

METHODOLOGICAL EXPLORATIONS IN HISTORICAL LINGUISTICS: TYPOLOGICAL FEATURE ANALYSIS DOES NOT REPLICATE PHYLOGENY

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Dunn et al (2008) advance the claim that the application of algorithms developed in evolutionary biology to data consisting of selected structural features of languages can “recapitulate” the findings of more conventional historical linguistic investigation using the comparative method. This represents a refinement of the findings of an earlier paper. The essential material is substantially the same in the two presentations.

We suggest that while the structurally-based techniques replicate some of the accepted classification for a small group of Oceanic languages in island Melanesia, the match with the comparative method results is far from perfect, and is not adequate to suppose that this methodology can serve as a proxy for the comparative method. Secondly, we see little justification for the extension of the method to the non-Austronesian languages of the same region, an extension which we suggest yields results which provide little information beyond that which a geographical analysis of proximity offers. Thirdly, we suggest that simple statistical analysis of the quantitative results reported by Dunn et al (2008) does not support their claim that these techniques can show relationships at time depths inaccessible to the comparative method, especially given that some of the methods used are known to overestimate such relationships. Fourthly, we demonstrate that the structurally-based methodology fails to separate the demonstrably related Oceanic languages from the non-Austronesian languages of the same area, according to the sample and coding of features in Dunn et al (2008). Finally we note that the separation which is replicated in Dunn et al’s work likely reflects the fact that they deliberately selected linguistic features that would “[reflect] the known linguistic variation of the region”, thus biasing the results of the structural method towards a replication of the results already known from the comparative method. Discriminant analyses show that these features bias the results of the structural study to a degree out of proportion to their 10% inclusion in Dunn et al's list of features examined.

We argue that the use of structural aspects of languages for comparative work, as opposed to lexical and morphological forms, is a very dubious enterprise. If a “neutral” set of typological features, not chosen to demonstrate known variation in the sample, is selected, the results of the comparative method will not be replicated, as we demonstrate with a case study.

Dunn, Michael; Stephen C. Levinson; Eva Lindström; Ger Reesink and Angela Terrill. 2008. Structural Phylogeny In Historical Linguistics: Methodological Explorations Applied In Island Melanesia. *Language* 84(4):710-759.

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