finally, there are lexical differences, e.g. Geg *tamël* 'milk' vs. Tosk *qumësht*.

Within the Geg and the Tosk dialect complexes, there is much regional variation, the details of which are beyond the scope of this chapter. It can be noted, though, that the diaspora varieties of Tosk show the effects of differential contact situations: Arbëresh in Italy not only has many Italian loans not found in Balkan Tosk, e.g. *kamineta* 'chimney' (cf. Italian *camineta* 'fireplace') but also lacks Turkish loanwords (cf. Balkan Tosk *oxhak* 'chimney, fireplace', from Turkish *ocak*), reflecting its absence from the Balkans after approximately the 15th century. Similarly, Arvanitika in Greece shows various Greek features not generally found in Tosk; for instance, according to Sandfeld (1930: 104), in Arvanitika, *mnj* (Sandfeld's notation) occurs for what is *mj* elsewhere in Balkan Tosk varieties, e.g. *mnjekrë* 'chin; beard' (vs. general Tosk *mjekër*), a shift that he states is "comme en grec" (cf. Thumb 1912: §30, who reports colloquial Greek forms like μνιά 'one.FEM' (presumably [mɲja] or simply [mɲa]) versus earlier, and still occurring, μιά ([mjá]), and cf. high-style μία ([mía])).

4   Relationship of Albanian to the other branches

Albanian shows mixed dialectal affinities, sharing key features with different sets of languages within the Indo-European family. This situation makes for a complicated determination of how Albanian is to be subgrouped with other branches. Ultimately, even though no consensus prevails as to the exact classification of Albanian, we argue here that lexical and morphological isoglosses point to a Greek-Albanian subgroup, a grouping suggested by computational phylogenetic methodology in Chang et al. 2015.[5]

We base our discussion largely on innovations Albanian shares with other branches. In this way, we work with the time-tested reasoning in comparative linguistics that bases subgrouping decisions on significant innovations away from a starting point, in this case PIE, that languages or branches share. By "significant", we mean nontrivial features that are unusual in some respect, especially from a typological perspective. It is not enough for languages to simply share features in order to be subgrouped together; those features must be unlikely to have arisen

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5   See §5.2; note also Holm (2011).

independently in the branches sharing them. Moreover, looking to such shared innovations as a basis for subgrouping is essentially taking the position that the sharing languages underwent a period of common development in which they were one and the same speech community. Finally, we adopt the methodological assumption that shared innovations are the best indicator of subgrouping, and especially are more diagnostic of subgrouping than shared retentions; that is, we take the default assumption to be that a feature will remain in a language unless speakers actively innovate away from it, so that retaining a feature from the proto-language is expected in the usual case and and thus typically (though see fn. 26 for further discussion) reveals nothing about subgrouping. What counts as a shared innovation or shared retention of course depends on decisions made about the nature of the proto-language in question. Thus assessments about subgrouping can become complicated and involved.

For instance,[6] Cowgill (1960) proposed that Greek *οὐ(κί)* 'not' could be connected with Armenian *očʿ* 'not', with both deriving from a phrase *$ne \dots h_2óiu\ k^wid$*, composed of the negative marker *ne*, the noun *$h_2óiu$* 'life force', and the indefinite pronoun *k^wid*, thus originally "not on (your) life; not at all", as an emphatic negator. He conjectured, following Pedersen 1900, that the Albanian negative *as* 'nor, and not' might belong here too, but was reluctant to pursue the connection. Joseph (2005; 2019) has followed up on the Albanian angle, arguing that the negative prefix *as-* 'not', as in *as-gjë* 'nothing' (cf. *gjë* 'thing'), is what matches *οὐ(κί)* and *očʿ*.[7] On the face of it, this *$ne \dots h_2óiu\ k^wid$* phrasal negation could be a shared innovation linking Albanian, Armenian, and Greek (see §4.8), if restricted to those three branches. However, Garnier 2014 and Fellner 2019 have argued that Latin *haud* 'not' and Tocharian A *mā ok* B *mawk*, *ma_uk*, respectively, also reflect *$(ne) \dots h_2óiu\ k^wid$*, so that this negator is shared by languages that do not otherwise show any particular evidence for being subgrouped together. One can thus conclude that *$ne \dots h_2óiu\ k^wid$* must have been a PIE negation phrase, so that its occurrence in these languages is a shared retention, an inherited feature in each, and thus irrelevant to subgrouping. Any potential shared innovation in principle must be examined in this way to determine where it stands vis-à-vis the innovation versus retention issue.

As noted above, there are numerous, often contradictory, indications of close connections between Albanian and other branches of IE, and though we ultimately favor the connection with Greek, we review here the evidence that aligns Albanian with one or another branch of IE.

4.1 Albanian and Balto-Slavic

Various features connect Albanian with Balto-Slavic. We mention a few here, and point interested readers to Porzig 1954: 174–7, Jokl 1963, Çabej 1975, Huld 1984: 166, Orel 1994 and Orel 2000: 254–6 for further details and assessment.

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6 Other cases like this of what we see as retentions, but which some scholars might see as innovations, are the use of *meh_1* in prohibitions (as with Albanian *mos* and Greek *μή*; see also §4.7.2) and the use of the augment in marking past tense forms. Space limitations preclude our discussing these here; see Joseph 2013 for some discussion.

7 The relationship between the free word *as* and the prefix *as-* is disputed; Joseph sees them as having different origins, while others see them as connected. That issue is irrelevant here, as the fact of there being some Albanian cognate to the Greek and the Armenian forms is all that matters in this case. See also Hackstein 2020 on sources of negation markers in Albanian, including *$ne \dots h_2óiu\ k^wid$*.

4.1.1   a/o *merger*

Both Albanian and Balto-Slavic show the merger of original **o* and **a* (cf. Alb *natë* 'night', Lith. *naktìs*, OCS *noštь* < PIE **nokʷt-*; Alb. *atë* 'father', OCS *ot(ьcь)* < PIE **at-*). While the merger is realized differently in Baltic (to *a*) and in Slavic (to *o*), the lack of differentiation between reflexes of **o* and **a* point to the merger, as also in Albanian. However, this merger also occurs in Germanic (cf. Gothic *nahts* 'night', *atta* 'father'), suggesting rather that Albanian might be part of a "northern IE" (genealogical or, more likely, areal) grouping, and not a specifically Albanian-Balto-Slavic group.

4.1.2   -teen *numerals*

Albanian forms the teen numerals 11–19, using a pattern of DIGIT-on-TEN, e.g. *njëmbëdhjetë* '11' (cf. *një* 'one', *mbi* 'on', *dhjetë* 'ten'), that parallels in many respects the pattern found in Slavic (e.g. Ru. *odínnadcat'* '11' (cf. *odin* 'one', *na* 'on', *des'at'* 'ten')) and part of Baltic, specifically Latvian (e.g. *vienpadsmit* '11'; Lithuanian aligns with Germanic here, using a formative based on **leik̑ʷ-* 'leave', not a form of '10'). However, there is one key difference between the Albanian and the Slavic/Latvian patterns. In particular, Albanian, along with Romanian, has a feminine form of 'ten', shown by the use of the feminine *tri* '3' with *dhjetë* '10' in the formation of '30', *tridhjetë*, whereas Slavic has a masculine form, shown e.g. in Russian by the use of the masculine *dva* '2' in the formation of '20', *dvádcat'* (literally "two tens"); Romanian for '20' is *douăzeci* 'twenty' (literally "two tens"), with feminine *două*, thus with a feminine '10'.

