Extending Parametric Comparison: A Preliminary Investigation of Celtic

[1]Ian Roberts, [2]James Baker, [1]Marieke Meelen and [1]Krishnan Ram-Prasad
(University of Cambridge[1], Leiden University[2])

Keywords: Parametric reconstruction, historical syntax

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 (2021) have determined the values of 87 clausal parameters in 36 languages from 6 families, plus Basque, Japanese and Korean. Here are two examples of their 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.

(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.

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).

We adopt 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 2007: 365).

For certain cases, the reconstruction is 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 possible divergence of Sanskrit from the other

languages may be explicable in terms of contact with Dravidian, 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 50-75% of the 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.

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