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DAWN OF VERBAL SUPPLETION IN INDO-EUROPEAN LANGUAGES

ABSTRACT

Verbal suppletion found in the earliest records of the daughter branches of the Indo-European language family is the focus of the paper presented at 2nd Indo-European Colloquium in Brno, 2013. If considering one first and best attested language in each branch, we find almost seventy (so far described) suppletive verbal paradigms. The paper examines their respective Proto-Indo-European roots and concludes about the relationship of their form and semantics. Special attention was given to the verbs of being, for which all branches choose to use the root √$h_1$es- for the present form, while as many as seven stems combine with √$h_1$es- for non-present usage. The range of semantic fields found among the suppletive verbs is discussed with conclusions concerning the relationship of form and semantics.

1. Verbal suppletion – definition, overall description

Suppletion is a typical feature of inflectional languages and no modern Indo-European (IE) language is short of suppletive verbs. Out of the ancient IE languages, it is only Hittite, where the presence of suppletive paradigms is questionable[1]. Otherwise, all the earliest attestations confirm the existence of this feature even in the oldest stages of the daughter languages of the Indo-European language family. The

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1   Cases of voice suppletion are described for Hittite but can hardly be considered when discussing inflectional suppletion as voice is not fully grammaticalized in all stages of Hittite. Among the paradigmatically suppletive verbs we find two suppletive imperatives and the case of the verb "speak", a case of person suppletion – this points to even greater irregularity (according to Corbet´s definition). However, Hittite totally lacks the typical present/not present suppletive oposition.

questions that interest researchers are the reasons for its existence, reasons for its pertaining in languages (even in cases of dramatic paradigmatic changes), its possible loss and synchronic typology – distribution of forms in a paradigm, parts of words and quantitative description of suppletion. In his famous booklet Hermann Osthoff (1899, 3) describes the reality of *suppletion* for the first time with this very term that since then has become the term for the reality of a well-known language variation. Osthoff discusses the concept of defective systems and prefers to call the relation among its members *suppletion*.

Verbal suppletion has recently gained great attention of several big projects: Surrey Morphological Group in Great Britain (eg. G. Corbett et al.), Ljuba Veselinova, G. Vafaeian, F. Plank, G. Ramón and others.

(Inflectional) suppletion is understood as extreme irregularity of form within one paradigm while it is impossible to explain the relationship of the forms through a regular morphological operation. It is defined by Greville Corbett on a scale of less or more canonical. According to Melčuk's (2000, p. 512) definition (abbreviated), the language does not operate such rules that would relate the two forms within the paradigm. Corbett in his definition uses 14 criteria to define suppletion. He covers (unlike Melčuk) merely the intraparadigmatic relations and refers to "lexeme" and "stem", as e.g. "lexeme with more stems is more canonically suppletive than one with fewer".

Typically for IE, the suppletion in verbal paradigms lies in use of distinct PIE roots, although regular sound changes and other minor reasons are the source of suppletion as well (e.g. for Ancient Greek, Daniel Kölligan (2007, 345) describes ten cases of so called "weak suppletion", which on a synchronic level appear suppletive but are known to have developed from formerly regular paradigm, which has undergone phonological changes within the internal development of Greek).

In this contribution, I consider only suppletion of stems (not affixes).

When examining written records, we need to rely on philologists´ research and decision-making about the two distinct forms belonging to one paradigm. Many defective paradigms are also found among the ancient languages. In these (certain) cases, the fact whether e.g. the respective perfect stem matches the semantics of certain present stem and can be considered as belonging to the same paradigm may be a matter of debate.

2. Brief description of IE verbal suppletive stems

In my research, I focused on tracing the suppletive paradigms in every branch of IE languages using its oldest sufficiently attested language (Gothic and Old English for Germanic, OCS for Slavonic, Vedic for Indo-Iranian, Homeric Greek, Latin for Italic,

Tocharian A and B for Tocharian, Grabar for Armenian, Hittite for Anatolian, Old Irish for Celtic, Albanian is not included due to its late attestation). Discussion on the possible suppletion in PIE is limited to the knowledge of situation in the oldest attested daughter languages. The question whether there was verbal suppletion in PIE is still a matter of debate. So far, no convincing arguments were presented to confirm that. The obvious reason for this might be the aspectual dichotomy of PIE stems which later became grammaticalized and gave rise to obligatory aspects formations, which in turn opened door for suppletion.

The data acquired from the oldest language stages has provided reconstructed PIE roots that became embedded into suppletive paradigms. The interesting questions to be answered are the similarity of semantic fields in every language, repetition of PIE roots in individual branches and connection to ways of grammaticizing aspect. Here, I will focus on the first two questions – the relevance of semantics to the choice of stems in suppletive paradigms.

