The Department of Linguistics & TESOL at UT Arlington: Dissertation Defense
Ziwo Lama

Subgrouping of Nisoic (Yi) Languages: A Study from the Perspectives of Shared Innovation and Phylogenetic Estimation

Abstract

In southwest China and neighboring countries, including Thailand, Laos, Vietnam, and Myanmar, there live over 100 ethnic groups who speak languages known as Nuosu, Naxi, Hani, Lisu, Lahu, etc. These languages belong to the Nisoic or Loloish Branch of Tibeto-Buran (TB) subfamily of Sino-Tibetan. Though the Nisoic affiliation to TB is very clear, its internal subgrouping has not been settled. This dissertation aims to study the internal relationship of 32 Nisoic and three Burmic languages from two perspectives shared innovation and phylogenetic estimation.

Shared innovation, the greatest discovery of 19th century historical linguistics, shows how correspondence sets can be made into a linguistic tree of descent. In fact, it is the most reliable tool for determining subgroups of the tree (Campbell 2004 Historical Linguistics). In this study, evidence from both shared phonological sound changes and shared elements of word formation are used to establish the internal structure of Nisoic languages. We adopt a bottom-up approach with binary-split to construct the hierarchical relationship among Nisoic languages. The application of shared innovations in Nisoic subgrouping yields 10 clusters that can be further grouped into eight subgroups: Nisoish, Lisoish, Kazhuoish, Nuosoish, Naxish, Lahoish, Hanoish, and Mondzish.

The Bayesian inference for phylogenetics is one of the most important methods to study classification of organisms in computational biology and it has been applied in language subgrouping recently. In this phylogenetic study, we used 240 characters (words) and 37 taxa (languages) as inputs for the algorithms. These characters produce 3388 character states (phonological rules, features, lexical innovations, etc.) for the 37 taxa. MrBayes3.1 and SplitsTree4.11 are implemented to compute binary codes converted from these character states. The phylograms (trees) and networks generated by these two applications, respectively, are almost identical to the family tree produced by shared innovation.

The results of this study represent the first comprehensive account of Nisoic subgrouping and also represent a hypothesis for further research in the field.

Thursday, March 8, 2012
1:00pm, Trimble Hall, Room 200