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Jan Bičovský

SUPPLETION AND ITS RELEVANCE TO THE IE FAMILY-TREE¹

ABSTRACT

Classification of related languages as to the level of mutual genetic proximity relies on a number of criteria, the principal one being the character and number of shared innovations. As singular innovations are likely to emerge in related languages independently, the risk of misinterpreting homology for homoplasy is high. In this respect, suppletion, as the extreme of morphological irregularity and therefore an innovation least likely to emerge independently in the semantically and etymologically identical paradigms, may help to support or invalidate hypotheses. In this article, I examine a number of shared suppletive paradigms to show how their distribution in the family may shed light on its bifurcation.

KEYWORDS

Indo-European; suppletion; morphology; language change

1 Introduction

Ever since the Stambaum theory has been introduced into historical linguistics, linguists attempted to perfect a methodology that would allow them to discover which of the possible genealogic trees best represents reality and how to weigh alternatives. This is a much more difficult task than might appear, as long as we take the mathematics seriously and ignore biases of tradition. For a language family such as Indo-European, with its ten known branches, the number of possible trees is somewhere in the realm of hundreds of millions.

As in biology, the decisive features are those of the inner structure, far more than the outward appearance. It has been stated repeatedly since the early 19th century

¹ I am indebted to Reiner Lipp for several hints and observation that proved valuable for this article.

that the final proof of relatedness lies in the grammar – especially in the match between the form and function of specific markers of grammatical (or derivative) categories. Over time, several methods were proposed, and some again rejected, to quantify relatedness within a group of related languages on the level of shared features (lexical, syntactic, grammatical or otherwise), which in turn translates into a family tree.

Again, this seemingly mechanical and processually easy task is complicated by several factors so as to make it very often impossible to arrive at a consensus (to which testify the ongoing debates over the family tree of Semitic, see e.g. Kogan (2015, 15). First, as has been obvious since the very beginning of the scientific study of the Indo-European language family, only innovations within the inherited system matter – shared archaisms are not of their own diagnostic. But neither it is always possible to decide between the two (not even in a family so well studied as Indo-European), nor do all innovations have the same value and – if the procedure incorporates calculations this means that without some external criteria as to which innovations as types are more important than others, some cases cannot be decided.

Within Indo-European linguistics, several attempts have been made to prove closer relation between two or more branches and establish sub-groups or areas. Yet, even for Italic and Celtic, where shared innovations are numerous and sometimes unique, it has been so far impossible to persuade the majority that positing Italo-Celtic, as a separate branch, is necessary, indeed – unavoidable (attempts such as KORTLANDT 2007 are in the minority). This may, in the end, be also a matter of inertia and – also – in many respects the existence or not of Italo-Celtic does not exert much influence on the step by step decisions done routinely in reconstructing their prehistory.

But far more important than the number of shared innovations is a) their nature b) their sequence. In principle, if any single change occurs with a certain probability and is therefore likely to happen in two languages independently (Vulgar Latin *au* > Romance *o* vs. Proto-Indic *au* > Vedic *o*) with a certain probability, for a sequence of two changes this probability – regardless of the fact that it is impossible to establish – is lower, and lower still for a longer sequence of changes. But it is not always possible to establish relative chronology. Even for such cornerstones of Indo-European linguistics, such as Grimm's and Verner's law, under certain conditions, their sequence could be reversed (EULER – BADENHEULER 2009, 54). And often, it is simply impossible to establish a chronology, since the crucial condition – that the changes overlap in their domain or context – need not be fulfilled.

A case in point is the problematic relation of Armenian and Greek. For a long time, it has been assumed that a number of unique isoglosses together with some shared phonological innovation point to a shared ancestor. Historical and territorial arguments seem to play in favour of this proposal – the two population may



have easily resided in vicinity in the period prior to Greek and later Armenian migration. But, ever since Clackson (1994), this opinion is shifting and the isolated innovations are no longer seen as probative. Why is this so? The answer is indeed the fact that they represent *isolated* innovations, not proper strings of innovations.

