

The Reconstruction of Oblique Subject Constructions in Proto-Indo-European: The Quest for Cognates*

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Abstract:

The enigma of the origin of non-canonical subject marking in the world's languages has been met with two competing hypothesis: the OBJECT-TO-SUBJECT Hypothesis and the OBLIQUE SUBJECT/SEMANTIC ALIGNMENT Hypothesis (cf. Eythórsson & Barðdal 2005). The present paper argues in favor of the Oblique Subject/Semantic Alignment Hypothesis, presenting five sets of cognate predicates in the early/archaic Indo-European daughter languages that occur in the Oblique Subject Construction. Not only are the roots cognate, but these are also stem cognates, occurring moreover in a cognate compositional predicate and argument structure, with a dative subject, the verb 'be' and an adjective, a noun, or an adverb. These data form the input of a correspondence set, on which basis we reconstruct a predicate-specific oblique subject construction for Proto-Indo-European, using the formalism of Sign-Based Construction Grammar. The evidence presented here thus suggests that oblique subjects are inherited from an early proto-stage and do not represent an individual development in the Indo-European daughter languages.

1. Introduction

The oblique subject construction is a complex syntactic construction in which the subject-like argument is not in the nominative case, but is non-canonically case marked, in for instance the accusative, dative or the genitive in those Modern Indo-European languages that still have the construction. Examples of the construction are easily found in the early and archaic Indo-European languages, although the exact origin of the construction is well camouflaged by prehistory. To illustrate the construction, synonymous examples from five Indo-European branches, with the meaning 'need' are given in (1) below:

- | | | |
|------|-------------------------------------------------------------------|---------------------|
| (1a) | <i>honum er nauðsyn</i>
him.DAT is need
'he has a need' | Old Norse-Icelandic |
| (1b) | <i>mihi necesse est</i>
me.DAT necessary is
'I have a need' | Latin |
| (1c) | <i>emoí deĩ</i>
me.DAT needs
'I need' | Ancient Greek |

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- (1d) *noužda by jemou* Old Russian
 need be.SUBJ him.DAT
 ‘he would have a need’
- (1e) *iiémus reikalingi búwo* Lithuanian
 them.DAT necessary was
 ‘they had a need’

Two main hypotheses regarding the origin of the construction are found in the literature, and these are broadly dividable into two main streams, i.e. those which assume that the constructions have developed from objects and those which do not make such an assumption. The former has been labeled the OBJECT-TO-SUBJECT Hypothesis and the latter the OBLIQUE SUBJECT HYPOTHESIS (cf. Eythórsson & Barðdal 2005).

In the present article, we will be arguing in favor the Oblique Subject Hypothesis, since we believe that non-canonical subject marking of this type is motivated by semantic considerations and not by the “object” character or an “object” origin of the subject-like argument. We present three different scenarios for the development of the construction and lay out the different predictions these make. First, if the construction is an independent development in the individual Indo-European branches, no cognates should be expected. Second, if the construction is a recent but common development in the Indo-European languages, then there is no reason why cognates are not readily found across the branches. Third, if the construction is an early common development, not particularly many cognates should be expected, since the construction will have had a longer time to have its vocabulary replaced. The data that we present are consistent with the last scenario, namely that the oblique subject construction is an early common development, since cognate stems in cognate argument structure constructions are difficult to come across, although in our investigations we have located some. During this process, we have also discovered recurrent patterns in the meaning relation between predicates which are canonically and non-canonically marked.

For several decades the consensus in the historical-linguistic community has been that syntactic reconstruction is at best controversial and at worst a fruitless endeavor. There are several reasons for this: i) lack of cognates, ii) lack of arbitrariness, iii) lack of regularity in syntactic change, iv) lack of continuous transmission from one generation to the next, and hence, v) the idea that syntactic structures are different in nature from simple lexical units like words. We take issue with all these views, although we concentrate on the issue of cognacy and lack of arbitrariness in the present article, and spend considerable effort arguing for arbitrary, as well as non-arbitrary, symbolic relations between syntactic form and semantic meaning, which ultimately renders syntactic structures equivalent to words, only more schematic and more complex than words. On the basis of this, we suggest the reconstruction of a predicate-specific oblique subject construction with the verb ‘be’, a dative subject and a resultative participial of a verb meaning ‘know’ for Proto-Indo-European, derived from the Proto-Indo-European root **g'neh₃-no/-to-*, employing the formalism of Sign-Based Construction Grammar, which proves itself an adequate tool for the enterprise. We conclude that oblique subject constructions must have existed in Proto-Indo-European, i.e. before the different Indo-European daughters branches off from each other.

We start, in Section 2, with an overview of the two hypotheses regarding the

origin of oblique subjects, including an overview of the different versions of the Object-to-Subject Hypothesis. We then present, in Section 3, six sets of cognates which we have found across different subsections of the Indo-European subbranches. We put forward some semantic generalizations about the relation between the meaning of a predicate when it is canonically marked and non-canonically marked. In Section 4 we suggest a reconstruction of the compositional oblique subject construction, with a dative subject, the verb ‘be’ and a participial form of the verb ‘know’. For this purpose we employ the formalism of Sign-Based Construction Grammar. Section 5 is a summary of the main content and conclusions of this article.

2. The Oblique Subject Construction and Possible Evolutionary Paths

There are, broadly speaking, two competing hypothesis about the development of oblique subject constructions found in the literature. These have been termed the OBJECT-TO-SUBJECT Hypothesis (Cole et al. 1980) and the OBLIQUE SUBJECT hypothesis (Eythórsson & Barðdal 2005), a.k.a. the SEMANTIC ALIGNMENT hypothesis (Bauer 2000, Barðdal & Eythórsson 2009, Smitherman & Barðdal 2009). Moreover, several different versions of the OBJECT-TO-SUBJECT hypothesis have been proposed in the literature:

- The TOPICALITY Hypothesis (Haspelmath 2001)
- The SEMANTIC DEVELOPMENT Hypothesis (Jespersen 1927, Lightfoot 1979, inter alia)
- The NULL SUBJECT Hypothesis (Falk 1997, Hewson & Bubenik 2006, Malchukov 2008, Mithun 2008)

Starting with the Topicality Hypothesis, Haspelmath (2001) suggests that Dat-Nom structures in the Indo-European languages have developed from Nom-Dat structures, and that the dative was topicalized because of its animacy, resulting in the dative becoming more and more associated with subjecthood. Even though this suggested developmental path may be the right one for Dat-Nom, Acc-Nom and Gen-Nom argument structure constructions, this explanation does not hold for argument structures in which there is no nominative (cf. Eythórsson & Barðdal 2005, Barðdal & Eythórsson 2009), like the ones highlighted in the second, third and fourth column in Table 1.