Following Hamp (1992), these facts can be interpreted for the Balkans as follows. The variety of IE destined to become Albanian (Hamp's "Albanoid") was a Northern Indo-European language, grouped with or in contact with Germanic and Balto-Slavic. Within Baltic, Lithuanian absorbed the teen-numeral pattern of Germanic, whereas Latvian interacted with Slavic and Albanoid, an inner-Baltic difference that makes sense geographically. Albanoid, along with Latvian, and Proto-Slavic, developed the DIGIT-on-TEN pattern, presumably an innovation in one language that spread by contact into the others, but its speakers changed this pattern as they moved south into the Balkans and came into contact with the variety of Latin that some of its speakers shifted to, yielding Romanian. This scenario accounts for both the similarities between Albanian and Slavic (and Latvian) and the differences between Latvian and Lithuanian, while still allowing for the specific form of the Albanian-Romanian parallel to emerge.

4.1.3   Winter's law

Winter (1978) posited for Baltic and Slavic the lengthening of vowels before PIE voiced plain stops (mediae, e.g. **d*), a prime example being Balto-Slavic **sēd-* 'sit' (cf. infinitives Lith. *sésti* and OCS *sěsti*), from PIE **sed-*. It is potentially telling that Albanian seems to similarly show this development, in forms such as *rronj* 'endure' < **rēg-n-* (with *o* as the regular outcome of PIE **ē*; for the root, cf. Gk. ὀρέγω 'extend') or *erë* 'smell' < **ōd-r-* (PIE **h₃ed-*, cf. Lat. *odor*), although this may alternatively reflect compensatory lengthening with the loss of the stop (Hyllested 2013).

4.1.4   *Lexical isoglosses*

Several scholars have noted a sizeable lexical overlap between Balto-Slavic and Albanian. Orel (1998: 250–256) counts 24 items shared between these branches, deeming this group of isoglosses the "most important and significant" one. As many as 48 words are allegedly shared between Albanian and Baltic only, leading Orel to call this connection "particularly close", while he further lists 22 terms shared just by Albanian and Slavic ("not as frequent as Baltic ones").

However, not all of these etymologies appear equally convincing. For example, Alb. *bac* 'elder brother, uncle' must be borrowed from Slavic **bat'a* 'elder brother; father', not cognate with it (Hyllested 2020: 402); Alb. *shtrep*, *shtrebë* 'cheese-fly larva', rather than being related to Slav. **strupъ* 'scab', belongs with Gk. στρέφω 'turn', στρεπτός 'pliant', στρόφος 'twisted band', as is not least apparent from its inner-Albanian cognate *shtrembet* 'be crooked' (Hyllested 2016: 75); and Alb. *murg* 'dark, grey' ~ Lith. *márgas* 'colorful' do not constitute an isogloss but are clearly related to both PGmc. **murkaz* 'dark', Gk. ἀμορβός 'dark', and, for that matter, PSlav. **mergǔ* 'brown'.

Crucially, the more promising of these comparanda are, in most cases, morphologically and/or semantically more distant from each other than the proposed Greco-Albanian isoglosses. Alb. *brez* 'belt' vs. Lith. *briaunà* 'edge' is a typical example: the two words undoubtedly contain the same IE root, but the word-formation is markedly different, and the meanings are quite distinct. Thus, while the item is useful in a general comparative analysis, it is less so as evidence for subgrouping. A systematic analysis of all relevant items goes beyond our scope, but one can fairly say that the number of really closely knit lexemes with strong etymologies is in fact not significantly higher between Albanian and Balto-Slavic than one would expect between any two IE branches.

4.2   Albanian and Armenian

Considering the large number of shared innovations between Albanian and Greek on the one hand (see §4.7) and between Greek and Armenian on the other (see chapter 11), it is perhaps surprising how few can be found between Albanian and Armenian only. This does not speak against a Palaeo-Balkanic subgroup encompassing all three since it may simply reflect the fact that Greek preserves so much more IE lexical material, including Balkanic innovations, than the other two.[8] Most famous among the relevant isoglosses is Alb. *zog* 'bird; nestling; (dial.) animal young' (identical to the name of Albania's last king) ~ Arm. *jag* 'little bird, sparrow; nestling', as if from a protoform **ĝʰāgʰu-* (Jokl 1963: 152; Olsen 1999: 110–11); however, it may constitute a shared retention since its root etymology is not known.

A shared inflectional feature is that the numeral '1' developed a new masculine **smi-i̯-o-* in Alb. *një* and Arm. *mi* based on the Balkanic feminine **smi-i̯-a* with breaking from PIE **sm-ih$_2$* as in Gk. μία (Klingenschmitt *Numerals* 22).

In derivational morphology, Armenian and Albanian share a productive agent-noun suffix **-ikʷi̯o-* > Arm. *-ič̣*, Alb. *-ës* (Matzinger 2016: 167; Thorsø 2019: 252) which we suspect is derived from PIE **kʷei̯-* 'gather' (cf. Gk. ποιέω 'make').

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8   See §4.8 on innovations shared by the entire proposed Balkan group.

One phonological development that Albanian and Armenian have in common is that *m was lost in the cluster *-ms-, cf. Alb. *mish* 'meat' ~ Arm. *mis* 'id.' < PIE *$mems$-o-; Arm. *ows* 'shoulder' vs. Gk. ὦμος 'shoulder' < PIE *$h_1ómsos$. This must however reflect two parallel developments if, as we argue, Albanian and Greek (or, for that matter, Armenian and Greek) form a subgroup within Balkanic since Greek preserves the *-m-.

Other joint phonological features relate to centum-satem behavior and are mostly systematically parallel, not necessarily substantially identical. First and foremost, like Albanian, Armenian keeps a three-way distinction of the PIE dorsals as described in §5.1. But both languages also have a development of PIE *$ḱu$- and *$ĝ^hu$-, which, like everywhere in the satem area proper, is different from both that of the palatals and that of labiovelars, but at the same time, unlike in Indo-Iranian and Balto-Slavic, shows no direct trace of the semivowel; e.g. Alb. *zë*, def. *zëri* (Geg *zâ, zâni*) 'voice', Arm. *jayn* 'voice, sound' ~ OCS *zvonŭ* 'noise' < PIE *$ĝ^huónos$.

4.3   Albanian and Celtic

Few traits, almost exclusively lexical in nature, link Albanian specifically with Celtic. A quite optimistic pioneering collection of isoglosses by Jokl 1927 was subjected to critical scrutiny by Çabej 1969, who effectively disqualified much of the evidence.[9] Most famous is the similarity between Alb. *gju* 'knee', def. *gjuni*, S Tosk *glu*, Geg *gjû* ~ PCelt. *$glūnos$ 'knee' (OIr. *glún*, Welsh *glin*), apparently involving a new stem-form evolved from PIE *$ĝénu$ and a subsequent dissimilation of *gnu-n- to *gl-un-.

The remaining evidence amounts to nothing more than what would be expected statistically; Orel (2000) mentions only six items. Moreover, the picture is somewhat blurred by the fact that many apparent shared lexemes are likely to be early Celtic borrowings into Proto-Albanian from when Celtic tribes such as the *Serdi* and the *Scordisci* settled in the Balkans in the 3rd c. BC. This may, e.g., be the case of Alb. *shqipe* 'eagle', which, like Welsh *ysglyf* 'eagle', is derivable from a protoform *$sklubo$-, metathesized from earlier *$skublo$- from which the other attested Celtic forms developed (Hyllested 2016: 76–7).

4.4   Albanian and Germanic

Taylor, Ringe, and Warnow (2002), in a statistical-quantitative analysis of the IE lexicon, came to the apparent result that Albanian forms a subgroup with Germanic, the significance of which the authors themselves downplayed, and with good reason: the absolute number of lexical cognates shared by these two branches only is relatively moderate. Orel 1998: 253–4 lists just 13, not all of which have equally valid etymologies; for example, *tym* 'smoke' must be a borrowing from Gk. θῡμός (with an older meaning than the attested 'anger'), rather than related to PGmc. *$ēdumaz$ 'breath'.[10] Moreover, the lexical isoglosses are not corroborated by many shared grammatical elements or features.

