## A phylogenetic review of kinship terminology determinants

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Anthropological literature propose that patterns of descent, marriage, and residence determine which terminology a society uses (eg. Fox, 1967; Murdock, 1949). But these theories have been perpetuated without critical review. Here, we re-evaluate 26 commonly cited hypotheses of kinship determinants in an evolutionary framework with modern, comparative phylogenetic techniques. Previous anthropological support for these theories relied on simple statistics and ethnographic reporting. The statistical approaches fail to account for shared ancestry, violating a core axiom of statistics, which phylogenetics aim to correct. While observational reports need to be validated cross-culturally. To assess the pervasiveness of these hypotheses, all are tested in the Austronesian, Bantu, and Uto-Aztecan language families, with data drawn from D-PLACE. Of the 26 hypotheses, we only find evidence of correlated evolution in four. Only one hypothesis holds in more than one language family and none hold in all three. These results place a question mark over foundational theories in kinship. Ethnographic observation proves the existence of the hypothesised relationships, however, when placed into a global and historical context, they do not hold. Treating each language family as an evolutionary experiment, these results suggest that social structures are not solely responsible for kinship system change. This opens the door to a more complex view of kinship system use and its determination. One which should account for the interaction of social structures, but also ecological and historical influence.

## References

Fox, R. (1967). *Kinship and Marriage: An Anthropological Perspective*. Cambridge University Press. Murdock, G. P. (1949). *Social structure* (Vol. xvii). Oxford, England: Macmillan.