Table 1: Case and argument structure constructions in Germanic

<i>Nom</i>	<i>Acc</i>	<i>Dat</i>	<i>Gen</i>
Nom	Acc	Dat	Gen
Nom-Acc	Acc-Nom	Dat-Nom	Gen-Nom
Nom-Dat	Acc-Acc	Dat-Gen	Gen-PP
Nom-Gen	Acc-Gen	Dat-PP	Gen-S
Nom-PP	Acc-PP	Dat-S	
Nom-S	Acc-S		

This means that argument structures like Acc-only, Dat-only, Gen-only, Acc-Gen, and Dat-Gen are left unexplained by the Topicality Hypothesis.

Turning to the Semantic Development Hypothesis (Jespersen 1927, Lightfoot 1979, inter alia), the assumption is that, for instance, the verb *like* originally meant ‘to

be like sby’, selecting for the Nom-Dat frame, but through a change in the semantics, the case frame was swapped, as shown in (2) below:

- (2) ‘NOM is like DAT’ > ‘NOM is pleasing to DAT’ > ‘DAT likes NOM’

It so happens that we have found an example from Old Russian, with a cognate of the Germanic verb ‘like’, with the meaning ‘be like’, here found in its prefixed variant with *razb-* ‘dis-’:¹

- (3) *Ne različno že bogatstvo ti oubožstvo* Old Russian
 no different PTCL wealth.NOM thee.DAT poverty.NOM
 ‘you are indifferent to wealth and squalor’ (Zlatostr. sl. 39)

This Old Russian example shows that a predicate, namely a prefixed variant of the root **leiK-* ‘be similar’, may be used with a subject in the dative case, showing that the first part of the semantic chain was not necessarily ‘NOM is (un)like DAT’ but may just as likely have been ‘DAT is (un)like (NOM)’.

One could of course now argue that even though the classical story of *like* does not hold, the story might still hold in general and be true for other verbs. So other verbs may have gotten their arguments swapped through a change in the verbal meaning. Another possibility, which we find more probable, is that verbs do not get their “arguments swapped” when their meaning changes, but rather that they get attracted by a different argument structure construction when they develop a new meaning, in this case a dative subject construction that already existed in the language.

Table 2: The development from Sanskrit to Old Marathi to Modern Marathi

SANSKRIT		OLD MARATHI		MODERN MARATHI	
ROOT	GLOSS	CASE	GLOSS	CASE	GLOSS
<i>smṛ</i>	‘recall’	N-A	‘recall’	N-A	‘remember’
<i>ut-kal</i>	‘expel’	N-A	‘solve’	N-A	‘solve’
<i>sādh</i>	‘obtain’	N-A	‘obtain’	N-A	‘obtain’
<i>pra-ir</i>	‘propel’	N-A	‘direct’	N-A	‘bear’
<i>sañ-jñā</i>	‘know’	N-A	‘understand’	N-A D-N	‘understand’
<i>budh</i>	‘perceive’	N-A	‘realize’	N-A D-N	‘realize’
<i>sūc</i>	‘reveal’	N-A	‘reveal’	N-A D-N	‘occur to’
<i>kal</i>	‘perceive’	N-A	‘realize’	N-A D-N	‘appear’
<i>bhāv-aya</i>		N-A	‘appear’	N-A D-N	‘suit’
	‘imagine’				
<i>mānaya</i>	‘think’	N-A	‘suit’	N-A D-N	D-N

In order to explore whether the Semantic Development Hypothesis may hold for other verbs, even though it does not hold for *like*, let us review the evidence from Indo-Aryan, given in Table 2, adapted from Deo (2003). Observe that the Dat-Nom

¹ Here we follow Fick (1909) and others in linking the Proto-Slavic root **lik-* ‘image, likeness’ to the Proto-Germanic root **laik-/līk-* ‘image, likeness’ despite the fact that Grimm’s Law would suggest the Proto-Germanic root relate to a PIE **leig-*, which is also reflected for the same meaning in Baltic (Lith. *lyg-ti*) and the Proto-Slavic to PIE **leik-*, also reflected in Greek (*a-link-ios*). Given this complementary distribution and equivalent proto-meaning, we see no justification for treating these as separate PIE roots with independent histories.

predicates found in Old Marathi do not seem to have developed from Nom-Dat in Sanskrit and the Dat-Nom predicates in Modern Marathi do not seem to have developed from Nom-Dat predicates in Old Marathi, at least if the story that Deo presents is true. Given her findings, the Indo-Aryan data do not support the Semantic Development Hypothesis.

Yet another variant of the Object-to-Subject Hypothesis is the Null Subject Hypothesis, on which it is assumed that a nominative null subject has been omitted in structures like the following:

- | | | | |
|------|-----------------|------------------|-----------|
| (4a) | <i>Mér</i> | <i>er kalt.</i> | Icelandic |
| (4b) | <i>Mir</i> | <i>ist kalt.</i> | German |
| | me.DAT is cold | | |
| | ‘I’m freezing.’ | | |

This is the traditional analysis found within Indo-European linguistics (Hewson & Bubenik 2006) for the existence of constructions without a nominative subject. A null-subject analysis has also been suggested by Falk (1997) for similar structures in the history of Old Swedish, by Malchukov (2008) for Native American and Papuan languages, by Mithun (2008) for Native American languages in general, and this is the standard assumption for structures of this sort in Modern High German (Grewendorf 1989: 145–164, Cardinaletti 1990, Haider 1991, Sigurðsson 1992: 17–22, Vikner 1995, Schütze 1997, Haeberli 2002).

The main problem with the Null Subject Hypothesis is that it assumes that a nominative null subject has been systematically omitted in all occurrences of an argument structure in all the early and ancient Indo-European languages. This is problematic because there are no signs of a deleted subject, no signs of ellipsis, and no signs of an ‘it’ ever being an elliptic part of the argument structure. In that sense, these structures are different from clear cases of ellipsis or pro-drop, since elliptical or dropped arguments can be retrieved in certain contexts. It seems not only counterintuitive, but also against scientific method, to postulate an argument as a part of the argument structure if it is never there. As such, this analysis is not motivated by the data (cf. Smitherman & Barðdal 2009).

In contrast to the Object-to-Subject Hypothesis, Eythórsson & Barðdal (2005) put forward the Oblique Subject Hypothesis, which assumes that oblique subjects have been syntactic subjects from the beginning, with the non-canonical case marking being motivated by semantic factors (cf. Langacker 1991, Smith 2001, Barðdal 2004). The hypothesis is based on an investigation of subject-like obliques in Old Icelandic, Old Swedish, Early Middle English (Barðdal & Eythórsson 2003, Eythórsson & Barðdal 2005) and Old French (Mathieu 2006), an investigation which clearly shows that these arguments behaved syntactically as subjects already in the oldest attested periods of these languages. Similar research is now being carried out for more ancient and archaic Indo-European languages, like Grillborzer (2010) for Old Russian, Fedriani (2009) and Dahl (2011) for Latin, Danesi (in prep) for Old Indo-Iranian, and Dewey (in prep) for Early West Germanic, again showing that the subject-like oblique behaves syntactically as a subject and not as an object. The Semantic Alignment Hypothesis is a continuation of the earlier Oblique Subject Hypothesis. Under such an hypothesis, the proto-language must be assumed to have had patterns of semantic alignment (in the sense of Donohue 2008).