2 The power of improbability

Yet, we are much more likely to rely on isolated innovation in establishing family trees than not. And, as hinted to above, even in the absence of any proper mathematical procedure to evaluate probability of a specific change under specific conditions, it is intuitively clear that changes that are known to be frequent and consist of a very simple and “natural” shift cannot be proved to be shared at some common stage of development by the languages that share them.

It is here that suppletion comes into the debate. If we disregard unique semantic developments, such as the origin of the English homonymy *flour* vs. *flower*², suppletion comes next as the least probable event in the development of language³. Since there are (or seem to be, in retrospect) always alternatives to suppletion (which can be easily seen in those cases where suppletion is replaced by morphological regularity), suppletion as a last resort of paradigm extension or repair should be extremely unlikely to happen. Yet, Indo-European (unlike, e.g. Semitic) is rife with suppletion.⁴ This is especially true in the area of verbal morphology, where especially Greek and Old Irish present a very complex situation, but also quite frequent with adjectival gradation and with nominal number (though, as far as I was able to establish, this is in most cases a later development within the already well-established branches), and also in the domain of pronouns.

In the following, I will examine a number of cases of shared suppletion in Indo-European in order a) to speculate on their value for establishing closer relations between branches b) to speculate on their value in regard to the grammatical category they express.

2 Originally, a flower emblem was found on the sacks of the best French *flower* and by way of metonymy, this term replaced the earlier English counterpart. This peculiar historical setting is not very likely to happen too often, given that it relies on such factors as a) flower being the emblem of the country of import b) the peculiar product being flour c) the quality of the product d) the position of the French language in the English culture of the day.

3 It has been repeatedly referred to as “unnatural” in morphological theory.

4 For this paper and reasons of simplicity, though not necessarily for my approach to suppletion elsewhere or in general, I will here limit myself to radical suppletion, that is the suppletive relation of two lexical items, where the rest of the morphological material respects the regular conditions.

3 Suppletion in Proto-Indo-European

The possibility to identify certain pairs of items on the level of the proto-language as suppletive depends on a) one's personal approach to PIE, to the Indo-Hittite hypothesis etc. b) to the nature of the grammatical categories and contrasts present in the last common ancestor of the language family. Hittite (and Anatolian) as such is remarkably different from the rest of the family in a number of aspects, crucially for this debate in respect to two grammatical categories: the opposition of punctual vs. durative, or in Indo-Europeanist terms, aorist vs. imperfect preterit, and in the lack of synthetic gradation in the adjective. As is usual with Anatolian, this allows for two interpretations – either the categories in question had not survived in Anatolian, or were not present when Anatolian split from PIE. Although it has been shown (FRANTÍKOVÁ forthcoming) that out of the dozen or so PIE verbal root-pairs that appear as suppletive in more than one branch, Hittite preserves none (that means, out of each pair, say **h₁es* and **b^hweh₂* 'be', only the former survived as a verb), this can either show that the relations in question had not and could not have been established simply because the need to fill the imperfect/aorist slot in any paradigm never occurred in the prehistory of Hittite, or it means they had been lost and levelled in every case, erasing the respective roots from lexicon (presumably the aorist roots). The same holds for the gradation. Hittite uses periphrases, but this on its own cannot be taken as proof of the absence of gradation in PIE. Hittite, which is perhaps more interesting, seems to lack also the derivative morphology which served the purpose in the rest of the family, the etymological families of the comparative **-jos-* or **-tor-* within the adjectival formations – which, given they must have been frequent enough in use at some stage in PIE to grammaticalize into gradation morphemes makes their absence from Hittite suspicious, but again, this is speculation from silence – Hittite has lost (whatever one means by that term) a lot. Thus, if Anatolian is included into the family (which I believe it should naturally), we are left with only one area where suppletion is frequent – pronominal morphology.

