CHAPTER 2

SYNTACTIC RECONSTRUCTION AND PROTO-INDO-EUROPEAN

Syntactic reconstruction poses a unique set of challenges to comparative philologists, and this has led some authors to go so far as to claim it is impossible. I begin this chapter by evaluating these challenges and how troubling they are for the enterprise of syntactic reconstruction. With this baseline established, I turn to the specific attempts that have been made at reconstructing syntax, in particular with reference to Proto-Indo-European. Although some aspects of syntax were treated as early as the Neo-Grammarians, the earliest concerted efforts to treat Proto-Indo-European syntax on its own terms date to the latter half of the twentieth century. There have been several different approaches to syntactic reconstruction since then, which fall broadly into four categories: Typological reconstruction; Pattern-based approaches; Construction Grammar; and Minimalist reconstruction. I will argue that, while it is not the only viable methodology, Minimalist reconstruction provides the most suitable means for the task of reconstructing relative clause syntax in Proto-Indo-European.

2.1 The Challenges of Syntax

Syntactic reconstruction is relatively difficult. That is to say, the difficulties we face when reconstructing syntax are best understood as relative to those faced when reconstructing other domains of a proto-language, such as its phonology or morphology. Scepticism around the possibility of syntactic reconstruction has been expressed for the best part of half a century; almost all discussions of the (im)possibility of syntactic reconstruction take as their starting point the validity of morphophonological reconstruction,

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

treating this as a benchmark that syntax may or may not reach.[1] Perhaps the most categorically negative appraisal of syntactic reconstruction is Lightfoot (2002). Lightfoot (2002) synthesises much of the earlier sceptical discussion around syntactic reconstruction (Jeffers, 1976; Watkins, 1976; Lightfoot, 1979; Winter, 1984), adding to it some novel criticisms of more recent approaches. Willis (2011) codifies Lightfoot's (2002) arguments into three discrete 'problems':[2]

1. Correspondence-set Problem. There is no way of forming a correspondence set akin to those used in morphophonological reconstruction.
2. Directionality Problem. There is no theory of universal directionality in syntactic change, unlike in phonology.
3. Radical-reanalysis Problem. Unlike phonological change, syntactic change is chaotic, meaning once a change has taken place, the previous state of the grammar cannot be reconstructed.

The problems present a crucible in which any proposed methodology for syntactic reconstruction must be tested, and advocates for any particular approach to syntactic reconstruction must address them in some way or another. The remainder of this chapter is structured as follows: I start with a brief overview of morphophonological reconstruction, taken as the traditional locus of the Comparative Method. I then address each of the three aforementioned 'problems' in turn, assessing the extent to which they should trouble us. I will ultimately conclude, with other authors such as Willis (2011), Walkden (2013) and Clackson (2017), that correspondence is the primary challenge faced when reconstructing syntax; addressing the Correspondence-set Problem is thus a core desideratum for any reconstructive methodology.

[1] Authors with this approach include Jeffers (1976); Watkins (1976); Lightfoot (1979, 2002); Winter (1984); Harris and Campbell (1995); Roberts (1998, 2007); Clackson (2007, 2017); Harris (2008); Willis (2011); Walkden (2013); Barðdal *et al.* (2013) and Gildea *et al.* 2020.

[2] Two additional problems have been invoked by previous authors, including Willis (2011) and Roberts (2021a): the 'Transfer Problem' and the 'Pool-of-Variants Problem'. See Walkden (2014: 52), who argues convincingly that both reduce to particular instances of the Correspondence-set Problem.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

2.1.1 *Linguistic Reconstruction and the Comparative Method*

Linguistic reconstruction is, at its roots, a speculative enterprise. Its central task is to form hypotheses about a language state that is not attested directly. By their very nature, these hypotheses are largely unfalsifiable, failing the emergence of new data from language states that are hitherto unattested. Nevertheless, we are generally able to establish the relative likelihood of different linguistic scenarios. For instance, if every attested Germanic language has a word for 'foot' that begins with the sound /f/ (cf. German ***F**uß*, Old Dutch ***f**uot*, Frisian ***f**oet*, Swedish ***f**ot*, Danish ***f**od*, Icelandic ***f**ótur* etc.), the most likely scenario for their shared ancestor, Proto-Germanic, is that the word for 'foot' began with the sound /f/, rather than, say, /w/ or /ʔ/. Of course, things become more complicated when attested languages differ, as they do with, for example, the final consonant of these words. At this stage, we must rely on a formalised methodology to establish a reconstruction: the **Comparative Method**.

The Comparative Method begins with the formation of **correspondence sets** across different related languages. The notion of correspondence is a technical one: in the case of phonology, a phoneme A in language X *corresponds* to phoneme B in language Y iff they can both be traced back to a single proto-phoneme in the shared ancestor language: in other words, if they share **diachronic identity** (Walkden, 2013: 101). For there to be diachronic identity between these sounds, they must occur in words that are inherited from a common source in the proto-language; such words are typically referred to as cognate. A rudimentary correspondence set for English /f/ and Latin /p/, consisting of three cognate lexical items, is given in Table 2.1.

In each case, we have words that have the same (or functionally similar) meaning; taking them together, we have a systematic correspondence between /f/ in English and /p/ in Latin. On this basis, we may hypothesise that each language inherits some form(s) of these words from PIE, which subsequently undergo a set of sound changes relevant to each language. Sound changes are the flip side of correspondence; for us to say that Eng. /f/ regularly

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Table 2.1 *Correspondence set for English /f/ and Latin /p/*

English	Latin
foot	***p**es*
father	***p**ater*
for	***p**er*

corresponds to Lat. /p/, we must hypothesise a regular sound change between the ancestor form of this phoneme and the attested forms in either English or Latin (or both). The regularity of sound change, commonly referred to as the Neo-Grammarian Hypothesis, is therefore a necessary assumption in the formation of phonological correspondence sets.

The formation of correspondence sets is no simple task, and is confounded in at least two significant ways. The first is that while vocabulary items may be inherited from a common ancestor, it is also possible for them to be borrowed via language contact. As it happens, English has undergone a significant amount of language contact with Latin and its descendants, muddying the waters. The English word 'language' does not correspond to Latin *lingua* for comparative purposes, since the former is a borrowing from French; the actual correspondence is with the inherited English word 'tongue'. Since correspondence sets must be based on inherited vocabulary, borrowings must be excluded. Alongside the issue of language contact, there is also the problem of semantic change. Even in the case of English 'for' vs. Latin *per*, while there is some semantic overlap, there is a divergence in meaning, with the latter more readily translatable with English 'through' or 'by'. As noted by Clackson (2017: 193), '[s]emantic change may . . . lead to the inclusion of material in correspondence sets which do not agree on meaning, and indeed sometimes cognates can show widely divergent meanings'. The formation of correspondence sets therefore presents some inherent challenges; what we choose to include must be informed by our knowledge of both

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Table 2.2 *Correspondence set for PIE* *p *in initial position*

English	**Gothic**	**Old High German**	**Latin** (Italic)	**Old Irish** (Celtic)	**Lithuanian** (Baltic)
foot	*fotus*	*fuoz*	*pes*	*ís* ('below')	*pėda*
father	*fadar*	*fater*	*pater*	*athair*	—
for	*faur*	*furi*	*per*	*ar*	*per*

Tocharian B	**Ancient Greek**	**Sanskrit** (Indo-Iranian)	Hittite (Anatolian)
paiyye	πούς	*pā́daḥ*	*pataš*
pācer	πατήρ	*pitā́*	—
pärweṣṣe ('first')	περί	*pári*	—

the specific history of a language and its neighbours, as well as theories of linguistic change.[3]

Once the correspondence sets are formed, the task is then to decide what the proto-forms were likely to have been. Unsurprisingly, we can't make this decision on the basis of Latin and English evidence alone; we have to expand our correspondence set to include other branches of Indo-European (Table 2.2).

Continuing to focus on the first sound in each word, we see that English groups with the rest of the Germanic languages in showing /f/, while Latin clusters with almost every other branch of IE in having /p/. At this stage, purely axiomatically, and with little reference to linguistic detail, we may be led to hypothesise that the original forms began with **p* rather than **f*. The first motivation may be variously referred to as Occam's Razor, the Principle of Economy or simply 'majority rule'. In short, most branches of IE have /p/, and it is more likely that they inherited it from PIE than that they independently innovated it. It is thus more economical to suggest that Germanic alone underwent a shift of **p* → /f/.

Beyond the economy principle, it is also worth taking into consideration the fact that the oldest languages all show /p/. A considerable amount of time passes between the earliest attestations of, say, Hittite (c. 1800 BCE) and Gothic (c. 500 CE). In this time, the irresistible tides of language change are likely to have carried the latter further away from PIE than the former. This likelihood is supported by the fact that the other archaic languages (Ancient

[3] Detailed treatment of the challenges presented by contact and change in morpho-phonological reconstruction can be found in textbook introductions to the Comparative Method such as those in Fox (1995), Clackson (2007), Campbell (2013) and Ringe and Eska (2013).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Greek, Latin, Sanskrit etc.) concur in their attestation of /p/. In parallel to 'majority rule', we may refer to this form of deduction as 'elder rule'.

The final nail in the coffin for a putative PIE **f*, however, is of a purely linguistic motivation. We know that the sound change /p/ → /f/, as a part of the broader category of sound changes referred to as lenition, is far commoner than the reverse process (fortition): Bybee and Easterday (2019: 278) find twenty-eight instances of the change stop → affricate, but only five examples of the opposite change. If we were to reconstruct **f* for PIE, not only would we have to hypothesise the same change of **f* → /p/ taking place in multiple branches independently, we would do this in the knowledge that this sound change is a very rare one. Thus, we can say with confidence that it is more likely that the proto-phoneme in question is **p*, rather than **f*. I will refer to this last motivation, based on our understanding of the typology of sound change, as 'directionality rule'.[4]

This minimal working example demonstrates the main steps of the Comparative Method:

1. Establish correspondence sets of inherited forms;
2. Using a combination of external axioms ('majority rule', 'elder rule') and linguistic motivations ('directionality rule'), posit a proto-form and a set of changes that derive the attested forms in the descendant languages.

As stated at the outset, reconstruction is a speculative enterprise that operates on likelihoods rather than certainties. Some of these likelihoods may seem overwhelming, but others are not. In taking up the question of PIE **p*, I have chosen what I hope is a rather uncontroversial phoneme; in other cases, however, scholars may draw quite different conclusions based on the evidence available to us.[5] Nevertheless, comparative morphophonological reconstruction has enjoyed considerable success over the last two

[4] Directionality is also what allows us to reconstruct the change **p* → ∅ in the Celtic languages, accounting for the total absence of a corresponding phoneme for the Old Irish examples in Table 2.2.

[5] See, e.g., Clackson (2007: 26–65) for an introduction to some major points of contention in PIE phonology.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

hundred years, and the scholarly consensus is that, inherent uncertainty notwithstanding, we have learned a significant amount about the phonology and morphology of PIE through the Comparative Method. Attempts to extend it to syntax, however, have enjoyed less success, to the extent that, as Gildea *et al.* (2020: 1) put it, 'syntactic reconstruction has been regarded as bootless, frowned upon and even lambasted'. I turn to these criticisms presently.