In order to investigate the credibility of the Oblique Subject/Semantic Alignment hypothesis, we have started the quest for cognates across the early and

archaic Indo-European daughter languages which occur in oblique subject constructions.

3. Cognacy

It has been noted by several scholars that not many cognate predicates seem to be found instantiating the oblique subject construction, across the early and archaic Indo-European languages. This lack of cognates seems to run counter to the hypothesis that the construction is inherited from Proto-Indo-European. Consider, for instance, the following quote from Bauer (2000):

The only impersonal verb of this type ... in Latin with a cognate in another Indo-European language may well be *decet* ['be proper'] which is related to Greek *dokei moi* 'it seems to me'. (Bauer 2000: 146)

Notice that the semantic relation between Latin *decet* and Ancient Greek *dokei*, i.e. between 'be proper' and 'seem', is also found between Icelandic *sæma* 'be proper' and English *seem* 'seem', which are also cognates. It is a well-known fact that *seem* was borrowed into Old or Early Middle English from Old Norse (OED 2004), although the meaning of *sæma* in Old Norse has always been 'be proper, befit', which in turn means that the development from 'be proper, befit' to 'seem' is an English development. Thus, the semantic relation between Latin *decet* and Ancient Greek *dokei* has a parallel in the etymons derived from the Proto-Germanic root **som-*.

Because of this notable lack of cognates, we have started the search for cognates across the early and the Indo-European languages and even though this work is in its infancy, we have found the following:

- At present, 189 PIE roots have been found across at least two subbranches of Indo-European
- Approximately 85 PIE roots are found across at least three subbranches of Indo-European
- 29 PIE roots are found across four or more subbranches of Indo-European

In order to be as conservative as possible, we consider Balto-Slavic as one subbranch, and Greek and Albanian are not considered separately due to high degree of contact influence between the two.

Of course, not all the common roots are found in the same type of predicates, since different types of predicates may instantiate the oblique subject construction in general. These are, for instance, simple verbs, compositional predicates with the verb 'be' together with adjectives, nouns, adverbs or PPs, and predicates formed by different verb formation processes, including preverbs, Aktionsart suffixes, etc. In other words, these are not necessarily all cognate stems, but rather cognate roots. At present we estimate that approximately a dozen of our cognate roots are also cognate stems. We will give examples of a subset of these below.

The question that now arises is how likely it is that we are not dealing with inheritance, but that these constructions have emerged independently of each other. If they have developed independently of each other, there is no reason to expect any more apparent cognate roots than would be statistically normal coincidence, nor would there be any particular tendency for overlap in semantic fields. We do know, however, that there is a major overlap in semantic fields between the early languages,

shown by a preliminary study of five early and archaic Indo-European languages, i.e. Latin, Ancient Greek, Old Norse, Old Russian and Lithuanian (Barðdal et al. 2012). This overlap in semantic fields extends far beyond the traditional sphere of the experiencer role, as oblique subjects are found with several predicates denoting happenstance events, ontological states, and other predicates denoting lack of control.

It also appears as reasonable that a recent inheritance would entail a high number of cognates and an early inheritance should most likely result in relatively few cognates, given that vocabularies are constantly being renewed. According to the most recent research on lexical replacement, this is inherently correlated with usage frequencies, in that highly frequent words are replaced at a much slower rate than low-frequency words. This means that random cognate sets found across the Modern Indo-European languages may vary from one set, for the numeral ‘two’, to nine cognate sets for the noun ‘bird’, and up to 46 cognate sets for the adjective ‘dirty’, depending on the usage frequency of each word (Pagel 2009: 410). This means that the average chance that a word will be replaced with a non-cognate with time is 50% for every interval of 2,000–2,500 years (Pagel 2009: 410). Notice that nouns and verbs change much faster than this, while numerals and deictic adverbs change much more slowly (Pagel, Atkinson & Meade 2007).

Given these estimations about the rates of vocabulary replacement, one would certainly not expect particularly many cognates to be found in Oblique Subject Constructions across the Indo-European subbranches, given the assumption that this may be an ancient category in these languages. Indeed, it seems to us that the fact that cognate roots are found across different pockets of the Indo-European subbranches, suggests inheritance, though not necessarily a very recent one, as a recent inheritance should result in systematic sets of cognates, rather than sporadic instances. A third scenario might be that the Oblique Subject Constructions have developed independently of each other in the Indo-European subbranches. On such an assumption, this category of argument structure constructions is even more recent than what we hypothesize, meaning that one would not necessarily expect any cognates at all.

Let us now consider some of the cognate roots and stems that we have encountered. To demonstrate the nature of the cognate root data, we begin by giving one such example where only the roots are cognates. Then we present two mixed examples, where a subset of the cognate roots also represent cognate stems, and finally we give three examples of cognate stems:

Indo-Iranian–Slavic–Germanic: PIE root: ***leuk-** ‘shine’

(5a) *yáthā tād ṛṣibhyo yajñáh* **prārocata** *Sanskrit*
 such then seers.DAT sacrifice.NOM pleased
 ‘How then the seers were pleased with the sacrifice’ (ŚB 11.2.3.7)

(5b) *Vnezapu lučisja imъ boi velikъ* *Old Russian*
 suddenly occurred them.DAT battle.NOM great.NOM
 ‘Suddenly they fell into/came upon a great battle’ (Sof.vr.7010g(2:268))

(5c) *weil ihm ... so was von seinem bruder eingeleuchtet* *German*
 because him.DAT something.NOM of his brother perceived
 ‘because he perceived something of his brother ...’

(Lessing, Nathan der Weise, Act 1, Scene 5, yr 1779)

In this example we have a verb derived from the Proto-Indo-European root **leuk-*, reconstructed with the meaning ‘shine’. In Sanskrit the root *roc-* and the thematic vowel *-a* make up the stem, which means ‘please’. The Old Russian stem consists of the root *luč-* and the verb class suffix *-i*, and the verb has a happenstance meaning, namely to ‘come upon’. The German verb is formed with a *t*-extension of an adjectival or a participial origin, and the verb means to ‘perceive’. In this last case, the development of the meaning from the original meaning of ‘shine’ to the meaning ‘light’ to the meaning ‘perceive’ remains quite transparent. This is therefore an example of cognate roots across three branches, i.e. across Indo-Iranian, Slavic and Germanic.

Notice that the last example from German is first documented in texts in the latter part of the 18th century, and that in Old and Middle High German texts *einleuchten* only occurs with the meaning ‘illuminate, ignite’ and it occurs consistently with the Nom-Acc argument structure construction, except for in one case where it occurs ditransitively. Whether the ‘perceive’ meaning of the verb has developed in late Early Modern German or whether it is old in the German language is impossible to know, since it might have existed without being attested. What we do know, however, is that the argument structure of the ‘perceive’ meaning with a dative subject has not developed from other argument structures of ‘illuminate’, thus providing further support against the Semantic Development Hypothesis.