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9   See, however, now also Trumper 2018.

10 One oft-mentioned item is Alb. *det* 'sea', Arbëresh *dej(ë)t*, usually etymologized as PAlb. *$deubeta$, corresponding to PGmc. *$deupiþō$- 'depth'. Hyllested (2016: 71 n. 12) instead suggests it could be a

There are nonetheless a few remarkable cases of shared word-formation. One recently published etymology is *hundë* 'nose' < PAlb. *skuntā ~ Far., SW Nw. *skon* 'snout' < PGmc. **skuna-* (Hyllested 2012). Alb. *delme* 'sheep' is only a metathesis away from corresponding regularly to Dalecarlian *tembel* 'sheep' < PGmc. **tamila-*, a derivative of PGmc. *tamjan 'to tame' < PIE **demH-*; treating the nasal rather than the lateral as original to the Albanian root is supported by the synchronically suppletive plural *dhëndë* < **domH-it-eh$_2$*, literally 'the tamed (collective of animals)'.

4.5   Albanian and Italic

As stated by Huld (1984: 168): "Relations between Albanian and Italic are largely negligible". Most prominent among the vanishingly few shared innovations is the lexical pair Alb. *bir* 'son', *bijë* 'daughter' (as well as Messapic *bilia* 'daughter'), which is likely identical to Lat. *fīlius*, *fīlia*, respectively (Hyllested 2020: 421–2). Albanian *hi*, Geg *hî*, def. *hîni* 'ashes' < **sken-is-* seems to agree on the ablaut with Lat. *cinis* 'cold ashes' < **ken-is-* vs. Gk. κόνις, -ιος 'dust; ashes' and Toch. *kentse* 'rust' < **koniso-*, but both forms are probably old in IE, and the equation with Albanian is far from certain anyway (Hyllested 2012: 76 fn. 4).

4.6   Albanian and Indo-Iranian

Jokl (1963: 152), in his somewhat inconclusive posthumous work, listed 8 lexical parallels between Albanian and Indo-Iranian, almost none of which, however, constitute exclusive isoglosses, as in fact Jokl himself acknowledged. Even his flagship first item, Alb. *dhëndër(r)*, Geg *dhândër(r)* 'son-in-law; bridegroom', which on the surface looks like the same **-ter* formation from PIE **ĝem(H)-* as Ved. *jā́mātar-* 'son-in-law', YAv. *zāmātar-* 'id.', may simply owe its *-d-* to inner-Albanian epenthesis as in the rhyming word *ëndër(r)* 'dream' < PIE **Hon-r-i̯o-*, while Indo-Iranian **-tar* can be analogical from other kinship terms. In that case, Albanian formally agrees with Lat. *gener* and Gk. γαμβρός instead.[11]

Orel's (2000: 260) more recent list of 10 items suffers from the same conspicuous weaknesses; for example, Alb. *thadër* 'a double-sided axe' does not in fact form a unique isogloss with Skt. *śastrá-* 'knife; sword', since Lat. *castrum* 'knife' represents an identical formation < PIE **k̂as-trom*, lit. 'cutting-instrument'. A critical assessment of some further oft-mentioned items is provided by Huld (1984: 167).

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borrowing from Gk. δέλτα 'river delta'. At least two other Albanian words from the same semantic field are Greek borrowings, namely *pellg* 'pond; basin; depth' ← πέλαγος 'sea' and *zall* 'river bank, river sand' ← αἰγιαλός 'sea-shore'.

11   The irregular and unparallelled plural *dhëndúrë*, N Geg *dhândórrë* is probably due to later conflation with Lat. *genitōres* 'begetters' (i.e., of heirs, cf. English *beget an heir*), where the significant position of the plural must be seen in the light of traditional Balkan household structures with several married couples under one roof.

4.7   Albanian and Greek

As noted above, our ultimate assessment treats Albanian and Greek as particularly close rela-
tives within Indo-European. We find the number of innovations shared only by Albanian and
Greek to be overwhelming, thus pointing compellingly to a Helleno-Albanian subgroup. In this
section, we aim to give an overview of shared developments, without claiming exhaustiveness.
The evidence is mostly morphological and lexical in nature, involving particular lexical items or
details of word-formation, but there are also several phonological commonalities.[12]

4.7.1   Phonology

1. Initial *$i̯$- has a twofold reflex in both languages: (a) an obstruent *dz- > Alb. gj-, Gk. $ζ$-, which
    already appears in Mycenaean, vs. (b) a preserved *j- > Alb. j-, PGk. *j- which later yielded h-
    in early Greek, but is still partially retained in Mycenaean. For Greek, the conditioning is
    famously disputed.[13] Despite the fact that a similar double reflex between j- and gj- has long
    been recognized in Albanian,[14] it has hitherto gone unnoticed that the distribution between
    individual lexemes is identical in both languages: Alb. $gjesh$ 'knead' (< *$i̯ós$-(i)$i̯e$-) ~ $ζέω$ 'boil,
    seethe' < *$i̯es$- 'boil; ferment'; Alb. n-$gjesh$ 'gird' ~ Gk. $ζώννυμι$ 'id.' < PIE *$i̯eh_3s$-; Arbëresh $gjër$
    'soup', Geg $gjânë$ 'silt, mudbed' < *$iou̯h_3$-(m)n-o- ~ Gk. $ζύμη$ 'sourdough', $ζωμός$ 'sauce; broth' <
    *$i̯eu̯h_3$-s- 'mix sth. moist'; vs. Alb. ju 'you (2pl.)' ~ Gk. $ῡμεῖς$ 'id.'; Alb. a-jo 'she' ~ Gk. rel.pron. f.
    $ἥ$ < *$i̯eh_2$; and Alb. $josh$ 'fondle, caress' < *$i̯eu̯d^h$-s- (cf. for the meaning Lith. $jaudà$ 'seduction')
    ~ Gk. $ὑσμίνη$ 'battle' < *$i̯ud^h$-s- < *$i̯eu̯d^h$- 'care for, be engaged in'.
2. In both Albanian and Greek, the original clusters *$ti̯$ and *$di̯$ underwent affrication to *ts-
    and *dz-, and in initial position, the former further assibilated into *s-. In Albanian, assibila-
    tion was ultimately completed in all positions, resulting in s and z, a development which
    happened late enough to also affect Latin loanwords. The only relevant lexemes shared by
    both languages involve the voiced cluster: Alb. Zoj-z 'Albanian sky god' ~ Gk. $Ζεύς$ < *$di̯éu̯s$
    (Mann 1952: 32) and Alb. $dhjes$ 'to shit' (with secondary final devoicing) ~ Gk. $χέζω$ 'id.' <
    *$ĝ^hed$-$i̯e/o$-.

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12 Space does not allow a word-by-word treatment of purported isoglosses whose validity for various
    reasons we reject. A few examples may illustrate: Alb. $egër$ 'wild' must be a borrowing from Gk. $ἄγριος$
    'id.', not its cognate, since the PIE root has *-$ĝ$-, which yields Alb. dh. The singularized plural $dhemje$
    'caterpillar; maggot' is unrelated to Greek $δεμελέας$ 'leech'; the variant $vemje$ shows it is instead a bor-
    rowing from the Slavic collective noun *$vĭrmĭje$ 'insects and worms' with regular development of v- >
    dh- /_VCC where one consonant is a labial. And while Alb. $derr$ 'pig' ~ Gk. $χοῖρος$ 'boar' clearly point to
    a common protoform *$ĝ^hór$-$i̯o$-s, this is likely not a Greco-Albanian innovation since Fi. $karjas$ 'wild
    boar' seems to reflect a loan from an otherwise unattested Proto-Germanic counterpart *$garjaz$
    (Hyllested 2020: 412 n. 26).
13 It is likely that the distribution is based on the presence vs. non-presence of laryngeals, as proposed
    for Greek by Peters (1976): *$i̯$- > $ζ$- vs. *$Hi̯$- > ʼ; however, other scholars exactly see the reverse distribu-
    tion here (e.g. LIV²). In either case, it is significant that Greek and Albanian agree on which lexemes
    show which reflexes.
14 See Kortlandt 1996 for a summary of the various scholarly views regarding the Albanian material.

