

## Commentary on Lowe and Mazaudon

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The Reconstruction Engine (RE) described by Lowe and Mazaudon takes the linguist's hypotheses about sound correspondences between (on one hand) several presumably related modern languages and (on the other) a reconstruction of their presumed common ancestor language, and it tests these hypotheses against a major portion of the lexicons of the languages.

Five advantages of the program especially are worthy of note: (1) It can tabulate results for several languages at once. (2) It can project correspondences both "downstream" and "upstream." (3) Its initial formation of cognate sets is not encumbered by semantic information (although word glosses are kept available for the user eventually to judge the plausibility of matches)—this ensures that the process does not overlook viable matches simply because of "small" semantic differences ('shoulder'/'thigh') or nonuniform rendering of glosses ('soak'/'wet,' 'snow'/'neige'). (4) It overcomes some of the dangers of losing potential matches to nonuniform parsing of syllable structure, by considering a variety of possible segmentations, based on partially overlapping categories (rhyme, vowel, etc.). (5) It incorporates "flexibility toward irregularity" (as in the use of "fuzzy" matching) as a kind of wider deployment of the net to catch cognates and as a way of keeping the process open to new discoveries. The authors rightly imply that the difference between regular and irregular sound change is not marked by a clearly drawn line based on simple observation, but rather depends on theoretical judgments made by the linguist.

Meanwhile, the applicability of the RE in its present form is perhaps limited in a fundamental way by looking only at sound correspondences between two stages ("ancestor" and "descendant"), rather than dealing with the undoubtedly multi-layered series of changes (not to mention the possibility that those changes may overlap in history, compete for input, and/or apply in different orders for different words). This may be merely the quibble of one who has worked mainly with a *documented* ancestor language (Latin), having had less experience with the problems of *reconstructing* an ancestor language. From this perspective, the limitations of a two-level table of correspondences can be brought into focus by considering for example the table that would be necessary to account for just the segment /o/ in Modern French (derived from different Latin ancestor sequences in *haut, eau, hôtel, chevaux, château*, etc.). The authors intend, rightly, to deal with the "chronologization of changes" in future refinements of the RE.

The notation system and parsing algorithms of the RE seem well suited to the phonotactics of "monosyllabic" languages such as the Tamang of the examples presented. With data from other language families, with polysyllabic strings and more complex consonant clusters, it might seem that the processing time to consider all possible correspondences could increase geometrically; but other researchers (e.g., John Hewson [this issue]—working with the very different morpheme structure of Algonquian languages) have developed techniques for resolving that problem.

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