3.1 The pronoun

Despite the title to this section (and *mutatum mutandum* for the following sections) I do not intend to give here an exhaustive list of the suppletive paradigms found anywhere in Indo-European, but to discuss the few cases where the same (= etymologically identical) suppletion is present in some parts of the family but absent elsewhere. Pronominal morphology is a good starting point. If any suppletion of PIE age can be found even in Hittite, it is the familiar suppletion within the personal pronouns. Apparently, 1. sg. and 1. du. and 1.&2. pl. in PIE were suppletive, which gives us English *I* vs. *me* and *we* vs. *us*, whereas the suppletion in 2pl. is found as such only in Armenian (where it is of dubious origin) and, remodelled, in Germanic



(Gothic *jūs izwis*), and has to be established by complementary reconstruction, combining the forms found in Lith. nom. *jes* and English *you* with the Av. *xšma-* (apparently shortened from **u(x)šma-*) and the nom. forms of Slavic, Baltic and Greek. In the dual, the situation is even less clear, but an alternation between nom. **n-* and oblique **w-* seems likely. Hittite, lacking the pronominal dual completely, cannot bear on the question. But in the sg. and pl., the suppletion is firmly attested.

The other case of suppletion which can be found anywhere from Tocharian to Indo-Iranian is what may have been the 3.sg. personal pronoun or its functional equivalent, the **so-* vs. **to-* bases, as seen in Gk. *ὁ ἦ τό*, Ved. *sá śá tad* or TB *se sā te* and Goth. *so sā þata*. If we take seriously the communis opinio on the relative position of Tocharian as one of the peripheral branches, next to split after Anatolian, than this situation requires further comment.

While the fact that Hittite has no trace of this alternation may be simply regarded as one of the cases which can either be classified as loss in Anatolian or absence in PIE, the situation for Italo-Celtic is remarkable. Hittite seems to lack the otherwise omnipresent PIE **to* completely, while possibly keeping parts of the paradigm of the **so* in the function which seems closer to 3.ps. personal pronoun than anywhere else in the family (e.g. it does not function as a deictic any longer)⁵. Since in the rest of the IE family the **so* **to* basis can clearly fulfil the function, and the grammaticalization cline implies rather the specialisation of deictic pronouns to personal than vice versa⁶, it can be assumed, that by the time Anatolian split, the **so* **to* suppletion had not yet formed, yet it was clearly in its position in the system by the time Tocharian split.

Italic (old Latin) has traces of the **so* paradigm (WEISS 2009, 339) treats the archaic acc.sg. m. *som* and f. *sam* as new formations) side by side with traces of **to* (in adverbials like *tum* < acc.sg. m. **tom*; in the unverbized *isto-* which, remarkable, in the form of Latin *iste* points to an earlier masculine **to*), which seems like an early case of levelling of **so* => **to*. Although Weiss (2009, 345) prefers a connection with the Gk. *-τε* as an indeclinable particle attached to the *is-* (PIE **h₁i-*) base, it is not immediately clear why Latin did not end up with a paradigm similar to Gk. *ὅδε* (*τοῦδε* etc.) or e.g. Czech *tento* (gen. sg. *tohoto*), where the first formant is declined while the latter remains constant, especially since parallels to this development are found

5 The origin of Hittite pronominal enclitics is not a settled question, however. KLOEKHORST (2008) prefers this alternative, while others (LIPP 2009, vol. I, 83 n. 236) would rather see these forms as related to the PIE **s(w)e-*, which albeit reflexive in most languages, does perform the function of an anaphoric at least in Greek and Indo-Iranian and its possessive has the value and the implication of 3ps. personal pronoun in Italic. The problem is obvious: as subject pronouns they are grammatically nominatives, precisely the case which is lacking in the reflexive paradigm. Of greater importance in the context of the present debate is the possible preservation of the neuter nom.-acc. **sod* in Luwian, parallel to **tod* and expected to have existed prior to the formation of this suppletive paradigm (JASANOFF 2010).

6 The vice versa would entail a reanalysis of a functional noun to an adjective through adposition to an adjective, e.g. *it, (the) dog* >> *this dog*, which seems unlikely.

in Latin itself, in the *hic* series. But if it is the case that *iste* goes back to a levelled **-to*⁷, this is exactly as important as the Luwian reflexes of **sod*. It implies that Italic may have inherited a form which again is expected to have existed in the **to*- paradigm.