When examining the earliest attested stages of the daughter branches of IE languages, we arrive at a number of approximately one hundred PIE roots involved in suppletive verbal paradigms. I have examined 92 such roots. Nevertheless, the list doesn't claim to be exhaustive (due to limited attestations or not yet described cases of suppletion which are likely to appear or even, for my lack of resources). The ninety-two examined PIE roots combine in sixty-nine verbal paradigms (excluding the cases of weak suppletion, for reasons beyond the span of this contribution (KÖLLIGAN 2007, 345–387). Only nine of them repeat more than twice, the other eighty-three are found only once or twice. The following figure shows the list of the nine PIE stems that are found in more than two paradigms across the languages.

Figure 1: Roots found more than twice in suppletive verbal paradigms of the IE daughter languages

PIE root	Translation	Number of suppletive paradigms
$\sqrt{b^h er}$-	'carry, bring'	5
$\sqrt{b^h weh_2}$-	'become'	7
$\sqrt{deh_3}$-	'give'	3
$\sqrt{d^h eh_1}$-	'put, lay down, sit, do, create'	4
$\sqrt{h_1 ej}$-	'go'	8
$\sqrt{h_1 es}$-	'be'	11
$\sqrt{h_1 ed}$-	'bite'	3
$\sqrt{k^w elh_1}$-	'turn'	3
$\sqrt{steh_2}$-	'stand'	3

3. The most frequent PIE stems found in IE daughter languages

The figure above shows that the most frequently repeated stem is the stem $\sqrt{h_1es}$-. This stem is used in every branch of the IE languages without exception to cover the notion of "be". In one of these branches, Anatolian, it famously does not form a suppletive paradigm. Everywhere else, $\sqrt{h_1es}$- combines with other PIE roots to supply for its non-present forms (aorist in Armenian, preterit in Gothic, aorist plus perfect in Greek, preterit and perfect in Latin, all past forms of Old Church Slavonic, all non-present non-indicative forms in Old Irish, in a Tocharian paradigm, where it is either defective with forms of 2. and 3.SG and 3.PL (*ste*, *skente*, *star-*), or as aorist, perfect, desiderative and passive in Vedic).

Interestingly, this verbal root is also used twice in non-present part of a verbal paradigm. Once it is in Greek, where it is used as a perfect to present stem $\sqrt{sed}$- with the meaning "sit down, sit". The other case is Tocharian paradigm of the verb "be", where $\sqrt{h_1es}$- is used in the imperfect while the stems $\sqrt{nes}$- and $\sqrt{steh_2}$- are used as present and subjunctive / preterit / imperative stem respectively.

The second most frequent root is $\sqrt{h_1ej}$- 'go' which is found in eight instances. It is always used in the meaning 'go'. In four branches, it is used in present tense, in two in past.

The third most frequent stem is $\sqrt{b^hweh_2}$- 'become', always used in non-present contexts. Five times it is combined with $\sqrt{h_1es}$- in the meaning 'be', in Old Irish it is a part of more complicated paradigm together with $\sqrt{steh_2}$-, $\sqrt{g^heHb}$- and $\sqrt{wel}$-, and in the meaning of 'do' in Latin *fiō*, combined with the root $\sqrt{dheh_1}$-.

The PIE root $\sqrt{b^her}$- 'carry, bring' is found in five distinct paradigms, every time combined with different root. It is always used in present and in Old Irish also in other imperfective contexts. It retains the meaning 'carry, bring' and in Old Irish also bears the meaning 'give'.

The stem $\sqrt{d^heh_1}$- 'put, lay down, sit, do, create' is found four times, in active contexts, and it combines with stems $\sqrt{kei}$-, $\sqrt{ter}$- and $\sqrt{b^hweh_2}$-. It is used in meanings 'sit, lie, lay', 'put', 'say' and 'do'. There are another four PIE roots that are found in three different language branches. All the other stems (another eighty-three examined stems) are found only once or twice.