2.1.2 *Correspondence and Identity*

Although some forms of syntactic reconstruction had been attempted quite early on in the intellectual history of comparative philology (see §2.2 below), it was first pursued systematically by the typologists of the 1970s (see §2.3) and concurrently problematised by authors such as Jeffers (1976), Watkins (1976) and Lightfoot (1979). These authors raise what remains the greatest challenge in syntactic reconstruction: the Correspondence-set Problem.

Recall from §2.1.1 above that the very first stage of the Comparative Method is the formation of correspondence sets of cognate lexical items (e.g. Table 2.2), on the basis of which we can point to correspondence between individual phonemes (e.g. the descendants of PIE **p*). Jeffers characterises this kind of correspondence in the following way (1976: 4):

> If two languages are related, a finite number of phones will correspond regularly, from language to language, on the basis of position within a finite number of cognate lexical items.

Jeffers (1976) thus makes explicit what is otherwise implicit in the formation of correspondence sets: the fact that there are actually two levels of correspondence in morphophonological correspondence. The first is the phoneme, and the second is the lexical item. This requirement is codified by Walkden (2013: 101) as the: Double Cognacy Condition

> 'Double Cognacy Condition': In order to form a correspondence set, the contexts in which postulated cognate sounds occur must themselves be cognate.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Walkden (2013) thus divides correspondence into two tiers: a 'higher level', concrete form of correspondence, between words, and a 'lower level', abstract form of correspondence, between phonemes. We can use the examples above to demonstrate this: take for instance Eng. 'for' and Lat. *per*. There is a 'higher level' cognacy between these two lexical items that entails a 'lower level' cognacy between their constituent phonemes (e.g. Eng. /f/ vs. Lat. /p/). The 'lower level' phonemic cognacy can be stated in its own terms (Eng. /f/ corresponds to Lat. /p/ word-initially), but it is the 'higher level' lexical correspondence that ensures we are not randomly comparing these sounds and including chance similarity as evidence for correspondence (as in, say, Eng. '**f**uton' vs. Lat. ***p**ulvinus* 'pillow').

If we are to extend the Comparative Method to syntax, then, we are looking for two points of correspondence: a 'higher level', concrete correspondence, and a 'lower level', abstract one. The problem, noted once again by Jeffers (1976: 4), is that there does not seem to be any point of concrete correspondence for syntax akin to that in phonology:

> In syntax there does not exist a finite set of sentences occurring in a finite set of discourses which might seem to serve as the basis for the establishment of 'correspondence sets.'

This idea follows logically from the notion of syntax as a generative program (see §1.3) capable of producing a theoretically infinite set of sentences. While individual lexical items are inherited, sentences are generated afresh by each language user.[6] This can be demonstrated trivially, of course, by the fact that we routinely produce sentences which are vanishingly unlikely to have been produced before:

(2.1) I, Krishnan J. Ram-Prasad, spent the year 2023 writing a book about Proto-Indo-European syntax.

[6] Whole sentences can be inherited if they are particularly idiomatic or formulaic; this is the basis of reconstructive poetics (Watkins, 1976, 1995). But insofar as humans tend not to speak primarily in proverbs and poems, we can discount this form of correspondence for the purposes of syntactic reconstruction.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

But more counter-intuitively, the lack of inheritance even applies to sentences that certainly **have** been uttered before:

(2.2) I'm writing a book.

In both (2.1) and (2.2), the sentence has been generated by the author's grammar, rather than inherited from a previous generation. The argument follows that, since sentences are not inherited (with an infinitesimal and well-defined set of exceptions), two given sentences cannot be cognate, even if they are formally identical.[7] In this way, syntax appears to lack a form of 'higher level' cognacy, and so fails to meet the Double Cognacy Condition. Thus, methodologies for syntactic reconstruction are forced to focus on the 'lower level', abstract form of cognacy: cognate structures underlying sentences that are not themselves cognate. The nature of this form of correspondence necessarily depends on the syntactic theory one adopts: this is an area in which there has been significant diversification since the Neo-Grammarians, and even since the 1970s. Authors have suggested this abstract form of correspondence could be patterns (Harris & Campbell, 1995; Harris, 2008), constructions (Barðdal & Eythórsson, 2012; Barðdal, 2013; Barðdal *et al.*, 2013) or parameters (Roberts, 1998, 2007; Walkden, 2013; Windhearn, 2020). I treat these different ideas in turn in the following section.

In purely descriptive terms, without any particularly strong commitment to syntactic theory, the correspondence problem in syntax may be circumvented in a limited set of circumstances. These are where the descendant languages show the exact same word order, i.e. in cases of **identity**. This point is conceded by every critic of syntactic reconstruction, including Jeffers (1976), Watkins (1976) and Lightfoot (1979, 2002). There is an analogue here with phonological comparison, since identity is often a feature of cognate phonemes – we saw this with the initial **f* in Germanic words for 'foot'. However, phonological correspondence sets are not typically built on the basis of identity or even similarity, but rather

[7] See further Winter (1984: 622–3), quoted in Harris and Campbell (1995: 346), who argues that 'Sentences are formed, not learned; morphemes and simple lexemes are learned, not formed . . . Syntax deals almost exclusively with entities not learned, but constructed – or generated.'

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

to codify systematic **differences** between descendant languages in the phonological forms of inherited vocabulary (e.g. Eng. /f/ vs. Lat. /p/). Without the possibility of cognate sentences, it is significantly more difficult to establish which differences of word order between languages are systematic – and thus worthy of inclusion in a correspondence set – or irrelevant. A natural solution to this problem emerges where the descendant languages exhibit very similar if not identical patterns of word order.[8] There are, however, relatively few examples of absolute identity across ancient IE languages, which is perhaps why syntactic reconstruction has historically fared so poorly in comparison to morphophonological reconstruction. In fact, Jeffers (1976) argues the same constraints hold for morphological reconstruction. The Comparative Method can get us as far as reconstructing paradigms; where there is identity, e.g. in the case of the nominative singular *-*s*, we can reconstruct a proto-morpheme. Where there is not,[9] Jeffers (1976: 5) suggests 'we either flip a coin, or throw our hands up in despair'. In this way, in the taxonomy adopted in Clackson (2007: 158–9), morphological reconstruction, like syntactic reconstruction, is a 'second-order' operation; only phonological reconstruction can have a claim to be 'first-order' according to the Comparative Method. The difference between morphology and syntax, then, is that while morphemes typically have phonological content and so are more readily retrievable via 'first-order' reconstruction, word-order rules do not.

I would therefore argue that there are two criteria that must be fulfilled for any methodology of syntactic reconstruction to overcome the Correspondence-set Problem. The first is to establish a precise locus of syntactic comparison: this will necessarily be an abstract or 'lower level' form of correspondence in the terminology of Walkden (2013), owing to the virtual non-existence of cognate sentences. The second is that this form of correspondence must be robust enough to accommodate those situations in which there is not identity between the descendant languages.

[8] Establishing syntactic correspondence from structural identity is broadly the approach taken by the Neo-Grammarians, including especially Delbrück (1893–1900) and Wackernagel (1892) (see §2.2 below).

[9] Jeffers (1976: 5) uses the example of dat. pl. *-*mo* in some branches vs. *-*b^ho* in others.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

2.1.3 *Directionality and Grammaticalisation*

Unlike the Correspondence-set Problem, the Directionality Problem does not feature in early scepticism of syntactic reconstruction, and has been largely rejected by authors since Lightfoot (2002). Lightfoot suggests that morphophonological reconstruction is necessarily informed by our knowledge of the relative probability of certain sound changes. This is the aspect of the process I referred to in §2.1.1 as 'directionality rule', arguing that a change /p/ → /f/ was more likely than a change /f/ → /p/. However, as has been pointed out by many authors (e.g. Willis, 2011; Barðdal, 2013; Walkden, 2013), comparative reconstruction does not rely on directionality to the extent Lightfoot (2002) seems to suggest. Indeed, it is often the case that no theory of phonological directionality can be invoked for reconstructive purposes. To illustrate this, Barðdal (2013) takes the hypothetical example of a language family where /a/ in half the languages corresponds to /o/ in the other half. She argues that 'it is impossible to decide . . . whether /a/ has changed into /o/ or /o/ into /a/ in the history of this language family. Both changes are entirely possible' (Barðdal, 2013: 447). Even in the aforementioned case of /p/ → /f/ vs. /f/ → /p/, the case is not as clear-cut as one might think; citing Kiparsky (1988), Walkden (2013: 99–100) argues that 'lenition and fortition are mirror-image processes that appear equally natural in some contexts'. Directionality in isolation, then, is not a central aspect of phonological reconstruction.

Another challenge to the supposed Directionality Problem is that there does appear to be at least some directionality in syntactic change: namely, **grammaticalisation**. The term dates back to Meillet (1912) and has played a key part in studies of language change across a variety of theoretical frameworks. I will adopt the definition of grammaticalisation, as phrased in Kuteva *et al.* (2019: 3), as 'the development from lexical to grammatical forms and from grammatical to even more grammatical forms'. It is common to visualise this pathway of change as a 'cline' from least to most grammatical, as in the textbook definition provided by Hopper and Traugott (1993: 7):

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

(2.3) content item > grammatical word > clitic > inflectional affix

Grammaticalisation, then, is conceived of as the movement along this cline. The relevance of grammaticalisation to questions of directionality is the hypothesis that it is unidirectional. That is to say, e.g., lexical items routinely become functional, but not vice versa. It is certainly the case that grammaticalisation is overwhelmingly common: Kuteva *et al.* (2019) list 544 grammaticalisation pathways, attested across over 1,000 language varieties. However, the absolute unidirectionality of grammaticalisation seems to be challenged by a more limited but well-documented set of exceptions of the reverse process, **degrammaticalisation** (see, e.g., Joseph & Janda, 1988; Ramat, 1992; Newmeyer, 1998; Norde, 2009; Willis, 2017), which appears to run in the opposite direction (functional items become lexical).

Lightfoot introduces and promptly dismisses the relevance of grammaticalisation to reconstruction, arguing that '[g]rammaticalization, challenging as a PHENOMENON, is not an explanatory force, and so cannot be invoked for the purposes of reconstruction' (2002: 126, small caps original). This argument is part of Lightfoot's broader view that 'there is no theory of change to be had independent of theories of grammar and acquisition' (2002: 127). This is a contentious issue that extends far beyond the scope of reconstruction per se (see, e.g., Kuteva & Heine 2008). Lightfoot (2002) objects to the supposed unidirectionality of grammaticalisation, pointing to the existence of degrammaticalisation as undermining the usefulness of grammaticalisation as a reconstructive tool.