3. PIE thorn clusters with a labiovelar retain the rounding (see §5.1). While this is in itself an archaism, many scholars who do not believe in the Core IE thorn cluster metathesis will see a very clear shared innovation here.

4. The two languages share many developments of clusters containing liquids. For example, *-s- was lost with compensatory lengthening before a sonant, e.g. Alb. *dorë* 'hand' < *$\hat{g}^h\bar{e}r\bar{a}$ < *$\hat{g}^h\acute{e}s$-$r\bar{a}$ ~ Gk. *χεῖρ* 'id.' < PIE *$\hat{g}^h\acute{e}s$-$\rlap{\r{}}r$ and Alb. *krua* 'spring' m., pl. *kronj* ~ Gk. *κρήνη*, Dor. *κρ$\acute{\bar{α}}$νᾱ* 'spring, well' < *kras-neh$_2$ ~ PGmc. *hraznō* 'wave' (> OE *hærn*, ON *hrǫnn*).

4.7.2   Inflection and morphosyntax

1. Under the assumption of a set of distinct past tense middle voice endings in PIE, as suggested by parallels between, e.g., Greek and Sanskrit, e.g. 3sg *-το* ~ *-ta*, 1pl *-μεθα* ~ *-mahi*, 3pl *-οντο* ~ *-anta*, it is interesting that both Greek and Albanian have formations with specifically active past endings in a nonactive past paradigm. That is, in the aorist passive, as opposed to middle forms with the endings given above (*-το*, etc.), Greek adds active endings to the passive stem, e.g. 1sg *ἐπλύθη-ν* 'I-was washed' / 2sg *ἐπλύθη-ς* 'you-were washed', etc. (for the endings, cf. active past imperfect 1sg *ἔπλυνο-ν* 'I-was washing' / 2sg *ἔπλυνε-ς* 'you-were washing', etc.); similarly, Albanian uses active forms with the formative *u* (based on the PIE reflexive element *s$\underset{\cup}{u}$e*), e.g. *u lava* 'I-was washed' / *u lave* 'you-were washed' (for the endings, cf. active past *lava* 'I-washed' / *lave* 'you-washed'). These past forms with active endings are in addition, in both languages, to inherited special present medio-passive endings (e.g. 1/2/3sg Greek *-μαι/-σαι/-ται*, Albanian *-m/-sh/-t*). It thus appears that both have innovated to use ostensibly active endings in a past passive formation.

2. As pointed out in footnote 6, both Albanian and Greek show the inherited use of the negator *meh$_1$* in prohibitives. Additionally, though, both also show innovative uses of *meh$_1$* not found elsewhere in IE. Specifically (cf. Joseph 2013), uses of *meh$_1$* in negating nonfinite forms (e.g. Alb. *për të mos dështuar* '(in order) to not fail', Gk. *τὸ μὴ προμαθεῖν* '(the state of) not knowing beforehand'), in tentative questions (e.g. Alb. *mos e njihni?* 'do you perhaps know him?', Gk. *μή σοι δοκοῦμεν* 'do we perhaps seem to you …?'), and in introducing 'fear' complements (Alb. *kam frikë mos e kam infektuar* 'I-have fear lest I-have infected him', Gk. *δέδοικε μὴ διαφθαρῶ* 'he-feared lest I-be-corrupted') are all functional innovations found exclusively in Albanian and Greek.

4.7.3   Verb formation

1. One of the most characteristic innovations shared by Albanian and Greek is a group of new productive verbal present types combining a nasal present and a *$\underset{\cup}{i}$*-present. They sometimes build on old nasal presents such as *h$_2$e$\underset{\cup}{u}$b^h-$\rlap{\r{}}n$-$\underset{\cup}{i}$-* > Alb. *venj* 'weave', Gk. *ὑφαίνω* 'weave' (Porzig 1954: 178; cf. Skt. *ubhnā́ti*), sometimes not (see §4.8 on *b^{h}eh$_2$-* 'shine' > Alb. *bëj* 'does', Gk. *φαίνομαι* 'appear'). They may even be denominal, as is the case with Alb. *thaj*, Arbëresh *thanj* 'dry up' ~ Gk. *αὐαίνω* < *sa$\underset{\cup}{u}$s-$\rlap{\r{}}n$-$\underset{\cup}{i}$-*, denominative to *sa$\underset{\cup}{u}$s-o-* 'dry' (Gk. *αὖος*).

2. In general, Greek and Albanian both frequently create simple secondary *$\underset{\cup}{i}$*-presents for verbs with roots ending in a sonant. At least three such verbs are shared between them:
   a. PIE *ten-* 'to stretch': *nu*-present *t$\rlap{\r{}}n$-né$\underset{\cup}{u}$-* (cf. Ved. *tanóti*) → *ten-$\underset{\cup}{i}$e-* in Alb. *n-de(n)j* and Gk. *τείνω*

b. PIE *_der-_ 'tear apart': thematic present *_der-e-_ → *_der-i̯e-_ in Alb. _djerr_ 'destroy' ~ δείρω (alongside δέρω) 'to skin, flay' (_pace_ Orel 1998: 69 and LIV² 119–20)

c. PIE *_dʰgʷʰer-_ 'flow; diverge, perish': thematic present *_dʰgʷʰer-e-_ → *_gʷʰþer-i̯-_ (cf. §5.1 and compare Skt. _kṣárati_ 'flow; wane, perish', Av. _γžaraiti_ 'flow, stream')

3. As mentioned in chapter 11, a new type of _s_-aorist arose in the broader Balkanic subgroup already, formed with *_-eh₂-s-_ to denominative verbs in *_-eh₂-i̯e-_. By analogy, Albanian and Greek agree on forming an _s_-aorist to the PIE root *_deh₂i̯-_ 'share, divide', cf. Alb. (_n-_)_dava_ and Gk. ἐδαισάμην, both 'I shared' vs. the old root aorist reflected in Ved. (_ava_) _adāt_ 'split off' (LIV² 103–4).

4. The OAlb. 3sg.aor. _u n-gre_ 'arose' goes back to the same innovated thematic aorist *_h₁gr-e/o-_ as Homeric Gk. ἔγρετο 'woke up', to the root *_h₁ger-_ 'wake up', replacing an original athematic aorist (Schumacher 2017).

5. Several verbs co-occur with *_peri-_ 'around' both in Albanian and Greek:

a. *_peri-kʷl̥-n-h₁-_ 'turn around' > Alb. _për-kul_ 'to bend, curve' ~ Gk. περι-τέλλομαι 'go in circles' (LIV² 386);[15]

b. *_peri-seh₂g-_ lit. 'drive around', lexicalized as _për-gjoj_ 'listen closely; eavesdrop' ~ Gk. περι-ηγέομαι 'explain, describe' (alongside 'lead around');

c. *_peri-pekʷ-_ 'bake all over', lexicalized as 'crust over' > Alb. noun _për-peq_ 'colustrum pudding', secondary from the pl. of *_për-pak_ ~ Gk. περι-πέσσω metaph. 'gloss over, cajole'.

6. The Albanian copula is prefixed with *_h₁en-_: Geg _âsht_ ~ Tosk _është_ 'is' < *_h₁en-h₁esti_ corresponding to Gk. ἔνεστι 'is in' alongside short forms in Tosk _ë_ and Koine ἔνι (cf. Hamp 1980; Joseph 2016).