Let us now continue to view some mixed examples of cognate roots and cognate stems:

Italic–Greek–Germanic: PIE root: **selh₂-* ‘luck, fortune’

- (6a) *quorum mihi et solacium ... est* Latin
of-which me.DAT and fortune is
‘and of which I am ... relieved’ (Pliny the younger)
- (6b) *eīpen dē autoīs hīlēōs humīn ...* Ancient Greek²
said PTCL them.DAT fortunate(ly) you.DAT
‘And he said ‘mercy be to you ... ’ (Genesis 43:23, TR)
- (6c) *selre us is* Old English
content us.DAT is
‘we are content’ (Aelfric’s Lives of Saints)

In example (6) we find the predicate-specific construction DAT-*is-fortune*, i.e. a compositional predicate with a dative subject, the verb ‘be’ and a noun in (6a), but an adjective in (6b–c), all derived from the Proto-Indo-European root **selh₂-*, which means ‘luck’ or ‘fortune’. In (6c) the root and the stem are the same, while the *-e-* in the Ancient Greek form is a reflex of the laryngeal. Since laryngeals do not have reflexes in Germanic, it is reasonable to analyze the Ancient Greek and the Germanic forms as not only being cognate roots but also as cognate stems.

² Note Greek *hīlēōs* as Attic variant of root *hīla-/hīlā-* (< **selh₂-* and redupl. **se-sleh₂-*) with regular *a*-colouring for **h₂*

Germanic–Slavic–Greek: PIE root: ***ter-B-** ‘be in need’ (**ter-*: ‘rub, press, cross’)

- (7a) *Unc is his hyldo **þearf*** *Old English*
 us.DAT is his favor.GEN need
 ‘We are in need of his grace’ (Jun.Man.664)
- (7b) *něsta mi **trěbě*** *Old Russian*
 are.not me.DAT need
 ‘I don’t need you’ (Čud.psalt.11thc.)
- (7c) *oudé ti thumōi **tarbeĩ** oudè phobeĩtai* *Ancient Greek*
 nor what soul.DAT frightens nor fears
 ‘(she) is neither afraid nor flees’ (Homer, Iliad 21.575)³

Observe, that the last example from Ancient Greek is a simple verb, while the examples from Old English and Old Russian are instances of the compositional construction with a dative subject, the verb ‘be’ and a noun. The Germanic and the Slavic nouns are not only root cognates but also stem cognates. This is therefore the second example of cognate roots where a subset consists of cognate stems. Let us now consider three examples of cognate stems:

Germanic–Baltic–Italic–Indo-Iranian: PIE root: ***wai** ‘woe’

- (8a) *nú er oss **vei**, er vér erum hjalplausar* *Old Norse-Icelandic*
 now is us.DAT woe, as we are helpless
 ‘now we have woe, as we are helpless’ (Ridd 65³⁴)
- (8b) *immo **uae** tibi sit* *Latin*
 then woe you.DAT is.3SG.SUBJ
 ‘Then, you shall have woe!’ (Plautus, Cas. 633)
- (8c) ***Vai** ka tev bus.* *Modern Latvian*
 woe how you.DAT be.FUT
 ‘Oh how it will be terrible for you!’
- (8d) *aēibiō aḡhāuš **auuōi** aḡhat apāmām* *Gatha Avestan*
 them.DAT life.GEN woe were.3SG.SBJ last
 They shall have woe at the end of (their) life’ (Yasna 45.3)

This example of the DAT-*is-woe* construction, which we have already discussed elsewhere (Barðdal et al. 2011), consists of the adverbial interjection ‘woe’, the verb ‘be’ and a dative subject. This cognate argument structure construction, including the cognate item ‘woe’, is found across four Indo-European subbranches, of which one is Indo-Iranian. This is the first example presented here where all the cognate roots are also cognate stems. Two more examples of cognate stems will now be presented:

³ The etymology of the Greek root is doubtful. The PIE roots **terg^{eu}-* (<**ter-g^{eu}-?*) ‘frighten’ (LIV 632, IEW 1076–7) and **term-/trem-* ‘tremble’ are also plausible sources. However, even though this not a stem cognate, it may still be based on the PIE root **ter(h₁)-*, which is also the likely foundation for a North European cognate set based on **tr-eud-* ‘push’, with a meaning of facing a heavy burden (necessity or difficulty) in the oblique subject construction.

Germanic–Latin–Ancient Greek: PIE root: ***sweh₂d-u-** ‘to find sweet’

- (9a) *Ʒ him swete wæron to aræfnenne* *Old English*
 and him.DAT sweet were to perform
 ‘and he enjoyed performing’ (Blick. Hom. 17:74-5)
- (9b) *quod suave est aliis* *Latin*
 which sweet is others.DAT
 ‘which others like/find sweet’ (Lucretius)
- (9c) *ouk àn emoi ge metà phresin hēdū génoito* *Homeric Greek*
 not PTCL me.DAT PTCL with souls sweet becomes
 ‘I find then it would be no more sweet’ (Od.24.435)

In (9) we find three different instances of what appears to be a cognate argument structure construction, i.e. the DAT-*is-sweet* construction, found across three different branches of Indo-European. Notice also that it is not only the adjective ‘sweet’ that is cognate here, but the predicate structure is also exactly identical. In other words, it is not only the lexical material which is cognate, but also the argument structure, an instance of what Walkden (2009: 33) has termed “the double cognacy condition” in phonological reconstruction. That is, a correspondence set must be drawn from a morphological context which is itself cognate, in order to secure the quality of the phonological reconstruction. In phonological reconstruction this means that the words on which basis a phonological reconstruction is made must also be cognate. One can say that our predicate and argument structure construction is the context, while the lexical stem is the reconstructed item. This shows very clearly that the double cognacy condition applies in syntax as well as in phonology, and that the co-occurrence of a cognate argument structure construction and a cognate lexical stem provides an even firmer ground for reconstruction.

Greek–Italic–Slavic–Germanic: PIE root: ***g^hneh₃-no/-to-** ‘know of’, ‘understand’

- (10a) *gnōstōn oīn éstō humīn ándres adelphoí* *Greek*
 known then is.3ps.SUBJ you.DAT men brothers
 ‘Be it known unto you, therefore, men and brethren’ (Acts 13:38, TR)
- (10b) *notum igitur sit vobis viri fratres* *Latin*
 known therefore is.3ps.SUBJ you.DAT men brothers
 ‘Be it known unto you, therefore, men and brethren’ (Vulgata)
- (10c) *ixže tebě věra znana est* *Old Church Slavonic*
 their.PTCP thee.DAT faith.NOM known is
 ‘of whose faith you know’ (Can.Miss.166a:27)
- (10d) *Thó uuarð managun cūð ...* *Old Saxon*
 then was many.DAT known
 ‘Men many knew ...’ (Heliand 386)

Our last example in (10) is exactly parallel to the examples in (8–9), i.e. it is the

compositional construction, although here it occurs with a dative subject, the verb ‘be’ and the resultative participial of the verb ‘know’. As is evident from the examples, the construction is documented in four Indo-European subbranches and the participial of ‘know’ is not only a root cognate, but also a stem cognate.