There are two cogent arguments against this point of view. First: whatever one may think of the explanatory power of grammaticalisation or lack thereof, there is no question that movement in the direction of grammaticalisation is overwhelmingly more common than movement in the other direction.[10] Whether or not this trend is itself explanatory or simply observational is beside

[10] Cf. Norde (2009: 53), who writes in the context of a rejection of absolute unidirectionality that 'it is . . . evident that grammaticalization is far more frequent, and far more cross-linguistically regular, than is degrammaticalization'.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

the point. In the same way that competing explanations for **why** /p/ → /f/ is common, while independent points of interest, do not factor into the reconstruction of Grimm's Law per se, an explanatory theory of grammaticalisation is not a requirement for its use in syntactic reconstruction. It is true historically that common sound changes such as lenition were treated as 'natural' by the Neo-Grammarians, and so preferable as reconstructions; for contemporary philologists, however, with access to typological data far beyond that available in the nineteenth century, the notion of 'naturalness' need not be invoked. Instead, this becomes a question of balancing the relative likelihood of different sound changes; here there is a clear analogy with grammaticalisation, regardless of its theoretical status. Second: degrammaticalisation does not pose any greater threat to grammaticalisation as a directional reconstructive tool than fortition does to lenition. In both cases, we have a greater likelihood of change in one direction, not an absolute certainty of directionality. The presence of counterexamples may incrementally shape the probabilities involved, but they do not fundamentally change the way we use these concepts, whether in phonology or syntax.[11]

In sum, the Directionality Problem is no more of a problem for syntax than it is for phonology. Grammaticalisation 'guides syntactic reconstruction through broad-brush rules of thumb, just as [the directionality of sound change] does in phonological reconstruction' (Willis, 2011: 442). In situations where all else is equal, a syntactic change is more likely if it runs in the direction of grammaticalisation, rather than against it. The operation in terms of likelihoods applies in syntax just as it does in phonology.

2.1.4 Chaos and Continuity

The Radical-reanalysis Problem stands apart from the other two problems in that it is not presented specifically as a failure for syntax to meet a criterion for the application of the Comparative Method, but something altogether more troubling: the supposed chaos of syntactic change. Lightfoot (2002: 133) argues that

[11] This point is made by both Willis (2011: 421) and Walkden (2013: 99).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

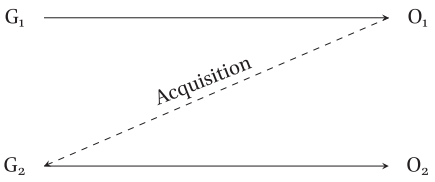


Figure 2.1 Z-model of grammatical change.

> Grammatical change is highly contingent, chaotic in a technical sense. Linguists can offer satisfying explanations of change in some instances, but there is no reason to expect to find a predictive theory of change, offering long-term, linear predictions. And that seems to be what is needed in order to predict backwards, to reconstruct proto-systems beyond the limits indicated here (where one has identity in the daughter systems).

Lightfoot's motivations for this claim must be contextualised within the broader picture of generative approaches to syntactic change, dating back to authors such as Andersen (1973), Langacker (1977), Timberlake (1977) and Lightfoot himself (1979). These authors all centre the language acquisition process as the locus of syntactic change. Under this theory, there are four relevant variables in intergenerational syntactic change: the mental grammar of the parent/care-giver (G_1) and the linguistic output of that grammar (O_1), typically referred to as the **Primary Linguistic Data** (PLD). We then have the mental grammar of the child/acquirer (G_2), and the linguistic output of the acquirer (O_2). During the acquisition process, the acquirer must build G_2 on the basis of the patterns they observe in O_1 (the PLD); they can use G_2 to generate their own output (O_2). Crucially, however, the acquirer does not have direct access to G_1; rather, their connection to G_1 is mediated via the PLD. This can be visualised in the 'Z-model' of grammatical change, presented in Figure 2.1.

This model incorporates the notion that the output O_1 could be generated by either G_1 or G_2, which suggests that the two grammars are very similar – perhaps so similar as to be identical. However, as noted by Willis (2011: 416), '[a] given syntactic pattern may be produced by more than one possible grammar'. In other words, G_1 and G_2 can be distinct and yet produce the same surface strings.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

This introduces the possibility that a change could occur between G_1 and G_2 which is not visible on the surface. This is essentially what we mean by **reanalysis**: a 'change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation' (Langacker, 1977: 58). To take a textbook example from Harris and Campbell (1995: 62),[12] consider the following string:

(2.4) *. . . it is bet for me | to sleen myself, than been defouled thus*
'It is better for me to slay myself than to be violated thus'
(Chauc. FranT. 714–15)

In ME, *for* is strictly a preposition governing *me*, as represented in the following bracketing:

(2.5) [It is better [for me]][to slay myself than to be violated thus]

In such a string, however, *for* can be reanalysed not as a preposition governing *me*, but as a complementiser introducing an infinitival clause *me to slay myself*:

(2.6) [It is better][for me to slay myself than be violated thus]

We know this analysis holds for present-day English because we can generate an alternative string of the form:

(2.7) [For me to slay myself] [would be better than to be violated thus]

We may thus consider the original string to be structurally ambiguous. It could be generated by two distinct grammars: one in which *for* was strictly a preposition (G_1), and one in which it also functions as a complementiser (G_2). G_2, however, is also capable of generating a different version of the string (2.7), which is no longer structurally ambiguous, but would be ungrammatical

[12] This example remains useful for illustrative purposes, though the traditional account of the development of *for . . . to* infinitives in English has been challenged (De Smet, 2009), and the change may not have happened in the way suggested by Harris and Campbell (1995).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

in G_I. This is what we call **actualisation**: the reanalysis that occurs between (2.5) and (2.6), originally 'invisible', is actualised in (2.7).

Syntactic change is therefore modelled in the following way:

1. G_I generates a set of strings in O_I, of which a relevant subset are structurally ambiguous;
2. The acquirer ascribes a different underlying structure to the subset of structurally ambiguous strings in O_I from the one that generated them: G_2 is distinct from G_I (**reanalysis**);
3. On the basis of the reanalysis, G_2 generates structures manifest in O_2 that could not have been generated by G_I (**actualisation**).

Stage 2 is where the chaos is introduced: Lightfoot (2002: 133) suggests that '[i]f those data [i.e. O_I] shift a little, changing the distribution of the cues [to acquire a particular grammar], there may be significant consequences for the abstract system [i.e. G_2]'. And since these 'shifts in data . . . often represent chance, contingent factors', syntactic change itself must be conceived of as driven by chance, or 'chaotic in a technical sense'.

Lightfoot (2002) does not draw a direct comparison here with sound change, but I interpret his argument as being that phonology is not subject to the same intergenerational discontinuity (via the acquisition process) as syntax, and so is not as chaotic. Of course, this is not true in the literal sense: acquirers no more have access to their forebears' abstract phonemic representations or lexicon than they do their syntactic processes (Barðdal & Eythórsson, 2012: 258). But as suggested by Walkden (2013: 101–2), the implicit argument here is that lexical items (and thus phonemic representations) are somehow 'transmitted' in a more straightforward way than abstract grammatical rules, and thus are less likely to be radically different between generations. Therefore, the task of phonological reconstruction is that of undoing gradual, perhaps even predictable sound changes, without the spectre of radical changes between successive generations of speakers to contend with.

It is also possible that, in invoking the **chaos** of syntactic change, Lightfoot is drawing an implicit contrast with the apparent **regularity** of sound change (i.e. the Neo-Grammarian Hypothesis). As discussed in §2.1.1 above, regularity is a necessary

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

assumption for morphophonological reconstruction, since without it we would have no basis for establishing correspondence. The nature of this regularity, however, is not a self-evident matter. Our understanding of sound change, and especially change-in-progress, has developed significantly since the Neo-Grammarians. We know that the 'before-and-after' picture we rely on for comparative reconstruction belies a complex process of linguistic and social diffusion that is not necessarily reflected in the Neo-Grammarian model. If we were to break down the process of sound change into similarly atomistic terms – the result of individual acquirers' reanalysis of previous generations' phonological grammar on the basis of the PLD – the locus for regularity at the level of the speech community would elude us. It is only over the course of time and successive generations that the regularity of sound change emerges in the historical record.[13] If we want to find a syntactic analogy to the Neo-Grammarian Hypothesis, therefore, the answer may not be located strictly within the bounds of the Z-model of language change. Whether such an analogy exists – a comparable notion of regular syntactic change – can only be addressed in theory-specific terms.

Questions of regularity notwithstanding, the primary objection to the Radical-reanalysis Problem is that, while in theory catastrophic changes are possible between successive generations of speakers, in practice abductive change is not as chaotic as Lightfoot (2002) seems to suggest. This point is made by Willis (2011: 409, emphasis mine):

> Reanalyses are not completely unconstrained: a successful reanalysis must have had some basis in the earlier grammar. Some sentences must have manifested acquisitional ambiguity, the possibility of two different structural analyses at the point of transition and **the output of that earlier grammar cannot have been radically different from its immediate successor**.

The scope of possible reanalyses is thus implicitly limited by the nature of both the PLD and the output of the newly acquired

[13] That regularity is 'emergent' rather than a 'top-down' feature of sound change is a common thread in usage-based approaches to language change. See, e.g., Ellis (2008) for arguments to this effect; see Hale (2003) for arguments to the contrary.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

grammar. In other words, radical though any reanalysis may be, the elementary observation that successive generations understand one another means that syntactic change is not unconstrained. Indeed, I would argue once again that the situation is syntax is not all that different from that in phonology. It may be true that syntax requires a further level of abstraction away from the PLD than the acquisition of lexical items; nevertheless, there is space in the acquisition process for sound change to happen. Walkden (2013: 101) notes that lexical items are 'acquired extremely successfully by each generation; it is exactly this that secures the continued intelligibility of a language across generations'. I would extend this argument to syntax too; it would make little sense for this 'continued intelligibility' to be restricted to individual lexemes but not the formation of utterances. Reanalysis does introduce a categorical difference between phonological and syntactic change, and it is something that must be accounted for; however, the fact that the reanalyses between any two grammars must be 'plausible and motivated' (Willis, 2011: 419) maintains a sense of continuity in syntactic change that is comparable to that of sound change.

This objection to the Radical-reanalysis Problem can be incorporated into a broader observation about historical syntax: namely, that syntax is relatively stable over time (Keenan, 2003; Nichols, 2003). This point is perhaps made most explicitly in regard to syntactic reconstruction by Barðdal (2013: 448), who argues that '[i]n fact, the role of stability in syntax is presumably a vastly underestimated factor, which should, in turn, contribute to making syntactic reconstruction easier than phonological and lexical reconstruction'. A similar argument is made in more modest terms by Willis (2011: 443, emphasis mine), who suggests that

> While language change is indeed chaotic in the sense that minor changes in the Primary Linguistic Data may lead children to posit grammars that show radical discontinuities with those of their ancestors, much of the time we are dealing with much smaller discontinuities constrained by the **relative stability of the data**.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Assessing the relative stability of syntax vs. phonology is complex task, and one I do not intend to address here.[14] Nevertheless, despite the theoretical possibility of catastrophic syntactic change arising from radical reanalysis, the chaos appears to be counterbalanced by the stability of certain elements of syntax over time.

The Radical-reanalysis Problem thus introduces a set of requirements for a methodology of syntactic reconstruction that complements those of the Correspondence-set Problem. Having established the point of correspondence, the next step in the Comparative Method is to posit a set of changes that reveals diachronic identity. In the case of syntax, these changes are mediated through the language acquisition process, and more specifically via abductive reanalysis. Where a syntactic change takes place, therefore, it is necessary to establish a 'plausible and motivated' reanalysis that could connect a pattern in the proto-grammar to that attested in the descendant languages. Like the Correspondence-set Problem, and perhaps even more strikingly in this case, the Radical-reanalysis Problem vanishes where no syntactic change has taken place (i.e. there is identity between the descendant languages). Coupled with the recognition that grammatical stability is also a relevant factor, then, we would be justified in characterising historical syntax as a linguistic domain where localised chaos is complemented by general continuity.