4.7.4   Nominal formation

1. Across IE, for deriving adjectives from *_sal-_ 'salt', various suffixes are found, e.g. *_-iko-_ in Germanic (e.g. Ger. _salz-ig_), *_-no-_ in Slavic (e.g. Ru. _sol-ën-yj_), but both Albanian and Greek show parallel formations with an *_-m-_ suffix alone or together with *_-i-_: Alb. _n-gjel-m-ët_ 'salty' ~ Gk. ἅλιμος 'of the sea', and cf. ἀλ-μ-υρός 'briny' as well.

2. Based on the need for *_ā_ or *_ē_ in the pre-form of Albanian _sot_ 'today', in order to motivate the _o_-vocalism, Joseph (2013) posits a pre-Albanian adverbial composed of a deictic element *_ḱi_ with *_āmer_ for 'day', *_ḱi-āmer-_, 'this day'; later, after a metanalysis to *_ḱi̯ā-mer-_, the more usual word for 'day', *_diti-_, replaced *_(ā)mer_, giving *_ḱi̯ā-diti_, from which _sot_ developed regularly. This lexeme occurs also in Greek (cf. ἦμαρ, ἡμέρᾱ) and Armenian (_awr_), so its presumed occurrence here may link Albanian, Greek, and Armenian, but the use of this form in the word for 'today' specifically links Albanian and Greek, inasmuch as Greek has σήμερον (Attic τήμερον), from *_ḱi̯-āmer-o-m_.[16]

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15 Although the context in which OIr. _do-air-chella_ 'conceals' is attested also allows for a translation 'encloses (of water)', _ar-cela_ alone means 'takes away, steals', and it rather contains the PIE root *_kel-_ in _celim_ 'hides' (Edel 2006: 83 n. 46; Le Mair 2011).

16 It is tempting to see the metanalysis to give *_ḱi̯ā-_ as a shared Albanian-Greek feature, since Greek shows the same development; cf. Mycenaean _za-we-te_ 'this year', from *_ḱi̯ā-wetes_ (note later σῆτες, Attic τῆτες).

3. Alb. *bot* 'someone; person', *botë* 'world; humanity; others' < a concretised acrostatic *t*-stem noun *$b^hu̯eh_2$-t-* 'living being' < abstract 'becoming' ~ *$b^hu̯eh_2$-t-éh_2*, collective of *$b^hu̯eh_2$-t-ó-* 'having life', respectively ~ Gk. φώς, gen. φωτός 'man; mortal' < *$b^hu̯oH$-t-* (Kashima 2019).

4. *$ksenu̯o$-* 'stranger, guest', probably from older *g^hs-en-u̯o-*, derived from the same root as NW IE *$g^hós$-ti-s* 'guest; host': Alb. *huaj* 'foreign' (< *ksenwjo-*) ~ Gk. ξένος, Dor. ξένϝος, Ion. ξεῖνος (Porzig 1954: 178). Albanian *huaj* is formally identical to the Greek adjective ξένιος, which is also an epithet of Zeus. The lengthening in Albanian (-*ua*- < *-*ō*- < *-*ē*-) is compensatory from the loss of *-*u̯*- (< *ksēnja-* < *ksennja-* < *ksenu̯jo-*; Hyllested 2013).

5. A new term *$ĝ^hersos$* 'dry land, fallow land' from the root *$ĝ^hers$-* 'stiff' > Alb. *djerr* ~ Gk. χερσός. Curiously reminiscent of Italo-Celtic *tersos* 'id.' from the root *ters-* 'dry, to dry'.

6. A derivative *spor-eh_2* 'seed; semen' from the root *sper-* 'spread, strew' > Alb. *farë* ~ Gk. σπορά.[17]

7. A result noun *$ĝ^hud$-tlo-* 'wax' from the root *$g^heu̯d$-* 'to pour': Alb. *dyllë*, Gk. χῡλός (Porzig 1954: 178; Huld 1984: 165). The lengthening reflected in Alb. -*y*- is compensatory from the loss of *-*d(s)t*-, not a sign of Winter's law operating in Albanian (cf. <mark>§4.1.3</mark>).

8. An instrument noun *$ḱemt$-trom* 'stinger' > Alb. *thundër* 'hoof' (with -*un*- from *-*em*- as in *tundoj* 'tempt' ← Lat. *temptō*; same root as in Alb. *thua* 'nail' and *thumb* 'bee's stinger; thorn; arrowhead point') ~ Gk. κέντρον 'point, goad; nail' (borrowed into Geg as *çândër*, *qândër* 'forked wall or fence shoring pole; prop').

9. A derivative *h_3od-meh_2* 'smell' > Tosk *amëz*, Geg *amë* 'scent; flavor' ~ Gk. ὀδμή 'stench' < vs. Lat. *odor* 'smell' Arm. *hot* 'smell; savor' (Huld 1984: 165).

10. Hamp (2015: 15) found a common collocation in Alb. *bie erë* 'smell' < *b^her-* + *h_3od-r-eh_2* vs. Gk. ὀσφραίνομαι 'to smell' < *h_3od-s-* + *b^her-* lit. 'carry odor'. Note that ὀσφραίνομαι is formed with the Helleno-Albanian combined nasal+*i̯*-present (<mark>§4.7.3 (1)</mark>).[18]

11. The name of the Albanian dawn-goddess, goddess of love and protector of women, *Premtë*, *P(ë)rende*, (whose name forms part of *e premte* 'Friday') corresponds regularly to the Greek name Περσέφαττα, a variant of Περσεφόνη, which Janda (2000: 224–50) convincingly traces back to *pers-é-$b^hn̥t$-ih_2* 'the one who brings the light through'. The development of the sequence -*$b^hn̥C$-* would be the same as in *venj* 'weave' < *vemj-* < *$h_2eu̯b^h$-n̥i̯-* (cf. <mark>§4.7.3 (1)</mark>); regarding Alb. -*r*- from originally pretonic -*rs*-, cf. *ter* 'to dry' from the PIE causative *tors-éi̯e-*.

12. In both Albanian and Greek, two PIE *u*-stems, *$ĝén$-u* 'knee' and *$dór$-u* 'tree', occur with -*n*-extensions: Alb. *gju* 'knee', def. *gjuni*, Geg *gjû* (cf. <mark>§4.3</mark>) and *dru* 'tree', def. *druni*, Geg *drû* ~ Gk. γόνατον (alongside the original γόνυ) and δόρ(ϝ)ατος (Huld 1984: 165).

13. PIE *h_2end^hos*, *h_2end^hes-* acquired the meaning 'flower' in both Alb. *endë* and Gk. ἄνθος vs. Arm. *and* 'field', Skt. *ándha-* 'plant', Toch. B *ānt* A *ānte* 'plain' (Huld 1984: 164; Kortlandt 1986: 39). From this noun, a new verb *(h_2)and^h-éi̯e-* was derived, yielding Alb. *ëndem*, Gk. ἀνθέω 'blossoms'. Formally, they correspond to Armenian *andem* 'cultivate' (Danka & Witczak 1995: 124), but the meaning differences suggest that the Armenian derivation happened independently.

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17 Alb. *farë* meaning 'affinity; kind' is historically a different word, borrowed from Langobardic *fara* 'military clan' into almost all Balkan languages, including Romanian, Bulgarian, and Modern Greek.

18 An alternative etymology has the Greek verbal root connected to Skt. *jíghrati* 'id.' < PIE *$g^{wh}reh_1$-*.

14. The Albanian *o*-grade derivative *darkë* 'supper, dinner; evening' < **dórkʷom* matches Gk. δόρπον 'evening meal' < **dórkʷom* (Porzig 1954: 178; Jokl 1963: 154); the root is not isolated if akin to Bret. *dibri, dribi* 'eat' (per Hamp 1966).

