

Extending Parametric Comparison: Some Preliminary Results on Older Indo-European Languages

We report preliminary results from our work developing the Parameter Comparison Method (PCM) by constructing a database of clausal parameter values (connected to VP/vP, TP and CP) as a “parametric grid” as developed in research on nominals by Guardiano & Longobardi (2017), Longobardi & Guardiano (2009, 2017), etc. A parametric grid permits the calculation of the value δ , the parametric distance between two languages, calculated as the number of differences in parameter values divided by the sum of the differences and identities. These values can then be fed into phylogeny programs, producing visualisations of the relations as trees or networks. Furthermore, they can serve as a basis for syntactic reconstruction.

Baker & Roberts (2022) have determined the values of 87 clausal parameters in 36 languages from 6 families, plus Basque, Japanese and Korean. The work reported here extends this synchronic work into the diachronic domain, with a view to reconstructing the parameter values of the Proto Indo-European (see below). The languages examined here represent a subset of the traditionally recognised branches of the IE family: Hittite (Anatolian), Vedic Sanskrit (Indo-Iranian), Gothic, Old English (Germanic), Latin (Italic), Middle Welsh and Old Irish (Celtic). Clearly the dataset is incomplete, but it represents a first step towards the reconstruction of the parameter settings relevant to the clausal syntax of the parent language (see also Carling & Cathcart 2021).

Here are two examples of Baker & Roberts’ parameters:

- (1) P47 TP over C (TOC) separates languages in which most elements normally associated with the C-area, such as complementisers or, in some languages, question particles or other clause-type markers, surface phrase-initially in the CP from languages wherein they occur in absolute clause-final position; this is taken to be a signal that the whole complement of C raises to some position to the left of C.

(Here the number 47 and the abbreviation TOC are assigned to this parameter as part of the method for indexing, comparing and relating parameters; see Longobardi et al 2013). This parameter determines whether complementisers precede or follow the clause (TP) they mark: C-TP order as opposed to TP-C order. It is positive in Japanese and negative in English. In most of the older IE languages, with the possible exception of Sanskrit, it is negative and we would therefore naturally reconstruct it as negative in PIE; this is confirmed by Windhearn (2021) (the possible Sanskrit exception may be attributable to early influence from the Dravidian languages, in which this parameter is typically positive). (2) is a further example:

- (2) P24 Grammaticalised Mood (GRM): This parameter defines whether grammaticalised marking of modal distinctions, via inflection, auxiliaries or particles (thus including periphrastic as well as synthetic constructions) is found.

P24 is positive in English, given the presence of modal auxiliaries, but negative in Dutch, where there are no modal auxiliaries and subjunctive verbal inflection is moribund. The majority of archaic IE languages have rich inflectional mood-marking (for example, Vedic Sanskrit distinguishes multiple irrealis moods), but Hittite does not. So this parameter may be negative in Hittite and positive in all the other branches.

We adapt Hale’s (1996: 162) definition of a reconstructed proto-grammar as follows:

- (3) A proto-grammar is a set of grammars which are non-distinct in their recoverable parameter values (Roberts 2021: 507).

A further goal of the work reported here is the creation of a parametric database for the older IE languages. We can use this database to (re)construct the proto-grammar for IE, defined as in (3).

For certain cases, the reconstruction will be straightforward: it is all but certain that all the older languages, being genetically and typologically close to one another, will be uniform in their values of certain parameters since the overall set of parameters is designed to apply universally. For example P1 and P2 concern grammaticalisation of Person and Number in the verbal-agreement system. While these parameters are negative in Japanese, for example, we expect them to be uniformly positive in PIE, since all the older languages have rich verbal agreement-marking. However, there are other cases where the languages will diverge: in the case of P47 above the single divergence may be explicable in terms of contact, while the status of certain divergences in Hittite as innovations or retentions, e.g. concerning P24 above, is less clear. The most interesting cases, where careful qualitative judgements will have to be made based on typological, diachronic and theoretical considerations, will be those where three or four of the seven languages agree on a given parameter value. Clearly, in principle, the lower the level of agreement, the more difficult the judgement. However, a combination of factors (age of attestation, typological and diachronic plausibility) and theoretical knowledge (likelihood or even impossibility of certain combinations of parameter values) should make a decision possible in almost every case. There may, however, be a small residue of non-recoverable values in the sense of (3).

The ultimate goal of the research reported here will be the largest ever dataset based on unified formal morphosyntactic properties of the older IE languages; moreover the dataset will be in principle open to further expansion, both in terms of the parameters and the languages.

References

- Baker, J. & I. Roberts. 2022. Extending Parametric Comparison: Preliminary Results. Ms. Universities of Cambridge and Leiden.
- Carling, G. & C. Cathcart. 2021. Reconstructing the evolution of Indo-European grammar. *Language* 97: 561-598.
- Guardiano, Cristina and Giuseppe Longobardi. 2017. Parameter theory and parametric comparison. In Ian Roberts (ed.), *The Oxford Handbook of Universal Grammar*, 377–400. Oxford: Oxford University Press.
- Hale, M. 1996. 'Theory and Method in Historical Linguistics'. Ms., University of Concordia.
- Longobardi, G. & Guardiano, C. 2009. '[Evidence for syntax as a signal of historical relatedness](#)'. *Lingua* 119: 1679-1706
- Longobardi, G., Guardiano, C., Silvestri, G., Boattini, A. and Ceolin, A. 2013. Toward a syntactic phylogeny of modern Indo-European languages. *Journal of Historical Linguistics* 3: 122-152. Appendix at <http://dx.doi.org/10.1075/jhl.3.1.07lon.additional>.
- Roberts, I. 2021. *Diachronic Syntax*. Oxford: Oxford University Press. 2nd edition.
- Windhearn, R. 2021. Disharmonic Headedness in Homeric Greek and Tocharian and implications for Proto-Indo-European Reconstruction. *Journal of Historical Syntax. Vol 5 No 1-13 (2021): Proceedings of the 20th Diachronic Generative Syntax (DiGS) Conference*.