2.2 'Converging Lines': Neo-Grammarian Syntax

Calvert Watkins begins his momentous 1963 article on the historical and comparative syntax of the Old Irish verb with a characteristically sharp appraisal of the field in his day:

[14] Some highly speculative evidence that syntax may be more stable than phonology comes from the Parametric Comparison Method (Guardiano & Longobardi, 2005; Longobardi & Guardiano, 2009 etc.; see Guardiano *et al.* (2020) for a recent overview). These authors argue that syntax can diagnose linguistic phylogenies that are 'chronologically deeper' than those established by phonology. This could be interpreted as evidence that syntax is more stable than phonology in some sense, especially in that it is more resistant to the effects of, e.g., language contact. Nevertheless, it does not yield any decisive conclusions on the nature of the difference in pace between syntactic and phonological change, nor the role of the acquisition process in either process.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

> Berthold Delbrück is rightly regarded as the 'Father of comparative Indo-European Syntax'; his posterity is limited indeed. Syntax is notoriously ignored in most studies of comparative and historical linguistics. (Watkins, 1963: 1)

At the time of writing, we are almost exactly as far from the publication of Watkins (1963) as the author was from the publication of the final volume of Delbrück's monumental *Vergleichende Syntax der indogermanischen Sprachen* (Delbrück, 1893–1900). The vast imbalance in the density of syntactic research between these two c. 60-year periods perhaps goes some way to explaining why syntactic reconstruction struggles for the same level of disciplinary security in the context of IE linguistics as phonology and morphology. Delbrück (1893–1900) looms so large that 'his three-volume work on comparative syntax . . . is still frequently described as "unsurpassed"' (Clackson, 2007: 157). Yet, by his own admission, Delbrück was not aiming to reconstruct the syntax of PIE per se, but rather to make 'a presentation, laid out in converging lines, of the oldest stages of the Indo-European languages' (Walkden, 2013: 97). I would suggest that Neo-Grammarian syntactic reconstruction can be characterised as the pursuit of these 'converging lines'.

The reconstruction of syntax through 'converging lines' follows a blurry approximation of the Comparative Method as applied to morphophonology. The basic stages are:

1. Observe a common pattern of word order in an old IE language, e.g. SOV in Vedic Sanskrit;
2. Establish whether it is shared with other old IE languages, e.g. Latin or Ancient Greek;
3. Where there is agreement, there is likely to be inheritance; where there is disagreement, to the extent that anything can be reconstructed, the pattern in the oldest attested language[15] is taken to be the PIE pattern.

Two aspects of PIE syntax with continued relevance were hypothesised very early on by this method: the unmarkedness of SOV word order (Delbrück, 1893–1900) and the presence of

[15] This is typically Vedic Sanskrit for the Neo-Grammarians, prior to the decipherment of Hittite in the early twentieth century.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

second-position clitics (Wackernagel, 1892). The latter is something I treat in detail in Chapter 5. The former has become a recurrent theme in reconstructive syntax, showing up repeatedly in almost every theoretical framework, as we shall see in §2.3–5 below. These aspects of reconstructive syntax are driven by – and dependent upon – structural similarity or identity in the descendant languages. This is demonstrated most meticulously by Wackernagel (1892), who systematically surveys the evidence available to him from Greek, Indo-Iranian, Latin and Germanic, arguing in each case that the languages exhibit clitics that appear in 'second position'. The same is also true for SOV; although Delbrück himself appears to take the Vedic evidence as sufficient for inheritance, subsequent research has established a basis for some form of verb-finality in nearly all branches of IE (Hock, 2015). Syntactic correspondence, then, is established on the basis of structural similarity or identity, which Walkden (2013: 98) describes as 'a crucial departure from the phonological comparative method, in which systematic correspondences, not structural similarity, are diagnostic for cognacy'.

Armed with very little in the way of syntactic theory,[16] the Neo-Grammarians' observations on syntax were limited to surface-level patterns such as those described above. Although Delbrück himself expresses certain ideas about syntactic derivation that are strikingly modern,[17] these do not coalesce into an independent theoretical framework as such. Indeed, the relative dearth of comparative syntax bemoaned by Watkins (1963) and the relative abundance since then correlates straightforwardly with the explosion of syntactic theory in the latter half of the twentieth century. Since these developments were set in motion, certain aspects of PIE syntax have continued to be investigated along the 'converging lines' approach. Watkins was an early advocate for marshalling contemporary syntactic theory for comparative reconstruction, suggesting that '[i]n the field of syntax on the descriptive

[16] Cf. Krisch (2017: 111), '[t]he syntactic framework of Delbrück and other eminent researchers like Jacob Wackernagel . . . was based on traditional Latin grammar and philological interpretation'.

[17] Perhaps most notably, that he appears to admit syntactic movement into his analysis of second position clitics (Delbrück, 1878).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

level we have now the extraordinarily powerful tool of transformational analysis, or generative grammar . . . There is nothing theoretical to stand in the way of an application of generative grammar to historical syntax' (1963: 3). Watkins (1976: 314–15) actually takes up the question of relative clause structure, citing examples from Hittite, Vedic and Ancient Greek, suggesting that '[t]he syntactic agreements are so striking and so precise, that we have little choice but to assume the way you said that sort of thing in Indo-European could not have been very different'. Despite his optimism for the potential of theoretically informed approaches to comparative syntax, however, Watkins does not pursue them in detail; this is left to subsequent authors.

In the decades that follow, a substantial body of research is dedicated to analysing the syntax of ancient IE languages within a more contemporary syntactic framework by authors such as Hale (1987, 1989, 1990, 1996), Hock (1989, 1993, 1997), Garrett (1994, 1992, 1996) and Kiparsky (1995) *inter alios*. Typically, these authors do not undertake syntactic reconstruction as such, but focus on refining synchronic models to account for the syntax of ancient IE languages. Where PIE is invoked, it is implicitly taken to incorporate the patterns observed in the most archaic IE languages, which are usually Vedic, Ancient Greek and Hittite.[18] Methodologically, then, we see here a continuation of reconstruction by 'converging lines', theoretically significantly more advanced than the approach of Wackernagel (1892) or Delbrück (1893–1900), but methodologically comparable.

Indeed, comparative syntax by 'converging lines' continues to occupy comparative philologists to this day. The incorporation of syntax into updated handbooks of IE linguistics has seen the recent publication of two major overviews of PIE syntax: Krisch (2017) and Keydana (2018). Between them these authors cover topics including verb position, discourse fronting, clisis, absolute constructions, case function, binding theory, subordinate clauses and more. Their chapters provide a valuable synthesis of the research in these areas, and point towards some concrete reconstructions.

[18] See, e.g., Kiparsky (1995: 153), who suggests that basic phrase structure is 'established for Indo-European on the basis of Vedic Sanskrit, Hittite and Greek evidence'.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Once again, the reconstructions are carried out by suggesting the proto-language instantiated those constructions found in (one or more of) the oldest IE languages. Invoking Delbrück (1893–1900), Krisch (2017: 111) states it in quite explicit terms: '[Delbrück] states that if constructions and meanings coincide in the Ancient Indo-European Languages, this could mean that the same was true also for PIE . . . This statement still makes sense today.' We see this attitude in arguments such as the following: 'one may hypothesize that Greek and Vedic, **and presumably also IE**, had both possible verb orders, verb-initial and verb-final' (Krisch, 2017: 132, emphasis mine) and '[i]t, seems reasonable to conclude that in the early IE languages – **and probably PIE, too** – local binding was not a grammatical constraint' (Keydana, 2018: 2212, emphasis mine). These arguments are made along the same lines as Watkins (1976), and his suggestion that PIE syntax 'could not have been very different' to Hittite, Ancient Greek or Vedic. The theoretical advancements of the last sixty years have thus facilitated the development of comparative syntax without necessarily challenging the Neo-Grammarian model of reconstruction by 'converging lines'.

Yet the primary difficulty faced by reconstruction of the Neo-Grammarian ilk, no matter how much its comparative scope is increased by contemporary syntactic descriptions, is that it relies on identity in the descendant languages; in doing so, it does not address the challenges introduced in §2.1 above. Where identity does not exist, we are back to flipping coins or despairing, as Jeffers (1976) would have it. Another option, perhaps the least appealing (though not unattested), is simply to ignore the data that doesn't fit, reducing our correspondence set to only those languages that do exhibit identity for a particular construction. In extreme cases, this practice can yield a correspondence set of one, leading us to treat (typically) either Hittite or Vedic as if it were 'uncut' PIE. It is worth noting here that the search for identity itself is not the problem; if syntax is relatively stable, identity will inevitably manifest itself. Often, however, the 'striking similarities' (*sc.* identity) between constructions in related languages that guide Neo-Grammarian reconstruction give the lie to meaningful

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

variation, as is the case with, for instance, Wackernagel's law. Reconstruction in these cases should allow us to make informed hypotheses about which aspect(s) of which language(s) are more likely to be inherited, and which are innovative. The methodology does not facilitate this.

More generally, Neo-Grammarian syntactic reconstruction, in stark contrast to morphophonological reconstruction, scarcely incorporates a theory of language change at all. Thus questions concerning directionality and reanalysis simply do not arise. This being the case, for areas of the grammar where even the oldest IE languages exhibit divergent patterns, reconstruction via 'converging lines' is not a suitable methodology.

2.3 Typology

In contrast to the longevity and productivity of the Neo-Grammarian approach to syntactic comparison, typological reconstructions of PIE syntax were extremely short-lived, advanced primarily by just three authors within a few years of each other: Lehmann (1974), Friedrich (1975) and Miller (1975). Typological syntactic reconstruction was lambasted at the time, particularly by Watkins, who referred to its methods as 'crude' and 'Cyclopean' (1976: 306), and it was not seriously pursued again. Yet, in the years since, many scholars have exhumed typological reconstruction, if only to rebury it under fresh layers of censure.[19] For Indo-Europeanists, at least, the motivation for continuing to refer to these authors (and to criticise them) likely lies in the ambition and breadth of their publications, two of which are monographs sharing the enticing title *Proto-Indo-European Syntax* (Lehmann, 1974 and Friedrich, 1975). For the purposes of this study, it is worth mentioning Lehmann (1974) in particular because of his opinions on relative clause structure; I address them here for completeness' sake, though they have no serious bearing on subsequent analysis. I also take the opportunity to mention some more contemporary

[19] A probably non-exhaustive list of authors who have criticised typological reconstruction includes: Jeffers (1976), Watkins (1976), Lightfoot (1979, 2002), Winter (1984), Hale (1987), Harris and Campbell (1995), Clackson (2007), Willis (2011), Barðdal and Eythórsson (2012), Walkden (2013), Keydana (2018) and Gildea *et al.* (2020).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Table 2.3 *Word order correlations, adapted from Greenberg (1963: 77)*

	VSO	SVO	SOV
N-P + A-N	0	1	6
N-P + N-A	0	2	5
P-N + A-N	0	4	0
P-N + N-A	6	6	0

developments in syntactic typology, and evaluate the role they should play in reconstruction.

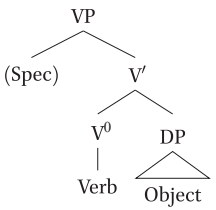
Typological reconstruction is an attractively simple procedure. It builds on Neo-Grammarian identity-driven comparison, incorporating the supposed predictive power of Greenbergian universals. Greenberg (1963) surveys the 'dominant' word order patterns in thirty languages, which he divides into three basic types: VSO, SVO and SOV. He maps these features against two other syntactic features: whether the language has prepositions (P-N) or postpositions (N-P); and whether adjectives precede nouns (A-N) or follow them (N-A). The results are presented in Table 2.3.