Lühr (2008: 19) argues that impersonal verbs instantiating the oblique subject construction seem to be very few in Homeric Greek, Old Indo-Iranian and Hittite, and thus in the early Indo-European languages.

... the use of impersonal constructions in Homer is not very common ... That fits well with the findings in Old Indo-Iranian and Hittite ... it seems that the early Indo-European languages have hardly had any impersonal verbs at all [Translation JB]. (Lühr 2011: 237)

It seems that Lühr is specifically discussing simple verbs and not compositional predicates, which are well documented across the early and archaic Indo-European languages, as evident from the examples above. But apart from that, it is of course not entirely true that no simple verbs are found in the early languages, as the following examples from Homeric Greek, Sanskrit and Hittite show:

- (11a) *oúneká moi túche pollà* *Homeric Greek*
 because me.DAT befell much
 ‘because I was fated to experience many things’ (Homer, Iliad 11.684)
- (11b) *(nu)]-ssi mahhan k̄asti k̄aninti nakk[(esta)* *Hittite*
 CONJ it.DAT when hunger.DAT/LOC thirst.DAT/LOC troubled
 ‘when they [the population] started to suffer hunger and thirst’
 (KUB 14.15 iii 45–46, text and translation from Luraghi 2010, new glosses)
- (11c) ... *tébhya eṣá lokò 'chandayat* *Sanskrit*
 them.DAT this.NOM world.NOM appear.IMPF.3SG
 ‘They liked this world’ (ŚB, 8, 3, 1, 2)

With that said, there may of course have been fewer oblique subject predicates in the early languages than in the modern ones, meaning that the early languages were perhaps dominated by compositional predicates in the oblique subject construction. However, our impression is that there are several examples of simple verbs found in the oblique subject construction in these early languages. The question is, however, whether the alleged lack of simple verbs has any significance at all with respect to the inheritance of the general oblique subject construction. As long as some examples are found, we are inclined to answer that question in the negative.

Finally, before we proceed to the syntactic reconstruction in Section 4, a clear generalization about the relation between the meaning of oblique subject predicates and their nominative counterparts may be put forward. The most well-known, and uncontroversial, correlation between the two meanings would be the use of copular/existential verbs to indicate possession. The use of the dative for possession is attested across virtually all branches of Indo-European and may occur as a full argument structure construction with the verb ‘be’ in most of these. This may be conceptualized in the following way:

- (12a) Nom+Nom+ **h₁es-* Canonical
‘X_{NOM} exists’ or ‘X_{NOM} is Y_{NOM}’
- (12b) Dat+Nom+ **h₁es-ti* Non-Canonical
‘X_{DAT} has Y_{NOM}’

In (12a) the Indo-European copular/existential verb **h₁es-* conjugates in agreement with a nominative subject when indicating existence or copular identity, while in (12b) it agrees with a nominative object, of course always a 3rd person object when indicating possession, with the nominative element appearing in a later position in the argument structure. Other verbs used like copulae in the Indo-European branches may be used similarly, e.g., **b^heu_h3-*, and more rarely **steh₂-*.

Table 3: Some common semantic correspondences of canonical and non-canonical constructions attested in the Indo-European daughter languages

Canonical	Non-Canonical
‘be’ <i>*h₁es-</i> , <i>*b^heu_h3-</i> , (<i>*steh₂-</i>)	‘have’
‘know/find.out’ <i>*g^ʷneh₃-</i> , <i>*woid-</i>	‘know.of/familiar’
‘shine’ <i>*leuk-</i> , <i>*b^heh₂-</i> , <i>*k^ʷwei-</i> , <i>*h₂ei-</i>	‘seem’; ‘befall’
‘sweet’ <i>*sweh₂d-u-</i>	‘enjoy’
‘rub’; ‘press’ <i>*ter(h₁)-</i> , <i>*g^ʷ(^h)er-</i> , <i>*h₂eng^h</i>	‘need’; ‘difficulty’
‘burn’ <i>*d^heg^{ʷh}-</i> , <i>*kenk-</i>	‘be angry’; ‘suffer’
‘freeze’ <i>*g^ʷel(h₁)-d-</i> , <i>*mer(H)-g^ʷ-</i>	‘fear’; ‘hate’
‘bend, twist’ <i>*g^ʷ(^ʷ)eu_h1-</i> , <i>*(s)keu-</i> , <i>*wer-</i>	‘pain’; ‘confusion’
‘blow’; ‘swell’ <i>*Beu-</i> , <i>*d^hem-</i> , <i>*d^heu-</i>	‘pain’
‘come, go’ <i>*h₁ei-</i> , <i>*g^ʷem-</i> , <i>*h_{1/2}er-</i> , <i>*per(h₃)-</i>	‘inception/happenstance’
‘burn’	‘be angry’; ‘suffer’

There are, moreover, many other patterns that appear to be common across several Indo-European branches, as shown in Table 3 (cf. Smitherman 2011). A relatively uncontroversial correlation of the meaning in canonical and non-canonical constructions is found when a verb of motion appears in conjunction with a noun, often itself deverbal, indicating a state or experience or a verbal infinitive of the same semantics. The motivation for non-canonical case marking with a motion verb is either the inception into a state, emotion or experience, or the indication of an immediate happening experienced by the non-canonically case-marked argument.

Reflexes of various Proto-Indo-European motion verbs are attested in these constructions across many Indo-European branches. Examples of an inceptive meaning with oblique subjects across three branches are given in (13) below:⁴

⁴ We are assuming that the first *oduna* ‘pain’ is emphatically uttered in the beginning of the verse.

- (13a) *kaì nūn odúna m' odúna báinei* Ancient Greek
and now pain.NOM me.ACC pain.NOM goes
'And now I am overcome by pain' (Euripides, Hippolytus 1371)
- (13b) *Þá mun flestum mönnum ... í hug koma dráp ...* Old Norse-Icelandic
then will most men.DAT in mind.ACC come murder.NOM
'Then most people will ... remember the killing ...' (Þórarins þáttur ofsa)
- (13c) *venit enim mihi in mentem oris tui* Latin
comes CONJ me.DAT in mind.ACC face.GEN your
'for I remember your expression' (Cicero, Rosc.Am.34,95)

Observe now that the Ancient Greek *bainei*, Latin *venit* and Old Norse Icelandic *koma* are all cognates, derived from the Proto-Indo-European root **g^vem-*. The relationship between the basic and the derived meaning may be conceptualized in the following way:

- (14a) Nom+ **g^vem-* Canonical
'X_{NOM} goes/comes'
- (14b) Acc/Dat+Nom+ **g^v(e)m-(ye-)ti* Non-Canonical
'X_{ACC/DAT} INCEPTION from Y_{NOM}'

Observe that motion verbs meaning 'go, come' are intransitives with no object and hence no case-marked object, either in the accusative or in the dative. There are some instances of the verb 'go' occurring with an accusative adjunct, with the accusative referring to a place of destination. Returning to example (14b), in Ancient Greek both accusative and dative subjects are attested for this type of construction. In Germanic and Italic datives seem to be overwhelmingly favored.