15. It has long been known (Orel 1998: 321 with references) that **pro-peth₂-o-* > Alb. *për-pjetë* 'steep', prep./adv. 'upwards', noun f. 'hill, slope' corresponds accurately to Gk. προπετής 'falling forwards', containing the root in πέτομαι 'fly'. But it has gone unnoticed that the phrase underlying the counterpart *tatë-pjetë* 'slope; (adv.) downhill' (Orel 1998: 450) lies behind Gk. κατα-πίπτω 'fall down'.

16. If Nikolaev (2009: 195) is correct in deriving Arm. *leaṙn* 'mountain' and OIr. *lie* 'stone' from **lēh₂u̯-r̥, *lēh₂u-n-*, then Albanian and Greek agree on a secondary thematic derivative of the nominative, **leh₂u-r-eh₂* 'cleft in a rock, mountain tunnel' > Alb. *lerë* 'heap of stones, slip (of rocks), boulder; pebble bank' ~ Gk. (Attic) λαύρα, Ep. Ion. λαύρη 'narrow passage, alley' (a connection also made by Jokl 1934: 46–8).[19]

17. Albanian and Greek agree on a *-no*-derivative **ku̯ap-nó-s* 'smoke' > Gk. καπνός, Alb. *kem* vs. other derivatives in Lat. *vapor*, Lith. *kvãpas* (Porzig 1954: 177).

18. A new derivative **bʰalii̯os* < **bʰl̥H-ii̯os* from PIE **bʰel-* 'white' is reflected in Alb. *bal* m. 'dog with blaze', adj. 'white-haired' and Gk. φαλιός 'white-patched'; the Proto-Albanian word was borrowed into Greek as the variant βαλιός 'white-speckled' according to Jens Elmegård Rasmussen (pers.comm.).

19. PIE **gʷelH-* 'to torment, to sting' in words for 'sewing needle' > Alb. *glep, gjep, gjilpërë*, Gheg *gjylpânë* ~ Gk. βελόνη (Irslinger 2017: 312). The Albanian suffix *-ërë, -ânë* even formally matches Gk. *-όνη* < **-m̥n-eh₂* (Olsen 1999: 492; Rasmussen 1996: 154), used in denotations for instruments and remedies.

20. Alb. *bar* n., pl. *barëra*, Geg *barna* 'grass; medicine' ~ Gk. φάρμακον 'drug, medicine' < **bʰar-(m)n-* (Jokl 1963: 129), derived from the Core IE root **bʰar-* which denotes crops everywhere else (e.g. Lat. *far* 'spelt', Eng. *barley*).

21. Alb. *ndër-dym* 'in doubt' formally corresponds to Gk. διά 'apart, through' < **du̯is-m̥* 'in two (parts)' (Mann 1952: 32).

22. A pronoun **h₂au̯to-* 'self' occurs in Alb. *vetë*, Gk. αὐτός (Witczak 1997: 216); also shared with Phrygian (*avtos*; see chapter 10).

4.7.5   *Semantic innovations*[20]

1. PIE **seh₂g-* 'seek' acquired a new meaning 'drive' in both Alb. *gjuaj* 'drive (quickly), chase' and Gk. ἡγέομαι 'lead the way, guide' (cf. §4.7.3 (5b)).

2. Alb. dial. *lag*, Standard Alb. *lagje* f.pl. 'troop; community, neighbourhood' ~ Gk. λόχος 'troop; band' share a specialized meaning of a derivative **lógʰ-o-*, originally 'camp' (PGmc. **legra-*), from PIE **legʰ-* 'lie (in)' (Hyllested 2020: 410–11).

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19 Milyan *lakre* is formally identical to the Helleno-Albanian word, but possibly means 'stone tablet'; cf. also Lyd. *laqrisa* 'covered passage, dromos' (Nikolaev 2009: 196).

20 Semantic innovations in certain plant-names (such as Alb. *ah* 'beech' ~ Gk. ὀξύα 'id.' vs. 'ashtree' in other branches) are not included as they may reflect geographical surroundings rather than genealogy.

3. Alb. *bimë* 'plant' ~ Gk. *φῦμα* 'id.' formally reflect the same derivative *$b^h\acute{u}h_2$-mn* of *$b^h\mu eh_2$-* 'to grow' as Skt. *bhū́man*, but the latter has a radically different meaning: 'world, region (n.); multitude, wealth' (m.) (Mann 1950: 387). The Helleno-Albanian and Indo-Aryan meanings may be said to both constitute innovations and retentions at the same time if they represent two original meanings of the word 'growth'; cf. Da. *vækst* 'growth; plant'.

4. Alb. *thellë* 'deep; dark(-coloured)', Gk. *κοῖλος, κόϊλος* < *$*ko\mu ilos$* 'hollow', Myc. *ko-wi-ro* reflect a meaning 'empty, curved in' rather than 'curved out' as in ON *haull* 'hernia' (Porzig 1954: 177; Huld 1978).[21]

5. Reflexes of the verb *$*her\hat{g}^h$-* 'to go, jump up' have acquired the meaning 'come' in Gk. *ἔρχομαι* and Alb. *erdh-* aor.

6. PIE *$*h_1\acute{e}h_1tr$* 'stomach; intestines' acquired the meaning 'heart' in both branches: Alb. *votër, vatër* 'heart' ~ Gk. *ἦτορ* 'id.' vs. PGmc. *$*\bar{e}þr\bar{o}$* 'veins, entrails', e.g. > OE *ædre*, also 'sinew; kidney'. In Albanian, the word has merged with *votër, vatër* 'fireplace, hearth' < *$*h_2eh_2$-tr*, understood as the central part of a house.

7. Alb. *krua* 'spring' ~ Gk. *κρήνη* 'spring, well' (§4.7.1 (4), compare PGmc. *$*hrazn\bar{o}$* 'wave') probably reflect a semantic change paralleling what took place in Eng. *well* ~ NHG *Welle* 'wave', Lith. *vilnìs*, Ru. *volná* 'id.'

8. Alb. *krromë* 'scab' ~ Gk. *κνῆμα* 'itch, scab' makes up a shared derivative of the verbal root in Gk. *κνάω* 'to scratch'; OHG *hnuo* 'knotch, groove'; Lith. *knisti* 'to dig' (Mann 1952: 38). Cf. however also Phryg. *knoumane* 'grave'.

4.8   A Palaeo-Balkanic group?

Evidence for a broader Balkanic group consisting of Albanian, Greek and Armenian, as well as Phrygian, is presented in chapter 11, §4.1 and (mainly) §5.[22] To this list we can add:

1. A new possessive pronoun *$*emos$* 'mine' > Alb. *im(e)*, Gk. *ἐμός*, Arm. *im*, perhaps dissimilated from an old accusative *me-me* (Huld 1984: 165 with references).

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21 Armenian *soyl* 'cave' appears to be a ghost form and would reflect *$*ko\mu(H)$-lo-* anyway (Zair 2011: 166 n. 5).

22 We can embrace most of the evidence adduced there although we want to point out that (1) Alb. *edh* 'goat' may simply be a borrowing from Lat. *haedus*, cf. Rom. *ied* (Witczak 1997: 125); (2) the locative plural ending *$*-si$* is not secured for Albanian since even *$*-su$* may yield the attested outcome *-sh*; and (3) *awr* 'day' etc. was probably not originally restricted to Greek and Armenian (see §4.7.4 (2)). On Alb. *grua* 'woman', see also Opfermann (2017). Two proposals mentioned by other scholars, but which we deem invalid, deserve attention:

   1. Alb. *dhjamë* 'lard, fat, tallow' ~ Gk. *δημός* 'id.' ~ Arm. *tamowk* 'moist' (*pace* Porzig 1954: 178; Jokl 1963: 153; Witczak 1997: 125). Albanian has a dialectal variant *vjamë*; words with oscillation between initial *dh-* and *v-* have *v-* as original (cf. fn. 14).