On the basis of the evidence, Greenberg (1963) posits a set of implicational universals concerning word-order combinations, such as the following:

> *Universal 4.* With overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional. (Greenberg, 1963: 79)

The correlations observed by Greenberg were subsequently treated under the general set of considerations surrounding **Head Directionality**.[20] In head-initial phrases, the head precedes its complement. Thus, a head-initial VP has the following structure, yielding VO word order:

(2.8)

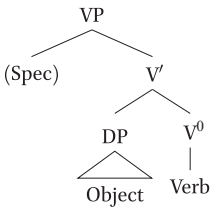


[20] See, e.g., Hoeksema (1992) and Dryer (1992).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

In a head-final VP, the verb follows its complement, yielding OV word order:

(2.9)



The same principle can be extended to all syntactic domains. Head-initial PPs yield prepositions, while head-final PPs yield postpositions, and so on and so forth, all the way up to the CP, where head-initial > clause-initial complementisers, and head-final > clause-final complementisers. Languages that are consistently head-final or -initial are referred to as **harmonic**, while those that exhibit mixed properties are **disharmonic**. Greenberg's universals, then, point in the direction of syntactic harmony: *Universal 4*, quoted above, is an observation that languages with head-final VPs tend to have head-final PPs with 'overwhelming' frequency.

Returning to typological reconstruction, the idea is quite straightforward: once a certain basic pattern can be established (e.g. OV vs. VO), we can use typological generalisations about head-directionality to reconstruct other patterns by implication. Thus Lehmann (1974: 31–2), reverse-engineering Greenberg's *Universal 4*, is able to make claims such as '[t]he evidence in Vedic for postpositions accordingly supports strongly the conclusion that the word order of PIE was SOV' (Lehmann, 1974: 31–2). Unfortunately, arguments along these lines are unconvincing for several reasons. In this particular case we start with an empirical failure: *pace* Delbrück (1893–1900), Vedic does not have a category of postpositions (or prepositions) in the strict sense, but rather a quasi-adverbial category of local particles.[21] There is also a hint of the Vedic-as-PIE trope in Lehmann's wording here, though in subsequent pages further evidence is drawn from Hittite, Latin and Ancient Greek; unsurprisingly, the evidence from these languages seems to agree with Vedic (we have identity). Thus, the

[21] See, *inter alia*, Hettrich *et al.* (2010), Lowe (2014: 26–31) and Reinöhl (2016: 65–84).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

central tenets of the Neo-Grammarian approach are maintained. It is the next stage, however, that constitutes the lethal misstep for the typological method: the assumption that PIE had strictly harmonic word order. Even if it were the case that Vedic had postpositions, the claim that this should imply basic SOV word order is motivated solely by typological considerations, rather than directed empirical enquiry.

The primary challenge to this assumption is that languages are routinely disharmonic; indeed, as noted by Biberauer and Sheehan (2013: 14), 'very many and possibly even the majority of languages fail to be fully harmonic in the sense that all head–complement pairs pattern alike'. Thus, even if we were able to secure with certainty the relative order of O and V in PIE, we would have no real justification for using this as an unequivocal predictive measure for the rest of the language's syntax. Even Friedrich, who accepts the validity of typological reconstruction on the whole, expresses some concern on this point (1975: 2):[22]

> There has been a tendency . . . to assume a simple, unidirectional causation between one variable – that of the order of verb and object – and all others. But this attribution of undue teleonomic power tends to reduce everything to one *Grundfrage*: VO or OV?

Methodological concerns notwithstanding, many of Lehmann's (1974) conclusions – including that PIE was basically SOV and had postpositions – are in agreement with Delbrück (1893–1900); indeed, as noted by Watkins (1976: 308), where Delbrück's hypotheses align with the typological predictions of Lehmann (1974), the latter presents the former as self-evidently correct. It is only where Delbrück's conclusions diverge from the strict SOV type that Lehmann (1974) takes a critical approach. One such domain is the formation of relative clauses. I present the comparative evidence in subsequent chapters; for now it is sufficient to note that every ancient IE language exhibits a relative clause introduced by a relative pronoun. Debates proliferate as to which of

[22] It is worth noting, if only as a matter of intrigue, that Friedrich's (1975) reconstruction of PIE syntax is significantly different from Lehmann's (1974), since he assumes PIE was a harmonic **SVO** language. Different again is Miller (1975), who prefers **VSO** as the original profile.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

two reconstructable forms (**yó-* or **k^wó-*) is the original relative marker, but the existence of such a marker is a treasured point of identity between the descendant languages; the reconstruction of such a marker, whether of the form **yó-* or **k^wó-*, or both, is taken as given. Lehmann (1974: 66), however, objects, since '[i]n a consistent OV language relative clauses are preposed, often, as in contemporary Japanese, without a marker'. The typological tail is wagging the dog: instead of taking the ubiquity of relative markers as cogent evidence that PIE was not a 'consistent OV language', we assume first that it was, and subsequently disregard the comparative evidence that suggests otherwise. As Jeffers (1976: 7) objects, '[t]he contrary should, of course, be the case'. Accordingly, I will not consider the possibility of a markerless relative clause in PIE in the remainder of this book.

Despite its many and varied failings, the typological method introduced the possibility of reconstructing syntactic change between a proto-language and its descendants in a way that had not been addressed by the Neo-Grammarian approach. Lehmann (1974) had a clear, if misguided, notion of directionality between the syntax of PIE and that of the descendant languages. The (over)power of this approach is what allowed the typologists to form such a broad picture of PIE syntax: they could take points of similarity identified by Delbrück (1893–1900) and extrapolate an entire grammar out of them. Unfortunately, this extrapolation was largely unjustified, both in its core assumption that PIE must have had harmonic word order, and in its execution, often flying in the face of comparative evidence. Typology as some form of reconstructive tool, however, is not entirely without support. For instance, working from principles in morphophonological reconstruction put forward by Lass (1997: 228–32), Walkden (2014: 61) incorporates 'system naturalness' into his guidelines for reconstruction. While he does not suggest that typological generalisations should inform our conclusions directly, he argues that we should not reconstruct grammatical systems that flout established typological universals and are hence considered to be 'impossible'. He further asserts that typology 'does not replace traditional reconstructive techniques; rather, it is a heuristic to be used alongside

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

them, and with care' (Walkden, 2014: 61). This seems like a reasonable compromise, and purposefully analogous to the use of typology in phonological reconstruction.[23]

So, the typological approach of the 1970s has indeed been 'debunked by the scholarly community' (Gildea *et al.*, 2020: 11), and comprehensively so. And perhaps, as Willis argues, its legacy 'has tarred all research in syntactic reconstruction with the same brush' (2011: 409). After more than half a century of stagnation, however, these studies kick-started a 'veritable renaissance of the study of Indo-European syntax' (Watkins, 1976: 305), setting the scene for the application of contemporary linguistic theory to the task of syntactic reconstruction.

2.4 Patterns

Focusing on Kartvelian languages, Harris (1985) develops a methodology of **pattern-based** reconstruction, expanded upon in Harris and Campbell (1995, 2002) and Harris (2008). In response to the Correspon-dence-set problem as advanced by Jeffers (1976), Watkins (1976), Lightfoot (1979) and Winter (1984), Harris and Campbell (1995: 347, emphasis original) concede that 'individual *sentences* cannot be tracked over time or reconstructed in the sense that words can', but hold that the *patterns* underlying those sentences can. The term 'pattern' is understood in the general sense of Jackendoff (1994: 12–14). Harris (2008: 86) stresses that the term is used 'flexibly' but according to the following definition:

> A pattern in the sense intended here is a repeated form that is paired with a consistent function or distribution.

Harris and Campbell (1995) pursue the argument that, by invoking patterns as an abstract form of syntactic correspondence, syntax maintains a distinction between 'type' and 'token' analogous to that found in phonology; the pattern is the 'type' (analogous to the phoneme), while the sentence is the 'token' (analogous to the lexical item). The authors concede that 'syntactic "tokens" are not memorized in the context of words, as phonological "tokens" are',

[23] On which see, e.g., Kümmel (2012).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Table 2.4 *Correspondences of general case-marking in Lezgian languages (Harris, 2008: 79)*

	Subject of Transitive	Subject of Intransitive	Direct Object	Indirect Object
Lezgi	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Tabasaran	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Aghul	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Tsakhur	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Rutul	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Budukh	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Kryts	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Khinalug	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Archi	ERG	ABSOLUTIVE	ABSOLUTIVE	DAT
Udi	ERG	ABSOLUTIVE	ABSOLUTIVE/DAT	DAT

but hold that 'they are often embedded in the context of a strictly limited syntactic pattern, which is the "type"' (1995: 347).

To take a working example: several pattern-based reconstructions concern case-marking in Caucasian languages. Following Harris' (2008) definition of a 'pattern', we can say that the 'repeated form' in question is the relevant morphological case, and the 'consistent function' is the situation in which that case is used. Harris (2008: 79) compares these patterns across the Lezgian languages, formulating the correspondence set reproduced in Table 2.4.

In the type/token model put forward by Harris and Campbell (1995), the 'type' is the relevant case-pattern in any given language (equivalent to a row in Table 2.4), while the 'token' would be a sentence in which that pattern is evidenced. According to Harris (2008: 87), this would include 'almost every sentence'. Note, however, that 'tokens' (i.e. sentences) are expressly **not** treated as cognate, and so are not the basis for the formation of this correspondence

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

set; rather, it is the pattern underlying these sentences that presents the point of correspondence.[24]

A central concern then becomes establishing whether a given pattern, as evidenced in one language, is cognate with a comparable pattern in another. In phonological reconstruction, the secured cognacy of lexical items (tokens) confirms the cognacy of the relevant phonemes (types) within those lexical items, as formulated in the Double Cognacy Condition. Harris and Campbell (1995: 349) raise this issue, and offer a number of 'safeguards' as a solution, primarily focused on securing (morphophonological) cognacy between the relevant verbs in sentences exhibiting a corresponding pattern;[25] Harris later argues, however, that for general patterns such as those presented in Table 2.4, 'there is no need for the verbs, the subjects, or the objects to be cognate, precisely because the relevant subpattern is used with *all* relevant verbs, subjects, and objects' (2008: 106, emphasis original). Harris (2008) contrasts this with specialised case patterns, which are restricted to certain verbs. In these instances, she argues, 'the specific verb is part of the pattern and therefore must be cognate across the patterns compared' (2008: 88).

As noted by Walkden, the problem with this approach is that it 'provide[s] no basis for concluding that any two patterns are *not* cognate' (2013: 106, emphasis original). He takes the example of the following two sentences from German and English respectively:

(2.10) *Er ist gekommen*
He is come
'He came'

(2.11) *He came*.

These sentences in two closely related languages could, in theory, be the basis of a correspondence set: while formally divergent, they are functionally equivalent, and even contain verbs that are

[24] Rather confusingly, however, Harris and Campbell (1995) do use the term 'cognate sentence' to refer to sentences that instantiate cognate patterns; this elicits criticism from Lightfoot (2002: 123).