To this may be added that what Weiss implies is more complex: it would require the particle **te* to have been interpreted as masculine ENDINGLESS *o*-stem, to serve as basis for the feminine **-tā* and **tod*, which in fact in this account would have been lost and then rebuilt in Italic. This seems less likely than the alternative, i.e. that the suppletion was levelled as it had been in Slavic, but the endingless form is an obstacle even to this hypothesis. On the whole, speakers tend to apply analogy in favour of non-zero exponency, so that **istos* is the expected form. Deleting the ending is very unlikely, unless there was a strong model – the reflex of PIE **so*. At this point, it may appear that the original suppletion may be reconstructed even for Italic but Italic, even Old Latin itself, preserves the reflexes of the **so* paradigm both as simplex and in the univertized *ipse* (WEISS 2009, 346). I see no other possible conclusion but to acknowledge that Italic started with two fully developed paradigms, **so* and **to* and since this is difficult to reconcile with the presence of the suppletive **so/*to*, Italic appears not to have inherited the system present in Tocharian!

The situation in Celtic is similarly confusing – while the traces of **so* have been identified in e.g. the OIr. demonstrative *so sa*, the single remnant of the **to* paradigm is the OIr. particle *tó*⁸ ‘yes, indeed’, comparable to e.g. Polish *tak* or Italian *si* in the basis, though not in the derivation (which in the case of Polish and Italian is an adverb(ial)). In fact, Irish does show the substantive use of the demonstrative bordering on a personal pronoun, but it is difficult to establish the prehistory of this phenomenon. Eska (2008, 175) states that “(t)he demonstrative stem **so/ā-* is attested in Hispano-Celtic and Gaulish, with the initial **s-*, originally only in the masculine and feminine nominative singular, extended throughout the paradigm,” but to my knowledge there is no data to substantiate this statement.

If the suppletive paradigm of **so *to* were to have any implication for the IE Stambaum, it would suggest that Italic and Celtic were to split BEFORE Tocharian.

7 Of course, on simply structural level, one would expect a PIE **to* to have existed on some historic level, and in fact, its absence in the nominative, the subject case, could easily point to its early univertization and grammaticalisation as 3.sg. **-to*. But the question is, whether Italic would have kept the original **to* side by side with what clearly appears in Italic as **-to-r*.

8 Wодтко (2003) recognises as possible traces of the PIE **to* in Celtic the demonstrative acc. sg. f. *stam* ‘that one’, which she interprets as belonging to the same paradigm as *sā* (the probative examples are nom. *sa kortika* and acc. *stam kortikam*. While it is entirely possible that we deal here with a contamination of *sām* and *tām*, as she suggests, her other suggestion is preferable – a comparison with Prussian *sta*. Here the *s-* goes back to PIE palatovelar, so she correctly gives this comparison as “typological”. The problem here is – if the **so* and **to* were at some point in Proto-Celtic part of the same paradigm, it is difficult to see, how they would end up in a sequence **sām tām*. An attractive comparison here may be the Latin *iste* series, on the condition that the initial vowel has been elided. This then would be a shared innovation for Italo-Celtic and further hint that both branches dealt with a situation which is closer to Anatolian than to Tocharian.

3.2 The adjective

As mentioned above, Anatolian lacks any traces of a synthetic adjectival gradation. Apart from Tocharian, Armenian, and Albanian, all other IE branches form synthetic adjectival grades and share the affix **-i(o)s-* (in Greek and Indo-Aryan along with **-ter-o-*). Adjectival gradation is the typical locus of suppletion and IE branches provide a plethora of forms and configurations (cf. BOBALJIK 2012). Yet, word equations are extremely rare. As even within the recorded history of separate branches suppletive adjectival series undergo lexical replacement, this should not be a surprise. As far as I was able to ascertain, there is not a single case of a complete pair of lexical items in a suppletive relation that would appear in two branches. Never the less, this does not exclude any comparison. The following two observations lead to the conclusion that lexical match of the comparative (and superlative) in any adjective is likely to reflect an inherited pattern: 1) under favourable conditions, a lexeme with close semantic proximity to the (future) positive is used in the relevant context – the choice of the *very same* lexeme, given the constantly shifting frequency and preference for quasi-synonyms, in two languages independently of each other is highly improbable. 2) it can be observed, that suppletion may often evolve in a rather unexpected direction – the “basic” member being replaced and the “suppletive” member preserved.⁹

