

The reconstruction of proto-Burmish: a case study in the computational implementation of the comparative method

The use of computational methods in comparative linguistics increases ever in popularity. Nonetheless, the fruits of such methods have so far been meagre when compared to the results the traditional comparative method. This paper explores a dataset of Burmish languages as a case study in improving the methodology of computational reconstruction. In particular are aim is not replace or modify the comparative method, but rather to implement the traditional method using computational tools.

Our database comprises 400 concepts and their translational counterparts in a dozen Burmish languages. Concepts are linked to the Concepticon (List et al. 2016), languages are linked to Glottolog. The primary data comes from Huáng et al. (1992.), as digitized by STEDT (Matisoff 2011), but we supplement this with other sources. We employ an iterative workflow combining the absolute rigor of a computer with the insightful intuitions of trained historical linguists. After providing all of the data with unambiguous phonetic interpretations, including the explicit encoding of underdetermined segments, the computer provides a preliminary alignment and reconstruction. These reconstructions are then adjusted with an eye to the relevant literature on proto-Burmish. The adjustments are made inside of the workflow system so that the algorithm and general methodology will be enhanced and made more robust.

References

- Hammarström, Harald & Forkel, Robert & Haspelmath, Martin & Bank, Sebastian (2015): Glottolog. Leipzig: Max Planck Institute of Evolutionary Anthropology (Available online at <http://glottolog.org>. Accessed on 2016-03-15).
- Huáng Bùfán 黄布凡 et al. eds. (1992). Zàng-Miǎn yǔzú yǔyán cíhuì 藏缅语族语言词汇. Běijīng: Zhōngyāng mínzú xuéyuàn chūbǎnshè 中央民族学院出版社.
- List, Johann-Mattis & Cysouw, Michael & Forkel, Robert (eds.) 2015. Concepticon. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at <http://concepticon.clld.org>, Accessed on 2016-03-15.)
- Matisoff, James (2011): STEDT. The Sino-Tibetan Etymological Dictionary and Thesaurus. University of California at Berkeley (available online at: <http://stedt.berkeley.edu>).