[25] These are criticised in detail by Lightfoot (2002: 123) and Walkden (2013: 105–6); I do not reproduce their arguments here.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

lexical cognates. As it happens, we know from independent evidence that the German and English patterns in (2.10) and (2.11) are not syntactically cognate, but descended from two different patterns: the perfect tense and the preterite tense, respectively. Without independent evidence, however, we could not exclude the possibility that there was a singular origin to this pattern, and that one language or the other had innovated away from it.

The lack of a consistent way of excluding cognacy brings pattern-based reconstruction back to the original criticism of Neo-Grammarian reconstruction: its over-reliance on identity. The case patterns of Lezgian are an apt example of this. Taking the correspondence set in Table 2.4, all that remains for Harris (2008: 80) to do is exclude Udi's use of the dative for 'definite' direct objects as an innovation; she is thus able to reconstruct the following pattern for the proto-language:

(2.12)
a. ergative case for subject of transitive verbs;
b. absolutive case for subjects of intransitive verbs and direct objects of transitive verbs;
c. dative for indirect objects.

This pattern is exhibited regularly in nine out of the ten languages surveyed, and indeed in Udi itself, albeit with a more restricted distribution. The cognacy of the case pattern seems very likely indeed, and the origins of Udi construction with dative alignment for direct objects is well understood (Harris, 2008: 80). Once it is accounted for, correspondence is reduced to identity, 'where the skeptics of the 1970s said that reconstruction was possible' (Lightfoot, 2002: 125). There is a slight mismatch, however, between the criticisms of Watkins (1976) and Jeffers (1976), focused as they are on PIE, and pattern-based reconstruction, which was never supposed to be applied to PIE. This is addressed by Harris (2008: 89–91), who suggests that the relative separation of the oldest IE languages is so great that establishing syntactic correspondence sets is far more challenging. She argues that the issue is exacerbated by the focus on word order in particular, which perhaps exhibits too much flexibility in ancient IE languages for correspondence to be established. If we accept that pattern-based reconstruction relies on a high degree of identity between

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Table 2.5 *The syntax–lexicon continuum (Croft & Cruse, 2004: 255)*

Construction type	Traditional name	Examples
Complex and (mostly) schematic	**syntax**	[SUBJECT *be*-TENSE V-*en by* OBLIQUE]
Complex, substantive verb	**subcategorisation frame**	[SUBJECT *consume* OBJECT]
Complex and (mostly) substantive	**idiom**	[*kick*-TENSE *the bucket*]
Complex but bound	**morphology**	[NOUN-s], [VERB-TENSE]
Atomic and schematic	**syntactic category**	[DEM], [ADJ]
Atomic and substantive	**word/lexicon**	[*this*], [*green*]

descendant languages, both these problems fall together into one: there is not enough identity between the oldest IE languages for pattern-based reconstruction to work. It is perhaps for this reason that, theoretical criticisms aside, pattern-based reconstruction has never been pursued in detail for PIE.

2.5 Construction Grammar

A potentially fruitful avenue in expanding the reconstructive power of the pattern-based approach lies in refining the notion of a 'pattern', so that points of correspondence can be identified across a broader set of languages. Such refinement is offered in the program of syntactic reconstruction based on **Construction Grammar** (CxG). In this theoretical framework, the grammar consists of a set of form–meaning correspondences referred to as **constructions**; these constructions vary in complexity, from the most 'atomic' constructions (i.e. lexical items) to the most 'complex' (i.e. simple sentences). These are codified in Table 2.5, as cited in Barðdal (2013: 450).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Working within this framework, Barðdal (2013: 449) interprets the term 'pattern' as used by Harris and Campbell (1995) as 'an abstract form–meaning pairing of its own . . . exactly like a lexical item is a form–meaning pairing of its own, only it is more complex and perhaps only partially lexically filled'. As suggested by the cline presented in Table 2.5 and Barðal's comparison to lexical items, under this interpretation of CxG there is no strict distinction between syntax, morphology and lexis: all three exhibit their own forms of construction based on form–meaning pairs. Thus, according to Gildea *et al.* (2020: 14), [c]onstructions . . . range from being concrete lexically filled units, like words, to being partly lexically filled set phrases and idioms, to being almost or entirely schematic'. The theoretical unification of lexis and syntax lends itself to comparative reconstruction; rather than a distinction being drawn between reconstructing 'words' and reconstructing 'patterns', everything is reduced to the reconstruction of 'constructions', understood as form–meaning correspondences.

The use of CxG in syntactic reconstruction was first developed by Gildea (1992, 1998, 2000, 2008), who focuses on Cariban languages. Its application to IE languages is more recent, led by authors such as Barðdal and Eythórsson (2009, 2012), Barðdal (2013), Barðdal and Smitherman (2013) and Barðdal *et al.* (2013). While many of these reconstructions pertain to Proto-Germanic (e.g. Barðdal & Smitherman, 2013; Vázquez-González & Barðdal, 2019), Barðdal *et al.* (2013) use CxG to reconstruct the *woe*-construction for PIE. Their method is summarised as follows. The authors start with a lexical item, **wai* ('woe'), which is reconstructed on the basis of comparative evidence in five sub-branches of IE (Indo-Iranian, Italic, Baltic, Slavic and Germanic). They isolate three constructions involving descendants of **wai* found across these branches:

1. Bare Exclamative: *woe*! (found in all five branches);
2. Predicative: *woe* is to X (found in four branches; not attested in Slavic);
3. Dative Exclamative: *woe* to X! (found in all five branches).

On the basis of the comparative evidence, they reconstruct several constructions for PIE. The first is the bare exclamative: this

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Table 2.6 *Correspondence set for the* DAT-is-woe *predicative construction (Barðdal* et al.*, 2013: 362)*

	Option 1	Option 2	Option 3
Old Germanic		DAT-*is*-*woe*	
Latin	ACC-*is*-*woe*	DAT-*is*-*woe*	
Baltic		DAT-*is*-*woe*	GEN-*is*-*woe*
Avestan		DAT-*is*-*woe*	

construction (being essentially a one-word interjection) is attested with identity in the branches surveyed. They then turn to the predicative construction, which exhibits two points of variation. The first is the morphological case of the maleficiary (i.e. experiencer); while all four branches that exhibit this construction show use of the dative, there are some variants including the genitive in Lithuanian and the accusative in Latin.

The authors exclude the genitive and accusative variants as branch-specific innovations, leading to the reconstruction of the dative as the original case in this construction. The second point of variation is the order of the maleficiary and *woe* (i.e. *woe*-is-DAT vs. DAT-is-*woe*). Drawing on interpretive evidence, they account for the alternation as follows: the order DAT-is-*woe* is an instance of 'neutral' SV order, where the maleficiary is treated as a dative subject of the predicative construction. The order *woe*-is-DAT occurs where *woe* – analysed as an adverb – is fronted owing to its being focalised. Each of these rules – that subjects precede verbs and that focalised elements are fronted – are captured in their own constructions, which interact with the predicative *woe* construction. Finally, the authors turn to the dative exclamative, which like the bare exclamative shows identical constructions across five branches (fixed *woe*-DAT word order,[26] no case variation). The authors make a convincing case that this construction is lexicalised from the focalised variant of the predicative construction, with omission of the copula.

CxG thus shares the spirit of pattern-based reconstruction, with some important theoretical refinements. Perhaps most salient is the

[26] The authors note three exceptions from Latin limited to a single poem by Ovid (Barðdal *et al.*, 2013: 343).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

explicit unification of syntax with the lexicon in the **constructicon**. In reconstructing lexical items, such as PIE **wai*, traditional morphophonological reconstruction can itself be considered a form of Constructionist reconstruction: the only restriction is that it focuses on 'atomic and substantive' constructions (i.e. lexical items). To reconstruct syntax, then, the task is to extend the locus of investigation to include more 'complex and schematic' constructions, such as those reconstructed for **wai* in Barðdal *et al.* (2013). The notion that we can reconstruct syntax through the reconstruction of lexical items is one that CxG shares with Minimalism (discussed below); I will call these **lexically driven** syntactic reconstruction.[27] The reconstruction of **wai* in Barðdal *et al.* (2013) presents an archetype of lexically driven reconstruction. We take a lexical item whose cognacy across the IE languages is secured by morphophonological reconstruction; we study the syntactic behaviour of this item in the descendant languages and the constructions it is associated with; the likely cognacy of these constructions is reinforced by the secured cognacy at the morphophonological level; we make hypotheses about the ancestral construction in the proto-language.

Lexically driven reconstruction goes some way to addressing the Correspondence-set Problem. We still cannot escape the failure of syntax to meet the Double Cognacy Condition, since we cannot rely on the existence of cognate sentences (the 'higher level'/concrete point of correspondence). However, by reducing the point of syntactic variation to the lexicon (or constructicon), we invoke the lexical item as a point of 'lower level'/abstract correspondence. This argument is made by Walkden (2013: 109), who writes:

> The isomorphism between phonological and syntactic reconstruction is thus almost complete: whereas in phonology we might reconstruct the lower level unit, sounds, through their context of appearance in lexical items attested in the daughter languages, in syntax we might reconstruct the lower level unit, lexical items, through their context of appearance in sentences attested in the daughter languages.

[27] This term is broadly equivalent to 'item-based' reconstruction as used by Walkden (2013).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Walkden (2013) makes this argument while advocating for Minimalist reconstruction, which I return to below; however, he takes the encouragingly ecumenical step of suggesting that 'the logic of the [lexically driven] approach is valid not only for Minimalist theories of syntax but in any approach that assumes such an 'item-based' view of syntactic variation. Construction Grammar . . . is one such approach' (2013: 109).

Despite this optimism, CxG is still open to the criticism that, like other reconstructive methods discussed so far, it relies quite heavily on identity in the descendant languages. Once again, **wai* is a case in point: the descendant languages are almost entirely concordant in their *woe*-based constructions, and points of deviation are straightforward to isolate. This criticism is made by Clackson (2017: 196), who suggests that 'it is not yet clear how the [CxG] model deals with cases where there is variation among the daughters'. While some presentations of CxG reconstruction do address the issue of syntactic change at a theoretical level (see especially Gildea *et al.*, 2020: 23–31), it is true that the starting point of correspondence is structural similarity and/or identity. However, by breaking down the unit of syntactic variation into lexical items and their associated argument-structure frames, the possible loci for similarity and/or identity to be found are increased substantially in number. For instance, in a Neo-Grammarian or pattern-based approach one might attempt to surmise a generalised correspondence in case use across the descendant languages, and struggle to establish a meaningful correspondence set; under the CxG approach, by working outwards from a comparison of lexically specific argument-structure frames, the case system of the proto-language can be reconstructed incrementally, accentuating points of grammatical stability across the descendent languages that may otherwise be neglected. In this context, then, Barðdal is right to claim that 'reconstruction on the basis of identity is therefore of value if it is proposed against a null hypothesis assuming that the relevant structures have changed' (2014: 352).