   2. The similarity between Alb. *liqen* 'sea', Arm. *lič* 'sea' and *λίμνη* 'marsh, lake, basin; sea' is also coincidental. *Liqen* is a loanword from Gk. *λεκάνη* 'basin, tub' (in Mod.Gk. also in the geographical sense), while *lič* can reflect *$*pl\bar{e}h_2$-g-$i\mu o$-* 'surface of the sea', an adjective made from the vr̥ddhi formation *$*pl\bar{e}h_2$-g-o-* reflected in the variant *lik*, derived from *$*pelh_2$-go-* > Gk. *πέλαγος* 'sea' (thus Kölligan 2019: 246); *λίμνη* is derived from *λειμών* 'meadow' with an original *$*-m$-* (i.e. not *-μν-* from *$*-g^wn$-*). Thus, these three terms have nothing to do with one another (*pace* Holst 2009: 93).

2. A suppletive aorist *g^werh_3-* to the verb 'eat', irrespective of the origin of the present stem. Compare Alb. *ha*, aor. *n-grë*; Gk. *ἔδω, ἐσθίω*, aor. *ἔφαγον, ἐ-βρώ-ϑην*; Arm. *owtʻem*, aor. *kʻer-* (Holst 2009: 87).

3. By the same analogy as described in §4.7.3 (3), the old root aorist of PIE *$steh_2$-* 'stand' was replaced with an *s*-aorist *$steh_2$-s-* with factitive semantics in both Alb. *shtova* 'added', Gk. *ἔστησα* 'made stand', Arm. *stacʻay* 'acquired', Phryg. *estaes* 'erected', and Mess. *stahan* 'erected' (Søborg 2020: 76).

4. A new root *$klau̯$-* 'to cry' > Alb. *qaj*, OAlb. *klanj* < *$klau̯$-$n̥i̯$-* ~ Gk. *κλαίω*, Arm. *lam* 'to cry', probably a secondary derivative from PIE *$kleu̯$-* 'to call, hear'.

5. Another new root *$k̂erH$-* in Alb. *thur* 'to twine, weave', *thurje* f. 'braid', *thark* 'pen, fold' (*$k̂r̥H$-ko-*) ~ Gk. *καῖρος* 'row of thrums in the loom', Arm. *sarikʻ* 'band, cord', *sard* 'spider' (perhaps *$k̂r(H)$-d^hh_1o-* 'web-maker', Olsen 1999: 193).

6. The originally honorific term *h_2ner-* 'man (of consequence)' has replaced *$u̯iHró$-* as the common word for 'man', Alb. *njerí*, Gk. *ἀνήρ*, Arm. *ayr* (Huld 1984: 165).

7. Generalized full-grade in the word for 'lice eggs': Alb. *thëri*, Geg *thëni* < *$k̂oníd$-*, Gk. *κονίς, -δ-*, and Arm. *anic* (dissimilated from *$sanic$*) vs. zero-grade *$k̂nidā$* in Germanic and Balto-Slavic: OE *hnitu*, Latv. *gnīda*, SCr. *gnj̏ida* (Huld 1984: 165).

8. *$ster$-ih_2* 'sterile (of females)' > Alb. *shtjerrë*, Gk. *στεῖρα*, Arm. *sterǰ* (Hyllested 2016; on the Greek-Armenian connection see de Lamberterie 2013).

9. Perhaps PIE *$k^wei̯$-* 'gather' > Palaeo-Balkanic 'make'; see §4.2.

There is also some evidence for a broader Balkanic unity wherein further developments set Albanian and Greek apart from Armenian, again pointing to a Helleno-Albanian subgroup:

10. PIE *b^heh_2-* 'shine' (LIV² 68–9) forms a nasal present in Albanian, Greek and Armenian, but only Greek and Albanian later add an extra *i̯*-present to it, following a productive pattern (§4.7.3 (1)): Armenian *banam* < *b^heh_2-n-* vs. Alb. *bëj*, Gheg *bâj* 'does', Greek *φαίνομαι* 'appear' < *b^heh_2-n-$i̯$-*

11. A derivative *Hon-$r̥$-$i̯o$-* (alongside archaic *Hon-$r̥$*) 'dream' occurs in Alb. *ëndërr ~ ëndër* and Gk. *ὄνειρος ~ ὄναρ* vs. Arm. *anowrǰ* (< *$Hnōr$-$i̯o$-*), all 'dream' (de Lamberterie 2013; Kortlandt 1986: 38; Witczak 1997: 126). The root is not known from elsewhere, but the heteroclitic declension points to an IE retention in Palaeo-Balkanic.

12. A derivative *h_1ed-$ún$-eh_2* 'pain' > Alb. *dhunë, dhurë* f.pl. 'damage, injury; shame, disgrace' = Gk. *ὀδύνη* 'pain' alongside the older *h_1ed-$u̯ōn$-* in Arm. *erkn* 'labour pains' and e.g. secondary *h_1ed-$ōn$* in OIr. *idu* (not *$-u̯ōn$-* since *$-du̯$-* > OIr. *-db-*).

And in one case, an Armenian innovation isolates it from a Helleno-Albanian remainder:

13. The word for 'bee' is derived from *$mél$-it* 'honey' in all three languages (Holst 2009: 90): Alb. *mjaltë* 'honey' ~ *bletë, mjalcë* 'bee', Gk. *μέλι* 'honey' ~ *μέλισσα, μέλιττα* 'bee', Arm. *mełr, -ow* 'bee' ~ *mełow* 'honey', but Armenian has *-u-* by influence from PIE *med^hu* 'mead' (Clackson 2017: 112).

5   The position of Albanian

5.1   Broader connections within IE: Albanian and the *centum-satem* division

Starting with reconstructed PIE with a three-way distinction in the guttural consonants (palatals, e.g. $*\hat{k}$, velars, e.g. $*k$, and labiovelars, e.g. $*k^w$), a division within IE is possible, descriptively, into branches that merge palatals and velars (so-called "centum" languages) and those that merge velars and labiovelars (so-called "satem" languages). The satem languages also show affrication and/or assibilation of the PIE palatals. We say "descriptively" because we do not see this division as a basically genealogical one within IE. That is, for us, the centum languages are not a coherent dialectal or genealogical subgroup while the satem languages might be. The position of Albanian within this scheme is thus of considerable interest, and not surprisingly, is somewhat complicated.

In particular, while Albanian shows some merger of labiovelar and velar, as in *pjek* 'to cook' $< *pek^w$- (cf. Gk. πέπων 'ripe') and *plak* 'old man' $< *pl\partial_2 k$- (cf. Lith. *pìlkas* 'grey'), it also maintains the original three-way PIE guttural distinction in at least some environments, and thus descriptively is neither centum nor satem. For instance, before a PIE front vowel like $*\bar{e}$, distinct outcomes of $*\hat{k}$, $*k$, and $*k^w$ occur, as recognized by Pedersen 1900, e.g. *tho-të* 'says' $< *\hat{k}\bar{e}$-*ti* $< *\hat{k}eh_1$-*ti* (cf. Old Persian ϑā-*tiy*), *kohë* 'time' $< *k\bar{e}s\hat{k}o$- (cf. OCS *časъ* 'hour'), and *sorrë* 'crow' $< *k^w\bar{e}rsno$- (a vṛddhi derivative of 'black', as in Sanskrit *kṛṣṇá*-). In this way, Albanian is like Luvian, as analyzed by Melchert 1987. Moreover, since elsewhere in Anatolian, e.g. in Hittite, one finds centum-like mergers (e.g. *kī-ta* 'lies' $< *\hat{k}ei̯$-, cf. Sanskrit *śe-te*), it must be that centum mergers happened independently in Hittite and any other centum language (e.g. Greek or Latin); thus centum-ness cannot be judged to be a significant innovation shared by such languages. In fact, centum-ness seems relevant only for post-Anatolian and post-Tocharian IE, and really equates to just Italo-Celtic and Germanic; satem-ness, by contrast, equates to Balto-Slavic and Indo-Iranian (and could be a real shared innovation between them). An ancient Balkan group, including Armenian and Albanian and Greek, appears like a potpourri, making up a third unit which initially kept all original stop distinctions; various developments in its individual subbranches subsequently obscured this basic retention, e.g. the Albanian $*k/*k^w$ merger in some environments noted above, or the assibilation seen in *sjell* 'bring' $< *k^wel$- (cf. Gk. πέλω 'be in motion').

