

“Computational experiments in Adamawa sub-classification”

Contemporary overviews (Boyd 1989, Güldemann 2018, Kleinewillinghöfer 2014, 2020) subsume a dozen microgroups under the label Adamawa and emphasize that their coherence as a unit as well as internal relationships remain to be worked out. As such the Adamawa languages belong to the least-well understood sections of the Niger-Congo family. Application of the comparative method is the ideal way to resolve these issues, but is proceeding at a relatively slow pace and is difficult to apply evenhandedly with so many diverse languages. With the advent of large lexical databases it is now practical to make use of computers to aid language classification and reconstruction. Toward this aim, we will present a completely automatic reconstruction system. Using only standard meaning-index wordlists as input it proceeds similarly to the application of the comparative method. First, it identifies shallow cognates. Based on the cognates, it identifies the most recent subgroup. The most recent subgroup is then reconstructed by playing back sound changes gauged for this subgroup from the identified cognates. The procedure is then repeated (until the bottom of the tree) with the reconstructed proto-language in place of the modern languages of the identified subgroup. Contrary to many other computational techniques, the procedure is entirely transparent and each step is intelligible and inspectable for a human. For this reason, the work may be of value toward the reconstruction and classification of the subfamily, even though the computational techniques are inferior to human cognate judgments and reconstructions. The method will be applied to lexical data (of varying size, mostly Swadesh-type lists) from the RefLex database (Segerer 2016) for some 63 Adamawa doculects.

Boyd, R. (1989). Adamawa-ubangi. In Bendor-Samuel, J., editor, *The Niger-Congo Languages: A Classification and Description of Africa's Largest Language Family*, pages 178–215. Lanham, MD: University Press of America.

Güldemann, T. (2018). Historical linguistics and genealogical language classification in africa. In Güldemann, T., editor, *African Languages and Linguistics*, pages 58–444. Berlin: DeGruyter Mouton.

Kleinewillinghöfer, U. (2014). Adamawa. Paper presented at the Linguistisches Kolloquium des Seminars für Afrikawissenschaften, Humboldt-Universität zu Berlin, 4 November, 2014.

Kleinewillinghöfer, U. (2020). Adamawa. In Vossen, R. and Dimmendaal, G. J., editors, *The Oxford Handbook of African Languages*, pages 220–230. Oxford: Oxford University Press.

Segerer, G. (2016). Reflex: la reconstruction sans peine. *Faits de Langues*, 47:201–214.