I share Walkden's concern that '[i]t is not clear, however, that the approach would be as easy to generalize to . . . more complex and schematic constructions' such as, for instance, relative clauses. A lexically driven approach is certainly warranted, which I will argue

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

should centre around the relative pronoun (**yó-*/**k^{w}ó-*). There is, moreover, a significant degree of identity across the daughter languages when it comes to relativisation. This was evident to the Neo-Grammarians, so that Brugmann (1904) and Delbrück (1893–1900) were able to be confident in their reconstructions of relative clauses in PIE. It is possible that these points of similarity could be formalised in CxG in such a way that novel correspondence sets could be formed, highlighting the remarkable stability of relativisation strategies in IE. However, from the earliest discussions of relative clauses in IE, the points of interest have been precisely where the descendant languages differ: in the forms of the pronoun; the positions of the relative clause and the main clause; the position of the relative pronoun; the case of the relative pronoun and the head noun; the semantic aspects of relativisation; and so on and so forth. To resolve these issues we must rely not only on a theory of syntactic change – which can be combined with a CxG approach – but on a formalism that facilitates syntactic comparison precisely where such variation across the descendant languages exists. It is possible that a CxG approach to relativisation, focusing on more 'atomic' points of agreement across the descendant languages, reducing the scope of the differences to something treatable, could shed light on the matter. However, treated as a schematic whole, I would argue that the relative clauses of PIE currently lie beyond the reconstructive capacity of CxG.

2.6 Minimalism

I turn now to Minimalist reconstruction, the approach which I adopt in this book. The methodology of Minimalist reconstruction emerges from the broader picture of Chomskyan syntactic theory, and, unlike the reconstructive methodologies discussed so far, it is anchored by the presupposition of Universal Grammar (see §1.3). As stated in the Introduction, arguments about the validity of such a hypothesis are beyond the scope of the current work; however, in subsequent pages I will advance the benefits of universalism as they pertain to syntactic reconstruction.

Minimalist reconstruction has developed in tandem with synchronic generativist theories, particularly concerning the notion

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

of the **parameter**. The genesis of parametric comparison lies in the predecessor to the Minimalist Program, Government and Binding theory, and the syntactic theory commonly referred to as **Principles and Parameters** (P&P) (Chomsky, 1981). The central hypothesis of P&P is that the grammatical structures of a language are the outcome of the interaction between a finite set of universal principles that hold in all languages, and a finite set of binary parameters whose values vary cross-linguistically. An example of a principle might be 'all languages have verbs', while a parameter might be, e.g., OV vs. VO. Under this theory, the grammar of a given language is reduced to the theoretically finite list of parameter values. Crucially, while the specified values of parameters may vary cross-linguistically, the set of parameters is universal; for a given parameter, *p*, every natural language has a value that is either 0 or 1.[28]

Roberts (1998, 2007, 2021a) presents parameters as a solution to the Correspondence-set Problem in syntactic reconstruction. Although Roberts does not couch his theory in such terms, parameters in different languages can be treated as cognate in the strictest sense. Not only are they inherited and so represent a point of cross-linguistic diachronic identity, this inheritance is literally genetic, insofar as the set of parameters forms part of the language faculty shared by all humans. Pursuing this line of argument: if a given parameter, *p*, in language X is cognate to parameter *p* in language Y, the value of these parameters can be compared in an analogous fashion to the comparison of phonemes that occur within cognate lexical items. On the basis of this comparison, we may determine the original value of the same parameter, *p*, in the proto-language. To illustrate the applicability of this approach, Roberts (2007) takes the toy example of OV vs. VO as the surface manifestation of the parameter *p* in ancient IE languages. He sets up a parametric correspondence set that includes Latin (OV, p=0), Gothic (OV, p=0), Sanskrit (OV, p=0) and Old Irish (VO, p=1). With this correspondence set established, Roberts suggests we can use precisely the

[28] This idea is challenged by the Emergentist theory of parameters (see, e.g., Roberts, 2019: 75–6), under which some parameters may not be assigned a value at all in a given language.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

same tools as morphophonological reconstruction to reconstruct the value of the parameter *p* in the proto-language, arguing (2007: 364) that

> Majority rule clearly favours *p*=0 (the OV setting) here. So do several other considerations: (i) Latin, Gothic, and Sanskrit are all older than Old Irish; (ii) Archaic Old Irish shows some evidence of OV orders . . . (iii) OV > VO seems to be a more natural change than VO > OV. On the basis of the criteria normally used in comparative reconstruction, then, we would come to the conclusion that *p*=0 was the Indo-European value of this parameter.

The parametric approach to reconstruction has drawn some robust criticism, particularly from Lightfoot (2002) and Newmeyer (2005). The difficulty is that in relying on a finite, universal set of parameters, the **linguistic** notion of genetic relatedness somewhat falls apart. There is nothing in principle that stops us extending a parametric correspondence set to include non-IE languages; if cognacy can be reduced to a universal aspect of human genetics, we lose the unique **linguistic** measure of cognacy unearthed by morphophonological comparison. To paraphrase a hackneyed adage: when everything is cognate, nothing is. Thus Newmeyer (2005: 102) concludes that '[n]othing [akin to lexical cognacy] can be concluded from the fact that two languages, related or not, share the same value for, say, the Ergativity Parameter'.[29] Both Newmeyer (2005) and Lightfoot (2002) extend their criticism to include the fact that parametric reconstruction necessarily relies on a well-articulated theory of directionality. Lightfoot argues that a correspondence set consisting in parameter values 'doesn't help with reconstruction unless one also has a theory which predicts the direction of change, that a positive setting may change diachronically to the negative setting and not vice versa, for example' (2002: 127–8). While I have argued that grammaticalisation theory may provide some aspects of the directionality desirable for syntactic reconstruction (§2.1), it cannot be informative in every instance

[29] While Newmeyer may be right in isolating a single parameter as non-diagnostic for relatedness, subsequent research in parametric comparison has shown that when more parameters are taken into account, syntax can be an indicator of linguistic relatedness (Guardiano *et al.*, 2020).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

of parametric change, since not all change is grammaticalisation. Nevertheless, as with Constructionist approaches, directionality need not be invoked when there is a significant degree of identity between the descendant languages. In this way, as suggested by Roberts (1998: 369), parametric comparison allows us to capture diachronic continuation or stability between a proto-language and its descendants.[30]

Lightfoot's (2002) criticism of parameters as a point of correspondence has been somewhat alleviated by the radical shifts in the theoretical landscape of parametric theory that have happened since, particularly concerning the size and locus of the parameters. In the early stages of P&P, parameters were generally thought to be large in scale (so-called 'macro-parameters'), taking scope over the whole language (e.g. VO/OV), and forming a distinct component of the grammar. Reasonably early on, however, some authors proposed that parameters should not be thought of as constituting an independent part of the grammar, but should instead be associated with lexical items, in the form of syntactic features. This was first suggested in Borer (1984), finding subsequent support in Wexler and Manzini (1987), eventually making its way into mainstream generativist syntax in Chomsky (1995). This association between parameters and lexical items is formulated in what is often referred to as the **Borer–Chomsky Conjecture**, defined by Baker (2008: 353) in the following way:

> Borer–Chomsky Conjecture: All parameters of variation are attributable to the features of particular items (e.g. the functional heads) in the lexicon.

This theory then breaks down the earlier macro-parameters, affecting the whole grammar, to 'micro-parameters', which affect only individual lexical items or subsets thereof. Moreover, rather than there being a distinct parametric component of the grammar,

[30] A striking demonstration of this can be found in the results of Windhearn (2020), who undertakes a detailed survey of the evidence from six archaic IE languages from different branches, arguing that they 'point unanimously toward a right-headed T domain for the protolanguage' (2020: 112). Such a discovery demonstrates clearly the reconstructive power of parametric comparison with no dependence on a theory of universal directionality.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

parameters are located within the lexicon, on the relevant functional heads. The VO/OV parameter is therefore explained by the features of the relevant functional head(s) associated with the *v*P/VP, which are located within the lexicon. Therefore, according to Pires and Thomason (2008: 41),

> The task of syntactic reconstruction can then be restricted to identifying variation in the feature specification of (functional) lexical items that determine syntactic structure and syntactic variation.

Thus, beyond macro-parametric comparison of the sort first proposed in Roberts (1998), one may also break down the point of correspondence as far as individual lexical items.[31] This approach helps to reintroduce linguistic cognacy into syntactic comparison: rather than being led by a predetermined set of universal macro-parameters, syntactic reconstruction can be led by cognate functional lexical items, whose syntactic features may be inherited alongside their phonological form. Such an approach is taken by Walkden (2013: 108), who draws an equivalence between the functional head in syntax and the phoneme in phonology. He takes the example of the phoneme /t/, which has the following feature matrix:

/t/ = +coronal, –voice, −continuous, +anterior, +distributed

He likens this to the feature matrix of the functional head T°:

T = tense:past, *u*Case:nom, *u*Num, *u*Pers

Pursuing this analogy further, Walkden (2013: 109) argues that functional heads undergo a form of regular change associated with phonology: a conditioned split. He argues that syntactic reanalysis has a conditioning environment equivalent to that found in conditioned sound changes (e.g. r > Ø / V ___ [C, +coronal]#).

[31] Comparison on the basis of both micro- and macro-parameters is possible under the aforementioned Emergentist approach to parameters (n. 28). Indeed, there is a growing body of research that seeks to reconcile micro- and macro-parametric approaches to cross-linguistic variation (Biberauer, 2011; Biberauer & Roberts, 2012a,b, 2017; Roberts, 2021a). Such approaches, insofar as they do not seek to roll back the clock on (some broad reading of) the Borer–Chomsky conjecture, are equally compatible with the mode of syntactic comparison put forward here.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Although Walkden (2013) does not tie this directly to the acquisition process, the conditioning environment can be understood as the set of ambiguous surface strings in the PLD (see §2.1.4 above). In these syntactic contexts, some aspect of the functional item is reanalysed, while elsewhere it remains the same, yielding a 'split'. This can be observed in the grammaticalisation phenomenon referred to as 'layering' by Hopper (1991: 22), in which innovative and archaic uses of the same item may coexist in a single grammar.

If we conceptualise syntactic change in this way, Walkden argues (2013: 110, emphasis original),

> it is difficult to imagine that *irregular* syntactic change could even exist. Irregular phonological changes are those which affect only specific individual words in which the sounds occur, with no phonologically-definable context. An irregular syntactic change would affect only specific individual sentences in which the functional lexical items occur, with no syntactically-definable context.

In this way, the comparison of functional heads is presented as a solution to the Correspondence-set Problem: one that allows for syntactic comparison where there is non-identity in the descendant languages. To reconstruct the proto-language, the task is to identify the relevant 'syntactically-definable context' in which a change has taken place: i.e. the locus of the reanalysis. This is a crucial step in the methodology advanced by Pires and Thomason (2008: 45), who argue that for our reconstruction to be sufficient in this theoretical framework for syntactic change, we must provide:

(i) hypotheses about the properties of the mental grammars that could generate the outputs possible in the daughter languages;
(ii) hypotheses about the properties of the mental grammars that could have been internalized by speakers of the ancestral language (the grammar of the proto-language);
(iii) hypotheses about how the different grammars of the daughter languages could have developed from the exposure of earlier generations to the output of the proposed ancestral grammar.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

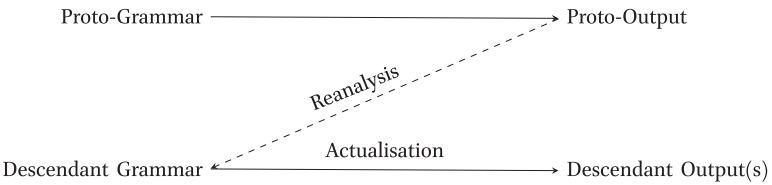


Figure 2.2 Z-model of reconstruction (adapted from Willis, 2011: 417).