Figure 2: Verbal roots that combine with $\sqrt{h_1es}$- in IE languages

Used in	In paradigm with	Lexeme and translation	Usage
Armenian	$\sqrt{k^welh_1}$-	*em* 'be, become'	present
Gothic	$\sqrt{h_2wes}$-	*im* 'be'	present
Greek	$\sqrt{ǵenh_1}$-	εἰμί 'be'	present
Greek	$\sqrt{sed}$-	ἧμαι ‚sich setzen, sitzen'	perfect

Used in	In paradigm with	Lexeme and translation	Usage
Latin	$\sqrt{b^hweh_2}$-	*sum, esse* 'be'	present, infinitive, future
OCS	$\sqrt{b^hweh_2}$-	*jesmь* 'be'	present
Old English	$\sqrt{b^hweh_2}$- $\sqrt{h_2wes}$-	*ēom, sind* 'be'	present except imperative
Old Irish	$\sqrt{b^hweh_2}$-	*is* 'be'	present
Tocharian	– (defective)	*ste, skente, star -*'is, are'	3 sg. pl., 2 sg.
Vedic	$\sqrt{b^hweh_2}$-	*as* 'be'	present
Tocharian	$\sqrt{nes}$- , $\sqrt{steh_2}$-	^{A} *ṣe-*/^{B} *ṣei-* 'be'	imperfect

Figure 3: Verbal roots that combine with $\sqrt{h_1ej}$- in IE languages

Used in	In paradigm with	Lexeme and translation	Usage
Tocharian	$\sqrt{mewsH}$- $\sqrt{mejth_2}$-	^{B}*i-* 'go'	present, subjunctive
Tocharian	$\sqrt{k^wel}$-	^{B}*i-* 'go'	present
Gothic	$\sqrt{\tilde{g}^heng^h}$-	*iddja* 'go'	preterit
Greek	$\sqrt{h_1leud^h}$-	εἶμι 'come, go'	present, future
OCS	$\sqrt{sod}$-	*iti* 'go'	present, simple aorist and infinitive
Old English	$\sqrt{g^heh_1}$-	*ēode* 'go'	preterite sg.
Old Irish	$\sqrt{stejg^h}$- $\sqrt{h_1leud^h}$- $\sqrt{h_1er\tilde{g}^h}$- $\sqrt{wet}$-	•*eth* 'go'	passive preterit
Vedic	$\sqrt{g^weh_2}$-	*i/ay* 'go'	present

Figure 4: Verbal roots that combine with $\sqrt{b^hweh_2}$- in IE languages

Used in	In paradigm with	Lexeme and translation	Usage
Latin	$\sqrt{h_1es}$-	*fuī, futūrum* ‚be'	preterit, perfect, participle
Latin	$\sqrt{d^heh_1}$-	*fiō* 'do'	passive
OCS	$\sqrt{h_1es}$-	*бъіхъ* 'be'	all forms except present
Old English	$\sqrt{h_1es}$- $\sqrt{h_2wes}$-	*bēon* 'be'	present

Used in	In paradigm with	Lexeme and translation	Usage
Old Irish	√$steh_2$- √g^heHb- √wel-	*boí* 'be' (3 sg. pret. form)	non-present, non-indicative
Old Irish	√h_1es-	*biid* 'be'	non-present, non-indicative
Vedic	√h_1es-	*bhav* 'be'	aorist, perfect, desiderative, passive

Figure 5: Verbal roots that combine with √bher- in IE languages

Used in	In paradigm with	Lexeme and translation	Usage
Tocharian	√$\tilde{k}emh_2$- or √gem- √ h_1aj-	^{B}*pär*- 'carry, bring'	present
Greek	√$sejk$- √h_3eit-	φέρω 'bring, carry'	present
Latin	√$telh_2$-	*ferō, ferre* 'carry'	present
Old Irish	√h_2nek ˜-	*beirid* 'carry, bring'	all imperfective forms
Old Irish	√deh_3 -	*do•beir* 'give'	all imperfective forms

The two suggested PIE underlying roots combining with Tocharian ^{B}*pär*- 'carry, bring' are √$\tilde{k}emh_2$- or √gem-. Their Tocharian heir is the stem *kām*-. Ringe (1996, 36) derives it from PIE *$kemh_2$- while Adams (1999, 371) and LIV (2002, p. 186) from *gem- 'grasp (with hands)', the stem of the preterite TochB *kamāte*, TochA *kamāt* 'carried' and the subjunctive TochA *kāmatär* 'will bring' being derived from a de-reduplicated perfect stem *gom-H- derived from the PIE perfect *ge-gom-.

4. Semantic fields of IE suppletive verbal paradigms

Semantics is an obvious candidate of a suppletion trigger (the correlation of semantics of individual lexemes and their suppletion is not discussed here. Rather, I am dealing with one, limited view point[2]- the correlation of semantics and form). Splitting the verbs to semantic fields suggested for IE languages by Carl D. Buck

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2   Here, only semantic fields and number of verbs found in suppletive paradgims are examined. Neither are the stems are sorted according to their type and quality nor are any phonological parameters considered. These areas are issues of further research.