There are three cases worth mentioning.¹⁰

(1) PIE **meHi-no-* ‘small’

Latin: ___ *minor minimus*

Greek: ___ μείων μείστος

Czech: ___ *menší nejmenší*

Gothic: ___ *minniza minnist*

Given that we have here four branches of IE using the same etymon in the comparative I believe that the only logical conclusion is that *this relation is inherited*. This at least proves that in the last common ancestor of these languages, this relation existed and by implication, adjectival gradation was already grammaticalized. This however does not expand our knowledge or contradict the *communis opinio*. If anything, it attests to a relative conservatism of suppletive paradigms.

(2) ?? **g^her-s-* ‘bad’ ??

Greek ___ χείρων

Czech ___ *horší*

Goth. ___ *wairiza-*

9 I use the inverted commas here for a reason: it is often the case that it is the least (or less) marked member of the relation which is a later intrusion – it is thus probably the case that Eng. *I* is suppletive the pronoun *me* in the nominative than vice versa, which is the case already in PIE.

10 Possibly a fourth case is the relation of Gk. βελτίων ‘better’ to Sl. comparative **bolě* ‘more’. Though the semantic match is not perfect, the fact that as continuants of PIE **bel* ‘strong’ they are only found in this paradigmatic slot is hardly a coincidence.

While it is possible to reconstruct in a mechanical manner a PIE root **g^her*, the prevailing interpretation of the Slavic etymon is one linking it to PIE **g^{wh}er* ‘burn’. This presupposes for Slavic a R(o)-adjective **gor-mo-*, a Caland formation, albeit with an unexpected radical o-grade, in fact attested (e.g. Old Czech *hormý¹¹*) or even a u-stem **goru-*, given the later derivatives as Cz. *horký* – the extension to **-u-ko-* is attested with at least a dozen other PIE adjectives in Slavic. For Gk., the situation is summarized by BEEKES (2010: 1622), who sees as the main obstacle to this relation the Slavic o-grade as well. Yet, the o-grade need not be original in Slavic. It is not at all improbable that the vocalism of the comparative were levelled to that of the positive. The real problem is with the positive and with the Gk. initial. For a u-stem adjective, one would expect radical zero grade, for an o-stem, radical e-grade. Comparing the variation between R(o)-*mo-* and R(e)-*mo-* in this very etymological family (OldCz. *hormý*, Eng. *warm* against Gk. *θερμός*) it is conceivable that this is the same source of confusion (two separate derivations from an acrostatic neuter abstract of the **Góru- *Géru-* type, whatever the root?). The Gk. initial should of course be *ϑ-*, and a *χ-* could only be explained as a case of levelling to a non-attested, and, moreover, zero-grade positive¹². In PIE terms, both a putative **g^{wh}ormo-* and **g^{wh}r-ú-* would form the comparative as **g^{wh}ér-jos-*. As noted above, this remains a speculation.

On the other hand, if we do indeed follow this path, perhaps we should examine the family of Eng. *worse* (note: this course has already been taken by Grimm (1878, III, 658), but was later abandoned). This is usually derived from PIE **wers* ‘confuse’ by way of PGerm. **wersiza-* (see the bibliography in OREL 2003, 457), which is closest to Goth. *wairsiza-*. The semantic connection is suspect and the proposed **wers* could be reconciled with the Gk. and Slavic etymons by way of a PIE **g^{wh}ers* (which as **g^{wh}ers-jos-* would yield the Gk. while for Slavic, one would have to envisage a complicated series of analogies and sporadic changes: **gers-jos-* => **gers-is-* > **gers-iš-* => [contaminated by **gormo-* if no longer semantically transparent?] **gorš-iš-* => [by way of haplology or perhaps as result of the previous change, which made unclear the morphological status of the *-iš-*] **gorš-*.