Albanian lexemes with initial clusters *vd*- and *ft*- are of special interest in this context. Previous etymologies of the two clearest examples, Alb. *vdjerr* 'to disappear' and *vdes* 'to die' (stem *vdek*- as in the participle *vdekur* 'dead') all involve a semantically vague labial prefix *v*- supposedly added to known verbal stems.[23] However, a less dichotomous centum-satem division, with Balkan languages showing characteristics of both, allows for a more economical analysis of these two Albanian verbs as regular reflexes of Core IE "thorn clusters" containing a labiovelar. Thus, Alb. *vdjerr* 'to leave' can simply correspond fully to Gk. φθείρω 'destroy, ruin', med. φθείρομαι 'perish', even down to the *i̯*-present, from Core IE $*g^{wh}per$- $< $ PIE $*d^hg^{wh}er$- 'flow; melt away; disappear', and no prefix need be posited. Similarly, *vdes* could straightforwardly contain the Core IE root $g^{wh}þei̯$-$(k^w$-$) < $ PIE $*d^hg^{wh}ei̯$- 'decline; perish' also seen in Gk. φθί(ν)ω 'perish', φθίμενοι 'the

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23   E.g. Mann 1952; Orel 1998; Hamp 2004; Holm 2011.

dead', though formally from an old causative *$g^{wh}\bar{b}oi̯-k^w-éi̯e-$ 'leave behind' that is closer to PGmc. *$sw\bar{\imath}kwjana-$ 'depart' (Eng. *swike*, ON *svíkva ~ svíkja* 'betray').[24]

An important consequence of this interpretation is that, since Albanian *v-* or *f-* reflects the old labiovelar, the dental *-d-* must continue the PIE thorn element. This, in turn, would mean that the common view that Albanian agrees with Balto-Slavic, Germanic and Italic in preserving only the dorsal part of *palatal* thorn clusters – as if *$\hat{g}^h\bar{b}om$* 'earth' and *$\hat{g}^h\bar{b}i̯es$* 'yesterday' were *$\hat{g}^h\bar{o}m$* and *$\hat{g}^hi̯es$*, respectively – must be abandoned. Although the regular reflex of a palatal *$\hat{g}(^h)$-* in Albanian is *d(h)-* as well, the sole consonant left in *dhe* 'earth' and *dje* 'yesterday' must then reflect the thorn element and not the dorsal, which disappears without a trace.

The above analysis has important consequences for the internal classification of IE:

1. it makes Albanian more of a centum language, since it preserves not only the velar-labiovelar distinction but even the actual rounding of labiovelars
2. it distances Albanian from Balto-Slavic, Germanic, and Italic, which all agree on preserving the stop part of thorn clusters only
3. it connects Albanian even more to Greek than previously assumed.

5.2   Conclusion

As noted at the outset, the relationships that Albanian shows within IE are complicated, and the evidence we have discussed should make that point abundantly clear. We have surveyed here the most striking possible connections that Albanian shows with other branches of Indo-European, based on key pieces of evidence:[25] Technically speaking, from a genealogical standpoint, Messapic is likely to be the closest IE language to Albanian (Matzinger 2005). However, in the absence of sufficient evidence, that connection must remain speculative. Among the other connections, leaving aside the broad centum-satem parameter, since we do not see it as a valid dialect division in the usual sense, we are left with the following, listed here from the least compelling (with Italic) to the most compelling (with Greek):

Albanian and Italic
Albanian and Celtic
Albanian and Indo-Iranian
Albanian and Germanic
Albanian and Balto-Slavic
Albanian and Armenian
Albanian and Armenian, Greek, Phrygian and Messapic (etc.)
Albanian and Greek

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24 A candidate for a reflex of the unvoiced counterpart *ft-* might be Alb. *ftik* 'dry' ~ Lat. *siccus* 'dry' (< *$s\bar{\imath}cus$*), if from a PIE *$tk^wiH-ko-$* or *$tk^wei̯-ko-$*, possibly also reflected in PGmc. *$swiþan-$* 'scorch' and/or Gk. *$\psi\bar{\imath}-\lambda\acute{o}\varsigma$* 'bare'. None of these four words have a generally accepted etymology.

25 We have deliberately restricted ourselves to the best evidence, leaving out some intriguing shared substratum words such as Alb. *dëllinje, dëlli* 'juniper' ~ Gk. (Hes.) *$\sigma\chi\acute{\epsilon}\lambda\iota\nu o\varsigma$* 'wild cypress or juniper', indicating a protoform *$(s)\hat{g}^helin-(i̯)o-$* (Danka & Witczak 1995: 132); and formations containing isolated roots such as *$u̯is\hat{g}^h-i(i̯)o-$* > Alb. *vithe* 'haunch, especially of a horse' ~ Gk. *$i\sigma\chi\acute{\iota}o\nu$* 'hip-joint; loins, haunch' (Mann 1952: 39).

These are not necessarily mutually exclusive, depending on one's overall conception of the interrelationships among all the branches of the family. That is, some apparent shared innovations could in principle be the result of wave-like diffusion in prehistoric times. Moreover, as noted throughout, one has to ask whether limited evidence for a particular linkage goes beyond what might be expected between any two branches in the family.

Ultimately, though, as indicated, the preponderance of evidence favors a close connection between Albanian and Greek,[26] possibly as a subset within a "Palaeo-Balkan" group with Armenian and Greek, as well as Phrygian, Messapic and other fragmentarily attested languages. The Albanian-Greek connection that we argue for here is particularly interesting in the light of the computational phylogenetic study of the interrelationships among IE languages reported on in Chang et al. 2015. In that paper, starting with the same model and data set as earlier phylogenetic studies (especially Bouckaert et al. 2012, 2013), but with a key difference in that they "constrained eight ancient and medieval languages to be ancestral to thirty-nine modern descendants" (p. 199) to allow for greater accuracy, the authors develop an "analysis with modern languages from all IE subfamilies" (pp. 199–200) in which Albanian, represented by Arvanitika and Tosk,[27] ends up in their resulting tree diagram of IE relationships as being most closely connected to Greek. Different methods and different IE data sets and different assumptions can of course yield different results,[28] but we take heart from the convergence of our more traditional qualitative assessment of Albanian's closest relative and the computational quantitative assessment by Chang et al.

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26 In line with our interest in just presenting the best evidence, we have focused on shared innovations with Greek. Despite what we say in the beginning of §4 about the limited value of shared retentions, we do believe that they can in principle, if the retention is unusual enough compared to the rest of the family, especially when paired with significant shared innovations, point to a close genealogical connection; in a certain sense, the retention can, under appropriate circumstances, constitute an innovation in itself. See footnote 6 for some possible instances in that regard.

27 Arvanitika, of course, is a Tosk dialect, but we assume that by "Tosk", Chang et al. mean the standard language, which is based on a variety of Tosk.

28 Ringe, Taylor, and Warnow (2002), for instance, as noted in §4.5, see Albanian and Germanic as being particularly closely related.

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