

New Methodology on Analysis of Language Change

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I ran across this last night. Does anyone know any more about the specifics of this and the methodology employed?

Evolutionary Tools Help Unlock Origins of Ancient Languages
Scientific American – 9/23/05

The key to understanding how languages evolved may lie in their structure, not their vocabularies, a new report suggests. Findings published today in the journal *Science* indicate that a linguistic technique that borrows some features from evolutionary biology tools can unlock secrets of languages more than 10,000 years old.

Because vocabularies change so quickly, using them to trace how languages evolve over time can only reach back about 8,000 to 10,000 years. To study tongues from the Pleistocene, the period between 1.8 million and 10,000 years ago, Michael Dunn and his colleagues at the Max Planck Institute for Psycholinguistics developed a computer program that analyzes language based on how words relate to one another. They developed a database containing 125 "structural language features," which include traits such as verb placement within clauses, for two sets of languages. Sixteen Austronesian languages made up the first set; the second was composed of 15 Papuan languages. (The image above shows an outrigger sailing canoe in a region where languages from the two sets are spoken. Called Island Melanesia, it is east of Papua New Guinea and northeast of Australia.) When the researchers used the new approach to reveal historical connections between languages, the results for the Austronesian languages closely resembled previous results that were based on vocabulary.

In contrast, the vocabulary-based method could not yield results for the Papuan languages but the novel technique did. It suggests that the languages are related in ways that are consistent with geographic relationships between them. In an accompanying commentary, Russell Gray of the University of Auckland in New Zealand cautions that the new technique still has uncertainty. But he contends that the approach "is likely to be widely emulated by researchers working on languages in other regions. In the future we may see the development of Web-based databases for the languages of the world. "

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