In many instances, the appearance of a predicate in a non-canonical construction does not greatly alter the semantics of the clause, but does indicate a degree of reduction in agentivity or volitionality. Such is the case especially with many participial adjectives. Note the following three schematic constructions for verbs of knowledge (PIE **g'neh₃-* and **woid-*) below (cf. examples 10 above):

- (15a) Nom-Acc- **g'neh₃-ti* Canonical (verbal)
'X_{NOM} KNOWS Y_{ACC}'; 'X_{NOM} finds out Y_{ACC}'
- (15b) Nom+ **g'nh₃-to-s+*h₁es-* Canonical (participial)
'X_{NOM} is known'
- (15c) Dat+ **g'nh₃-to-m+*h₁es-ti* Non-Canonical
'X_{DAT} knows/knows of/is aware of/understands Y_{NOM}'

In this case, the verb may only be attested canonically but the participial form may be used as a neuter impersonal with a 3rd person 'be'. Although the meanings of the verbal construction with a nominative subject in (15a) and the non-canonical construction with a participle and dative subject in (15c) overlap in the semantic

domain of ‘knowledge’, the former may also indicate the active pursuit of knowledge whereas the latter is stative and cannot be selected to indicate any volitional participation by the subject in attaining some understanding.

Finally, we have observed a larger category of semantic correspondences that appear to be metaphoric. Good examples include Proto-Indo-European roots that can be reconstructed with the meaning of ‘burn’ in a canonical construction indicating some sort of suffering in a non-canonical construction. Another example is with etymons meaning ‘bend’ or ‘press’ indicating physical pain. Again, the oblique subject construction indicates a less active/dynamic meaning than the canonical argument structure construction, whether the latter is transitive or intransitive, active or inactive. This relation may be conceptualized as in (16) below for the PUSH/PRESS–PAIN and BURN–SUFFER metaphors (where V stands for “verb”):

- | | | |
|-------|-------------------------------------------------------------------------------------------|---------------|
| (16a) | Nom+Acc/Dat+* <i>treud-(e)ti</i>
e.g., ‘X _{NOM} pushes Y _{ACC/DAT} ’ | Canonical |
| (16b) | Dat/Acc+* <i>kenk-ti</i>
e.g., “X _{DAT/ACC} is in pain” | Non-Canonical |

There is little difficulty in reconstructing the patterns of such metaphorical extensions represented by a change in argument structure for Proto-Indo-European. It is far more complicated to reconstruct specific Proto-Indo-European stems for particular patterns. For example, oblique subject predicates with roots descended from Proto-Indo-European etymons reconstructed to mean ‘burn’ when used canonically are found across at least five Indo-European branches, with at least five cognate sets represented. The ‘suffer’ metaphor is attested for predicates relating to four of these etymons in four branches. However, the distribution of the pattern among particular branches and roots does not permit a clear etymological reconstruction of the BURN–SUFFER metaphor for a given Proto-Indo-European root.

Nonetheless, some such patterns can be reasonably well reconstructed and, as the present research develops, we believe that more particular Proto-Indo-European stems may be reconstructed to have had specific meanings in an oblique-subject construction which are distinct from their meaning when used canonically. At present, we will let it suffice to reconstruct cognate lexical stems in cognate context, i.e. in the same predicate and argument structure construction (see next section), assuming that oblique subject constructions in Proto-Indo-European are as old as at least the late proto-language and that the motivation of the oblique case marking is primarily semantic (cf. Barðdal 2004, Barðdal & Eythórsson 2009). Even if non-canonically subject-marked argument structure constructions have developed from canonical constructions, whether by the expansion of the already existing dative of possession construction, or by the syntactic development of quasi-human-universal metaphoric expressions, it is most prudent to assume that the construction emerged before the total dissipation of the Proto-Indo-European language.

4. Reconstructing Proto-Indo-European Argument Structures

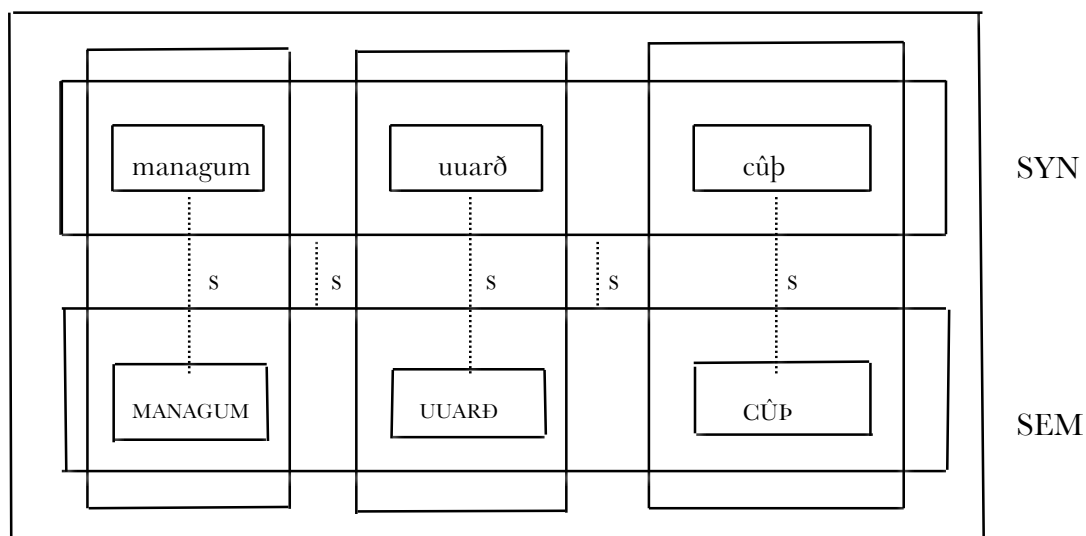
For several decades, syntactic reconstruction has been regarded as at best a highly controversial enterprise and at worst a stranded endeavor within the historical linguistic community (cf. Watkins 1964, Jeffers 1976, Lightfoot 1979, 2006, Harrison

2003, Pires & Thomason 2008, Mengden 2008, inter alia). The reason is that syntactic structures have not been regarded as being on par with lexical items. Rather, they have been considered “bare structures” devoid of meaning, and not form–function correspondences. In other words, the meaning that has been attributed to sentences has been taken to be the sum of the meaning of the lexical parts (Klein 2010). On such a view, sentences or syntactic structures do not qualify as simple form–meaning correspondences like words, hence there cannot be any reconstruction.