(3) **sen-* ‘old’

Latin *senex* (gen.sg. *senis*) ‘old man’ – *senior* ‘(an) elder’ - ...

Gothic *sineigs* (gen.pl.f. *sineigos*) ‘old’ - ... - *sinistans*

A very different situation can be presented for the PIE **sen-* ‘old’. In Italic and in Germanic, we encounter a secondary derivative to PIE **sén-o-* ‘old’, i.e. **senekó-*, reminiscent of similar enlargements of other Caland adjectives, such as Ved. *laghú-* vs. e.g. Czech *leh-k-ý* ‘light’. On its own, this enlargement is therefore unremarka-

11 Note that if this continues the positive to *horší* ‘worse’ it is striking that the semantics show no shift towards ‘bad’ at all. But the North Slavic *gorje* ‘grief’, usually derived from **gor-* ‘burn’, could represent another secondary derivation to an otherwise unattested basis (semantically or formally).

12 Although, there is perhaps the possibility that a Pre-Greek **k^{hw}ormo-* could have been raised to **k^{hw}urmo-* by Cowgill’s law, as the *-o-* it is conveniently flanked by two labials.



ble, though more frequent with *u*-stem adjectives. Yet the suppletive arrangement, albeit not identical in the distribution, implies common descent. Again, the lack of the newer stem in the comparative or superlative¹³, or even in the oblique cases in Latin, suggest a lexicalisation of an adpositional adjective ('X the old'). Note that it is not the newer, possibly individualising derivation, but its presence within the paradigm of its derivative basis which support the conclusion that this is a case of common innovation.

These three (possibly only two) remnants of the late PIE situation, as I have already noted, do not invalidate any current *communis opinio* on the relative branching off of the Indo-European family and simply strengthen the point that adjectival comparison is already of LatePIE date.

3.3 The verb

The PIE roots paired in suppletive paradigms have been treated by Frantíková (forthcoming). Varying in the number of lexemes (with Greek probably the extreme, KOLLIGAN 2007), suppletion is present in all branches. In Anatolian, one must hasten to add, this is not the case for what is the most common configuration elsewhere. While there is a suppletive pair ('say' – 3sg. *tēzi* 3pl. *taranzi*, KLOEKHORTS 2008, 870), there is no suppletion over the aspect axis. With Anatolian problematic as to its prehistory, including the verbal system – perhaps especially the verbal system – the important datum that could be the result of this analysis is at the present moment unattainable. We simply cannot establish, whether at any stage Proto-Anatolian used the reflexes of PIE **h₁es* 'be' and **b^hweh₂* 'become' formed a suppletive paradigm. Frantíková's finding that out of the most frequent PIE verbal roots present in suppletive paradigms it appears that Anatolian always preserves only one member of each pair may be important. Apart from Anatolian, aspect/tense suppletion is present in all the branches. As for the lexical pairs (or rather, for quartets), there are few apart from the aforementioned. But again, as we have already seen with the adjectival suppletion, the very fact that e.g. **b^her* 'carry' is suppletive in a large part of the family, regardless of the fact that the suppleting partner is not etymologically related, probably guarantees its suppletive status in some stage of PIE. Though partial replacement of the lexical material in a suppletive paradigm is not frequently encountered as a process (the alternative, levelling or complete replacement being far more frequent), there are examples, most famously the replacement of OE *éode* 'went' by the preterit of *wend*. In each case, the reasons for replacement may have been a unique configuration of both semantic and formal factors, but it is in no way unimaginable that the roots that supplete **b^her* have

¹³ In Latin, the comparative is already lexicalised, of course, in Gothic, only the superlative is attested, translating Greek *πρεσβύτερος* 'elder' while *sineigs* translates *πρεσβύτερος* 'old man' – Nota bene: in this manner it cannot be safely said that functionally this was an adjective or that *sinistan* is really the superlative to *sineigs*.