Following Pires and Thomason (2008), Willis (2011) coins the term 'local directionality', referring to the establishment of plausible and motivated reanalyses between different language states; this is in contrast to 'universal directionality', which is roughly coextensive with 'grammaticalisation' and does not take into account the specific context for a given change. Willis suggests that, guided by local directionality (taking universal directionality as a 'rule of thumb'), the task of reconstruction is essentially that of retracing the steps in the Z-model of language change (Figure 2.1). This is represented in Figure 2.2.

Willis (2011) illustrates this methodology in the reconstruction of free relatives in Brythonic.[32] He takes as his starting point the Welsh conjunction *bynnag* and its cognates, which '[correspond] to *-ever* in English *whoever* etc.' (Willis, 2011: 425). These forms originate morphologically from some from of the interrogative pronoun *py*, and *na(g)*, a negative marker in Common Brythonic, the proto-language in this case. Willis works his way through the pathway of change from Common Brythonic to the attested forms, starting with the hypothetical example clause (2011: 433):

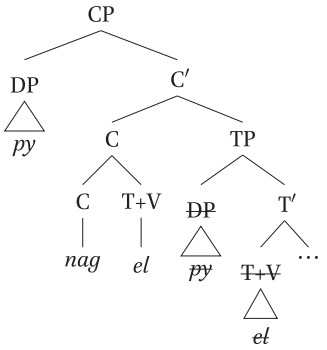
(2.13) *py* *nag* *el*
WH REL.NEG GO.PRES.SUBJ.3SG
'whoever goes' (Stage I = Common Brythonic)

for which he posits the following structure:

[32] Such an approach also underlies Walkden's (2013) reconstruction of the early Norse 'middle' suffix *-sk* and the wide range of Proto-Germanic syntactic phenomena reconstructed in Walkden (2014).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

(2.14)

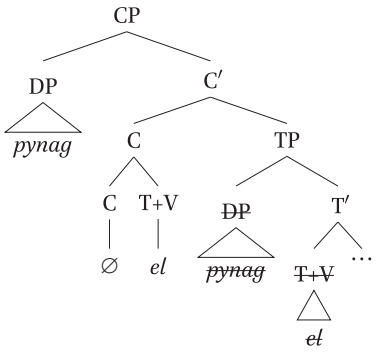


The first stage of reanalysis is for *py* and *nag* to be univerbated as an independent *wh*-pronoun, yielding stage II of the change:

(2.15) *pynag el*
WH GO.PRES.SUBJ.3SG
'whoever goes' (Stage II = reanalysis of *py nag* as a single item, Common Brythonic)

for which he posits the following structure:

(2.16)

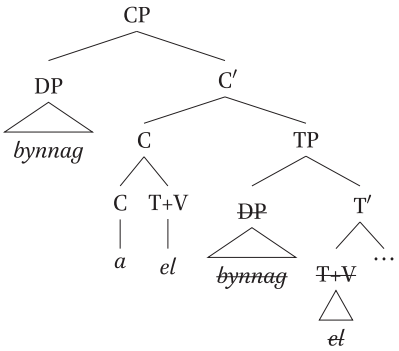


At this point, Willis argues, *nag* is no longer analysed as a negative marker, but an integral part of *pynag*. This loss of negativity then turns the phrase *pynag el* into an affirmative relative clause, which requires the particle *a* to be inserted, a pattern attested in all the medieval Brythonic languages:

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

(2.17) *bynnag* *a* *el*
FREE.REL REL GO.PRES.SUBJ.3SG
'whoever goes' (Stage III = addition of relative particle, Common Brythonic)

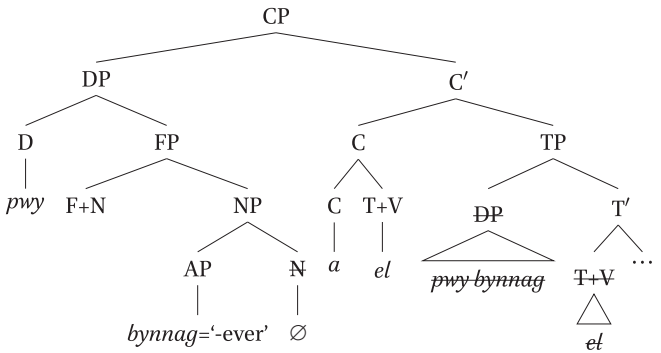
(2.18)



Stage IV is that *bynnag* loses its [+WH] feature; that is to say, the internal structure of the DP is reanalysed so that a null D_{WH} is posited that dominates *bynnag*, now interpreted as some sort of AP. At this point, speakers can then begin adding an overt *wh*-pronoun (e.g. *pwy* in Middle Welsh), yielding Stage V:

(2.19) *pwy* *bynnag* *a* *el*
who ever REL GO.PRES.SUBJ.3SG
'whoever goes'

(2.20)



Of interest here is that this pattern is attested in all the descendant languages; however, Middle Cornish alone allows a construction

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

without the overt *wh*-pronoun, as well as one where it is present. In Middle Welsh and Middle Breton, on the other hand, only the construction with the *wh*-pronoun is attested. Willis argues therefore that Common Brythonic must have been at Stage III of the change when daughter languages started to diverge. Middle Cornish was trapped at a transitory stage, where *bynnag* is variably [±WH]. Willis argues that 'this irregularity . . . could not have emerged from a grammar like Middle Welsh or Middle Breton where *wh*-pronouns are compulsory in free relatives' (Willis, 2011: 438). Thus, he argues, Common Brythonic grammar must have generated bare *bynnag* constructions, probably because *bynnag* bore a [+WH] feature (Stage III). The changes from Stage I to Stage III are therefore hypothesised to have taken place within Common Brythonic itself, before divergence.

With the CORRESPONDENCE-SET PROBLEM addressed by the comparison of functional heads, local directionality thus presents a solution not only to the DIRECTIONALITY PROBLEM but also to the RADICAL-REANALYSIS PROBLEM. In placing a heavy emphasis on the acquisition process, and especially in isolating ambiguous surface strings that could plausibly have been the locus for reanalysis, Minimalist reconstruction puts the granular details of conditioned syntactic change at the heart of the reconstructive methodology. This gives it the edge over other methodologies in cases where there is non-identity in the descendant languages, and so a change must be hypothesised.

Beyond its overarching capability in dealing with cases of non-identity, Minimalism is particularly well suited to the reconstruction of relative clauses in PIE. We begin with a functional item, the relative pronoun, whose lexical exponents are clearly inherited from the proto-language. We also have certain syntactic divergences to reconcile and reanalyses to posit that connect the structures attested in the descendant languages. Minimalist reconstruction offers us an avenue to pursue this aim. It is also of significance that relative clauses have received extensive treatment in synchronic Minimalist syntax (see §3.2), including from a comparative perspective; the universalising nature of this theoretical framework means we can draw on research undertaken outside the languages of study here (ancient IE) to inform our analyses. This

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

is particularly important given the limited nature of the evidence we are working with, and particularly the lack of native speakers. While this is primarily a practical concern, the theoretical presupposition of a universal set of functional heads lends structure to our analyses that may otherwise be counterproductively impressionistic. This is not to say that a universalist theory should represent some sort of straitjacket into which the data must be made to fit.[33] Where the comparative data from the descendant languages challenge pre-existing theories – which they do on several occasions – we must consider revising those theories. However, where the data are at least compatible with such theories, we are able to capitalise on the strengths of the analysis of contemporary languages where the ancient evidence is non-diagnostic.

To conclude this section: I will proceed with a reconstruction of relative clauses in PIE with an approach we may refer to broadly as Minimalist reconstruction. I will frame my analysis not in terms of micro-parameters or feature matrices, but in terms of the behaviour of functional items in the lexicon and their behaviour in syntactic derivation. The primary focus will be on the relative pronoun (treated primarily in Chapter 4); the theory will also necessitate the reconstruction of other left-peripheral functional heads (treated primarily in Chapter 5). I will not focus on those that occur in the IP or below.[34] Where there is identity, the reconstructive power of Minimalism may not be categorically superior to other options; where there is divergence, however, I will use Minimalist analysis to isolate the points of reanalysis to model the changes that have taken place between PIE and the descendant languages.

2.7 A Note on Competing Methodologies

Each of the reconstructive methodologies I have discussed in this chapter has brought something to the table. Aside from the foundational significance of Neo-Grammarian reconstruction, the methodology of comparison along 'converging lines' has stood the test of time. With the intense development of syntactic theory since

[33] Nor indeed a Procrustean bed, to echo Watkins (1976).

[34] Though see Windhearn (2020, 2021) for studies that have done this for PIE within a Minimalist framework.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

Delbrück (1893–1900), the scope for establishing where the points of structural similarity may be has widened significantly. Moreover, since the methodology itself does not rely on any particular conception of syntax, it is compatible across the range of theories available for syntactic description. In a sense, Neo-Grammarian reconstruction may subsume work undertaken under other more theoretically articulated approaches, including those of Construction Grammar and Minimalism. Though the methodology may be challenged when the lines of grammatical analysis do not converge, our enhanced ability to spot convergence when it does exist means there is still scope for progress here.

It is reasonably unlikely that reconstruction based on typology and syntactic harmony will ever be attempted again. However, typology itself continues to play an important role in syntactic reconstruction. In particular, the exclusion of 'impossible' languages can support the relative likelihood of the grammar we reconstruct for a given proto-language. The scholarly consensus remains that the comparative evidence is primary, and the typological, secondary. Yet this consensus is tempered by the notion that, all things being equal, we should avoid reconstructing a language that breaks the rules all attested languages follow – this follows from our adoption of the Uniformitarian Hypothesis (see Walkden, 2019).

Under radically divergent theoretical assumptions, Construction Grammar and Minimalism both allow for the deconstruction of syntax into the features of individual lexical items. This seems to be a vital step in establishing the cognacy of grammatical structures, and represents a knitting-together of syntactic reconstruction with morphophonological reconstruction: the former picks up where the latter leaves off. I have argued that Minimalism is particularly well suited to the reconstruction of relative clauses, and perhaps other large, schematic aspects of syntax. I have also suggested that it is capable of reconciling the evidence in cases of non-identity, in a way that has yet to be demonstrated for other methodologies. I think it is clear, however, that much can be learned about PIE syntax using these other methodologies. Barðdal's (2013: 448) contention that the stability of syntax is a 'vastly underestimated factor' in the reconstruction of syntax may well prove to be true.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002

In this case, both Construction Grammar and Minimalism can contribute to establishing the points of identity and continuation between the syntax of the ancient IE languages and their common ancestor. It is also likely that they have the capacity to isolate different points of continuity; that is, each reconstructive methodology plays to the strengths of its respective theoretical framework. The analysis of relative clause structure lends itself to Minimalism: a different theoretical question, still within the overall project of syntactic reconstruction, may be better addressed in a different framework.

In sum, I share the sentiment expressed in some form in Walkden (2013: 109) and Windhearn (2020: 6) that Minimalism is not the only viable methodology of syntactic reconstruction. In fact, I go one step further in advocating for the continued development of reconstructive methodology within different theoretical approaches to syntax. Where they diverge in their empirical focus, covering between them a broader range of syntactic phenomena than any methodology could address in isolation, this can only be a good thing. Where their investigations overlap and they reach incompatible conclusions, the task is to move forward from abstract comparisons of their methodological viability and towards assessing the relative likelihood of different reconstructed scenarios. Where overlap leads to shared conclusions across different theoretical frameworks, the strength of these conclusions is reinforced.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 21:02:30, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009664196.002