Construction Grammar provides us with a more nuanced view of form–meaning or form–function correspondences. It presupposes that there is not only a symbolic link between simple form–meaning correspondences like lexical items, but also between more complex form–meaning correspondences. Consider again the argument structure of the Old English compositional predicate ‘be known’ from example (10d) above. On, for instance, a Radical Construction Grammar analysis (Croft 2001, Croft & Cruse 2004: 257–262, Barðdal 2006: 74–78), there is a symbolic link between each syntactic element and its corresponding semantic component, and there is also a symbolic link between the entire SYN-field and the entire SEM-field, as illustrated in Figure 1, where *s* stands for a symbolic link. In other words, there is a symbolic relation between the form and the meaning of each and every lexical item, and then there is also a symbolic relation between the whole semantic structure and the whole syntactic structure. Therefore, on this view, larger more complex linguistic structures are also form–meaning correspondences, exactly like words, and should as such also be reconstructible. The only difference is that they are complex form–meaning correspondences rather than simple form–meaning correspondences.

In other words, in historical-comparative linguistics, one has focused on the symbolic relation between *managum* and MANAGUM in the first vertical box Figure 1, the symbolic relation between *uuarð* and UUARÐ in the second vertical box, etc. The totality of the meanings for all the words then yields the lower horizontal box in Figure 1, labeled SEM. What Construction Grammar adds to this equation is the symbolic link between the SYN and the SEM parts, which represents the symbolic relation between the form and the meaning parts of a construction. This is how syntactic objects become form–meaning correspondences in Construction Grammar.

Figure 1: The Symbolic Relations between Parts of Constructions



Of course, in some cases the relation between the form and the meaning is an

arbitrary one, like with idioms and other semantically specific constructions, while in other cases the meaning is not arbitrary, but is a sum of the meaning of the parts. Either way, syntactic objects count as form–meaning correspondences, and are as such legitimate objects of the Comparative Method.

Several other arguments against syntactic reconstruction have been brought forward in the literature, such as the lack of ARBITRARINESS in syntax, the lack of COGNATES, the lack of REGULARITY, and the problem of DISCONTINUOUS TRANSMISSION. In addition to the early work of Harris & Campbell (1985), arguing for the reconstructability of syntax, more recent articles have also been published where the claim is supported that syntactic reconstruction is not only possible but also quite feasible (Campbell & Harris 2003, Kikusawa 2003, Harris 2008, Bowerman 2008, Barðdal & Eythórsson 2011, Eythórsson & Barðdal 2011, Barðdal 2012, Barðdal & Eythórsson 2012). We will begin with a discussion of arbitrariness and use the remainder of this article to continue with the argument that there need not be any lack of cognates in syntax. For a discussion of the lack of regularity in syntactic change and discontinuous transmission, we refer the interested reader to the publications cited above.

When it comes to the ARBITRARINESS requirement, Harrison (2003: 23) points out that arbitrariness is only required when establishing genetic relatedness, i.e. that it is only needed for reconstructions that aim to show that one language is related to another one. In our terminology this means that since we are comparing languages for which genetic relatedness has already been established, it is enough that there is a symbolic link between the form and the meaning. That is, it is irrelevant whether this link is derivable from the semantics of the parts or not. Hence, the demand for an arbitrary link between form and meaning is superfluous in syntactic reconstruction. Notice that in our case, it is in fact arbitrary which lexical predicates instantiate the oblique subject construction and which not, meaning that here is, after all, a certain degree of arbitrariness in our reconstruction anyway.

Turning to the issue of COGNACY in syntax, i.e. the alleged lack of cognates, we believe that this is also a non-issue. Kikusawa (2003), for instance, introduces the concept of *cognate structures*, i.e. structures that are inherited from an earlier common proto-stage. Barðdal & Eythórsson (2011) also elaborate with the concept of *cognate argument structure constructions*, i.e. argument structure constructions that are inherited into the daughter languages from a common ancestor. For languages with case marking, it may be easier to identify cognate argument structure constructions than for languages without morphological case. For instance in the Indo-European languages, the morphological case markers are also cognates with each other. Some of the functions of the cases have of course merged (cf. Luraghi 1987), but the history of these mergers is relatively well known, at least for the best-studied languages of the Indo-European language family.

Consider, now, the following examples from Early Germanic of the verb ‘lust’, which all exhibit the same case and argument structure construction, namely Acc-Gen:

(17a) *nu **dih** es so wel lustit* *Old High German*
 now you.ACC it.GEN so well desires
 ‘now that you desire it so well’ (Hildebrandslied 59)

(17b) *that **ina** bigan bi thero mennisko* *Old Saxon*
 that him.ACC began because-of the.DAT humanity.DAT

môses *lustean*

meat.GEN desire.INF

‘that because of his humanity, he began to desire meat’ (Heliand 1060)

- (17c) **Hine nānes þinges** *ne lyste on ðisse worulde* *Old English*
 him.ACC no.GEN thing.GEN not desire on this world
 ‘He desired nothing in this world’ (Boethius Cons.Phil. 35,6)

- (17d) er **þig** *lysti þessa* *Old Norse-Icelandic*
 when you.ACC desired that.GEN
 ‘when you desire that’ (Ljósvetningasaga, Ch. 19)

Examples of the verb ‘lust’ in the Acc-Gen case frame constitute the input for the correspondence set in Table 4. The correspondence set in turn reveals that there is absolute identity among the daughters, and hence a verb-specific argument structure construction may be reconstructed for Proto-Germanic.

Table 4: Correspondence set for the ACC-*lusts*-GEN argument structure construction

	Alt 1
Old English	ACC- <i>lusts</i> -GEN
Old Saxon	ACC- <i>lusts</i> -GEN
Old High German	ACC- <i>lusts</i> -GEN
Old Norse-Icelandic	ACC- <i>lusts</i> -GEN

Clearly, there is an abundance of cognates found in the oblique subject construction across the early Germanic daughters. This is also expected since the time span for Proto-Germanic is very different from the time span for Proto-Indo-European. Or, in other words, Proto-Germanic is much younger than Proto-Indo-European.

Moreover, as we showed in Section 3 above, cognates, including cognate stems, are found across the Indo-European branches, cognates which lend themselves readily to reconstruction. Consider, for instance, the Proto-Indo-European root **g^hneh₃-no/-to-* ‘know of’, ‘understand’, which is found with a dative ‘knower’ and a nominative ‘knowee’ in Greek, Italic, Slavic and Germanic, as shown in (10) above. The correspondence set for this predicate-specific construction would be as in Table 5, and a predicate-specific argument structure construction may thus be reconstructed for Proto-Indo-European, as suggested in Figure 2.