undergone the same process. Some other pairs are remarkable, such as the equation of Armenian *goy* with English *was*, both being the reflexes of PIE $*h_2wes$ ‘remain, stay’ (suppletive in the paradigm of ‘be’), or Greek $\xi\lambda\upsilon\theta\omicron\nu$ and Old Irish *luid*, both suppletive to the reflexes of PIE $*h_1ei$ ‘go’, in that the first would imply the improbable triple suppletion (along with $*b^hweh_2$), while the latter would only imply that PIE $*h_1leud^h$ had already established a close relation with $*h_1ei$ in the last common ancestor of Greek and Celtic.

3.4 The noun

As far as I am aware, it is not possible to reconstruct any radical (= including the root) suppletion within the PIE noun class. There are at least two cases of stem suppletion, one restricted to case alternation (the so-called *r/n-* or heteroclitic stems, wherein two stems alternate, one in the nom.-acc., the other elsewhere) and one to case and number alternation: the $*-h_2$ stem of the former nom.-acc. sg. collective which was incorporated into the paradigm of the neuter as the form of the nom. acc. plural). In the daughter languages, both case and number suppletion evolve repeatedly, e.g. Latin *Iuppiter* gen.sg. *Iovis* or Greek Ζεύς gen.sg. Διός , or Russian sg. *rebenok* pl. *deti* ‘child’. The presence of suppletion in the paradigms of ‘god’ in Latin and Greek is of course a mere coincidence, though the etyma are in fact related. But it is more difficult to see as mere coincidence the suppletion in Germanic and Balto-Slavic of the term for ‘people’, as exemplified by German *Leute*, Czech *lidé* and Lithuanian *liaudis*. That this derivation of PIE $*h_1leud^h$ (also in Greek $\epsilon\lambda\epsilon\upsilon\theta\epsilon\rho\varsigma$ ‘free’, Latin *liber* dtto) has undergone common development to ‘people’ is remarkable by itself (in retrospect, there have always been alternatives to this peculiar development). The fact that it serves as the plural to a number of words of different origin but similar meaning ‘(hu)man’ in these three branches indicates common stage of development. The alternative – a contact phenomenon – is by no means to be excluded, yet owing to the regularity of sound-change from PIE to the attested reflexes it is impossible to prove (i.e. had the dental been in all cases identical, this would hint at a borrowing) and should be considered as a weaker alternative.

3.5 The numerals

There is in fact a certain degree of suppletion within the system of PIE numerals which is by itself interesting (e.g. the $*-sr-$ element in the feminine forms of the numerals 3 and 4, that is m. $*tréjes$ vs. f. $*tistrés$ and m. $*k^w\text{etwóres}$ vs. f. $*k^w\text{étusres}$; this is a Indo-Iranian-Celtic isogloss, which places this innovation at the latest to an early stage of disintegration of PIE) but for the branching off of Indo-European is of no consequence. A typical case of quasi-suppletion is the formation of ordinals. This is apparently ubiquitous and was likely to be the case in PIE already. The prevalence of derivatives of PIE $*per-$ ‘(be)fore’ for ‘first’ makes this a likely candidate for PIE

itself. In both cases, nothing stands in the way of Anatolian being the first to split (little can be said about Anatolian cardinals (cf. KLOEKHORST 2008) and the cardinal ‘first’ (Hittite *ḫantezziā-*) could either be a replacement of a derivative of **per*, or a form which has been abandoned after the “Indo-Hittite split”).

4 Conclusion

Three main points can be made on the basis of this brief survey: 1) the presence of the **so* **to* pronominal suppletion vis-à-vis its absence in Celtic and Italic (if it can be decisively supported) may imply that the Tocharian branch split *later* than these two branches 2) the procedure described here could perhaps be of use to specialists dealing with similar situation elsewhere (e.g. Iranian languages) 3) suppletion, especially radical suppletion, is here employed as the extreme in what in fact is a continuum – a continuum in the degree of improbability of any morphological irregularity.

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