(1949, p.12) is presented in the following Figure 6. In my research, definition of semantic field given by Brinton was used. Brinton defines semantic field as follows: "*A semantic field denotes a segment of a reality symbolized by a set of related words. The words in a semantic field share a common semantic property*" (BRINTON 2010, 112). Based on Buck's list, verbal roots of suppletive paradigms are sorted below. Out of his 22 major semantic categories, the studied suppletive verbs can be found in 11 of them. Some of the stems retained their original meaning, typically 'be, become', 'go', 'say' and other, while for some of them, their semantics has shifted, e.g. in the verb 'eat', where the original meaning of the verb besides 'eat' could have been 'nourish', 'bite', 'distribute' or 'devour'. The suppletive verbal paradigms of daughter languages cover the following semantic fields:

Figure 6: PIE stems of verbs with suppletive paradigms sorted by semantic fields

semantic field	meaning of PIE stem
Body parts and functions	live, die, to kill
Food and drink	eat, drink
Physical acts and materials	do, carry, fall, guard, lead (guide), drive, bring, fence in, pull, strike, (hit)
Motion and transportation	go, run, come, throw, drive
Possession and trade	have, take, give, steal, buy, sell
Sense perceptions	see, watch, look
Mind and thought	want, appear (seem)
Language and music	say, speak
Spatial relations	put, place, sit, lie, lay
Warfare, hunting	fight
Expressions of being	be, become

The observation one can make about suppletive verbal paradigms summed up in the Figure 6 is that the suppletive stems seem to express general ideas. We do not find verbs with specific meanings such as e.g. *fish, knit, sprinkle* or *decorate*. Also, there does not seem to be a specific semantic field(s) in which we should look for suppletive verbs. Their meaning as such does not seem to unify them.

The examined suppletive paradigms seem to express about forty different meanings. As we are dealing with ninety-two PIE stems, some of which repeat in different languages, obviously there are the same semantic notions expressed by different means. The stems that the individual languages chose to form a suppletive paradigm are by no means unified. In the following Figure 7, this principle is illustrated by the verb "go, come". The same meaning is expressed in the daughter languages by a number of PIE stems, even more so the verb "be" and other verbs, as well.

Figure 7: Verbal roots that express the notion of "going, coming"

PIE root	Translation	Used in	In paradigm with	Lexeme & translation	Usage
$\sqrt{g^heh_1}$-	'come, reach'	Armenian	$\sqrt{g^wah_2}$- $\sqrt{g^wem}$-	*gam* 'come'	present
		Old English	$\sqrt{h_1ej}$-	*gān* 'go'	all forms except pret. sg.
$\sqrt{g^wah_2}$-	'come'	Armenian	$\sqrt{g^heh_1}$- $\sqrt{g^wem}$-	*eki* 'come'	aorist
$\sqrt{g^wem}$-	'go'	Armenian	$\sqrt{g^heh_1}$- $\sqrt{g^wah_2}$-	*ekn* 'come'	3 sg. aorist
		Greek	$\sqrt{g^weh_2}$-	βαίνω 'go, come'	present
$\sqrt{h_1ej}$-	'go'	Tocharian	$\sqrt{mewsH}$- $\sqrt{mejth_2}$-	ᴮ*i*-'go'	present, subjunctive
		Tocharian	$\sqrt{k^wel}$-	ᴮ*i*-'go'	present
		Gothic	$\sqrt{g^hengh}$-	*iddja* 'go'	preterit
		Greek	$\sqrt{h_1leudh}$-	ειμι 'come, go'	present, futurum
		OCS	$\sqrt{sod}$-	*iti* 'go'	present, simple aor., infinitive
		Old English	$\sqrt{g^heh_1}$-	*ēode* 'go'	preterit sg.
		Old Irish	$\sqrt{stejg^h}$- $\sqrt{h_1leudh}$- $\sqrt{h_1ergh}$- $\sqrt{wet}$-	•*eth* 'go'	passive preterit
		Vedic	$\sqrt{g^weh_2}$-	*i/ay* 'go'	present

5. Conclusion

The number[3] of suppletive paradigms in the daughter branches of IE languages reaches almost seventy (many of them with the same semantics, led by the verbs "be" and "go" – "be" is suppletive in all branches except Anatolian, "go" in all except Latin). The underlying PIE stems involved in these paradigms show a surprising variety – almost a hundred stems are involved in the formation of the paradigms (ninety-two of them examined by the author and a few more known, besides sev-

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3   Off course, I do not claim that the number is exhaustive – the review presented here is rather to be taken as a sample.

eral doubtful cases). The ability to build a suppletive paradigm could hardly be an inherent feature of the PIE root and the hypothesis that can be built on these facts is that the reasons for suppletion have to be sought elsewhere.

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