

The Evolution of Musical Gabonese Heritage : A Musical Phylogenetic Approach

Sylvie Le Bomin, Evelyne Heyer, and Guillaume Lecointre
Museum National d'Histoire Naturelle - Ecoanthropologie Ethnobiologie, France

Music, like languages, is one of the key components of our culture, yet musical evolution is still poorly known. Numerous studies using computational methods derived from evolutionary biology have been successfully applied to varied subset of linguistic data.

One of the major drawback regarding musical studies is the lack of suitable coded musical data that can be analyzed using such evolutionary tools. Here we present for the first time an original set of musical data coded in a way that enable evolutionary approaches. Using phylogenetic methods, we test two competing theories on musical evolution: vertical versus horizontal transmission. We show that, contrary to what is currently believed, vertical transmission plays a key role in shaping musical diversity. The signal of vertical transmission is particularly strong for intrinsic musical characters such as metrics, rhythm, and melody. Our findings reveal some of the evolutionary mechanisms at play for explaining musical diversity and open a new field of investigation: musical evolution.