# Inheritability and transmissibility of linguistic and other cultural features: The coevolution of noun categorization and kinship systems

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Keywords: noun categorization, language evolution, phylogenetics, kinship

**Abstract**

The presentation will focus on the extent to which linguistic and other cultural features are vertically or horizontally transmitted in relation to human population history, and how such processes lead to the coevolution of languages and other cultural traits. Structural features of language may vary in their inherent propensity to become transmitted vertically (by lineage) or horizontally (via contact). As an example, grammatical gender is commonly transmitted within language families (Allassonnière-Tang and Dunn 2020; Carling and Cathcart 2021). The same scenario is present for cultural features: in particular, systems of kinship are strongly inclined towards vertical transmissibility (Guglielmino et al. 1995), and can be reconstructed to earlier states of language families (Fortunato and Jordan 2010; Jordan et al. 2009). We take typological data for 3044 languages worldwide for gender, noun class and classifier systems, which we test for geographic and phylogenetic cohesion. We find that more grammaticalized features, i.e., gender and noun class, are more likely to be transmitted by lineage, whereas classifier systems are more likely to be transmitted by contact. By contrasting to climatological data, we find that it is highly likely that the global patterns of distribution for these systems (gender/noun class and classifiers) are caused by migrations and contact events during the mid-Holocene period (Allassonnière-Tang et al. 2021). In relation to this result, we suspect that the expansion of these linguistic systems by migration may pertain to mid-Holocene change in subsistence systems (i.e., emergence of agricultural systems), which may coevolve with other cultural changes in for instance kinship systems. Preliminary tests of correlation between presence of gender/noun class and cultural features, such as patrilocality and agricultural systems, indicate that this is a likely scenario. We test various models, including mixed models accounting for area and family as random effects. We also conduct a phylogenetic analysis of correlated evolution (Dunn et al. 2011) between the linguistic and cultural features involved in our study.

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