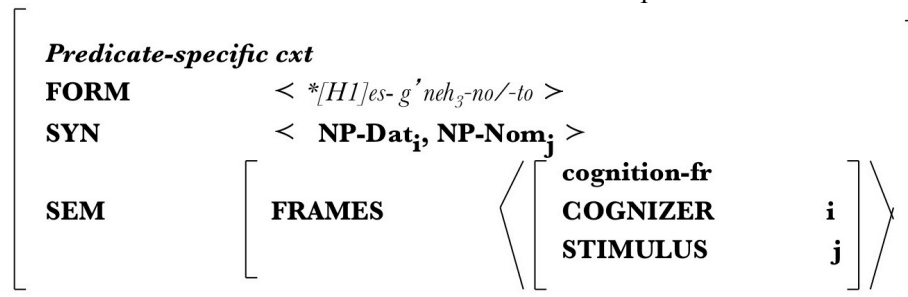
Table 5: Correspondence set for the DAT-NOM-*is-known* argument structure construction

	Alt 1
Ancient Greek	DAT-NOM- <i>is-known</i>
Latin	DAT-NOM- <i>is-known</i>
Old Church Slavic	DAT-NOM- <i>is-known</i>
Old Saxon	DAT-(NOM)- <i>is-known</i>

Exactly as with the Proto-Germanic correspondence set of ‘lust’ above, a complete identity is found between the data that form the basis for the correspondence set for ‘be known’ in Proto-Indo-European. The predicate-specific construction is here represented with the formalism of Sign-Based Construction Grammar (Sag 2011,

Michaelis 2010, 2011), and it consists of three levels: i) the level which specifies the lexical form of the predicate, ii) the SYN field which specifies the number of arguments and their case marking, and iii) the SEM field which gives the semantics of the construction.

Figure 2: A Reconstruction of the predicate-specific DAT-NOM-*is-known* construction in Proto-Indo-European



The semantics is specified in terms of semantic frames (Fillmore 1982, 1985, Petruck 1996), in this case the cognition frame, which entails that there is a cognizing entity and a stimulus which the cognizing entity cognizes of. Notice that the roles of cognizer and stimulus are here indexed with *i* and *j* respectively, and hence coindexed with the two arguments of the argument structure. This means that the dative is coindexed with the cognizer and the nominative with the stimulus.

We have here specified the order of the arguments in such a way that the dative precedes the nominative in the word order, but since the opposite word order is also found, we believe that this predicate-specific *is-known* construction in the Proto-Indo-European daughter languages alternates between two argument structure constructions, the Dat-Nom and the Nom-Dat constructions. Such alternating predicates have been documented in several Germanic daughter languages, like Old English (Allen 1995), Modern Icelandic (Barðdal 2001) and Modern Faroese (Barnes 1986), and even today, the North-Germanic cognate *vera kunnugt* ‘be known’ is an alternating predicate in Modern Icelandic. On such an analysis, one of the word orders is not a topicalization of the other but exists in its own right as a full-fledged argument structure construction. We will not pursue the argument for such an analysis here, but let it suffice to mention these facts from Germanic, which in turn underscores the possibility of an analogous analysis for the early and archaic Indo-European languages.

To conclude, not only is syntactic reconstruction a viable enterprise, but it is also possible to reconstruct constructions for Proto-Indo-European in which the subject-like argument is non-canonically case marked. The formalism of Sign-Based Construction Grammar turns out to be adequate for this endeavor.

5. Summary

Hypotheses about the emergence of oblique subjects may, broadly speaking, be divided into two main categories: those which assume a development from object status to subject status and those which assume that no such development has taken place and that non-canonical case marking is motivated by semantic factors. We have referred to these two as the Object-to-Subject Hypothesis and the Oblique Subject/Semantic Alignment Hypothesis, and we have argued for the sustainability of

the latter.

In order to corroborate the validity of the Oblique Subject/Semantic Alignment Hypothesis, we have started the quest for cognates across the early and archaic Indo-European daughter languages. At the present stage of our research, we have encountered dozens, even hundreds, of roots found across two, three or four Indo-European subbranches, although these roots are not systematically distributed across the same branches but are found in different pockets of the Indo-European daughters. The number of cognate stems is approximately one dozen at present, and we have so far only harvested data systematically from Germanic, Italic, Greek, Slavic and Baltic. Here we have presented five different cognate stems found across two, three or four Indo-European subbranches. In addition, these cognate stems are found in the same predicate type, namely the compositional Dative Subject Construction consisting of the verb ‘be’ together with a noun, an adjective or an adverb. In other words, not only are the lexical stems cognate but also the more schematic predicate type and its argument structure. Our reconstruction is thus based not only on cognate lexical stems but it also fulfills the Double Cognacy Condition found in phonology that reconstruction of a unit must be based both on the reflexes of that unit in the preserved material and also that it must occur in a context which is itself cognate.

Regarding the age of the Oblique Subject Construction in the Indo-European languages, three scenarios are possible: a) the category is an early feature of the Indo-European languages, b) it is a recent feature of the Indo-European languages, and c) it is an independent development in the Indo-European daughters. If the construction has emerged through an independent development, then no cognates should be found at all, unless they have been borrowed after the emergence of the category. It is clear, however, that the lexical form of ‘woe’, ‘sweet’ and ‘known’ in the different branches excludes borrowing from one branch to another. An independent development is thus not corroborated by the data. A recent common development should entail a substantial number of cognates, it seems, while an early common development should entail few if any cognates, because of the differences in time elapse between the two scenarios. If the Oblique Subject Construction was a recent common development, we should expect to find more cognates than we have found so far. So to conclude, the data are most compatible with the hypothesis that the Oblique Subject Construction is an early common inheritance in the Indo-European languages.

We have also laid out some generalizations about the relation between the meaning of a verb in a canonical nominative construction and its meaning in the non-canonically case-marked Oblique Subject Construction. We have found three apparent patterns: a) verbs of motion are used to indicate inception or inchoative meaning, b) dynamic verbs are reduced in agency and are used to indicate states, and c) metaphorical extensions of verbs meaning ‘burn’ and ‘press/bend’ are used to indicate ‘suffering’ or ‘pain.’ These appear to be recurring patterns found across different subbranches of the Indo-European languages with different etymons, perhaps of universal nature.

Finally, we have rejected the common view that syntactic reconstruction is impossible because larger syntactic units are not simple form–meaning correspondences like words. On a constructional approach, larger syntactic units are also form–meaning correspondences; they are just complex form–meaning correspondences rather than simple form–meaning correspondences. We have thus argued for the possibility of reconstructing complex syntactic constructions and presented an attempt to reconstruct an oblique subject construction for Proto-Indo-European on the basis of attestations in four of the Indo-European subbranches:

Ancient Greek, Latin, Slavic and Germanic. The relevant reconstruction contains the participial form of the verb ‘know’ from the Proto-Indo-European root **g’neh₃-no/-to-*, a dative subject and the verb ‘be’, i.e. the compositional dative subject construction. We have also shown that the formalism of Sign-Based Construction Grammar is adequate for this enterprise.

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