# 4. Linguistic convergence in the Ancient Near East 

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Applying advanced methods (sBayes, Ranacher et al. 2021) Efrat-Kowalsky et al. (in rev.) found evidence for an amount of similarity between the unrelated ancient Near East languages Hurrian and Sumerian that cannot be accounted for by contact, universal preferences, or inheritance. The authors suggest that Hurrian and Sumerian might be the last survivors of an earlier area which was wiped out by later spreads of Semitic and Indo-European, or alternatively, Hurrian and Sumerian reflect an ancient global distribution which is different from today's.
We follow up on this promising approach and assess the impact of language sampling on the results. To do this, we expand the language sample by adding languages from the same region (e.g. Ancient Greek, Classical Armenian, Old and Middle Iranian varieties) and ancient and medieval varieties from Europe that were not part of the original sample. We apply the same methodolgy as Efrat-Kowalsky et al. (in rev.) and find that Hurrian and Sumerian still display similarity that cannot be explained by genealogy or universal preferences. However, the algorithm identifies two Indo-European languages, Middle Persian and Classical Armenian, that are assigned to the same cluster as Hurrian and Sumerian. We suggest that the similarity between these languages is best explained by areal convergence, a signal formerly not captured because of the restricted language sample.

## References

Efrat-Kowalsky, Nour et al. (in rev.). "Oldest attested languages in the Near East reveal deep transformations in the distribution of linguistic features". In: Scientific Reports. in revision.
Ranacher, Peter et al. (2021). "Contact-tracing in cultural evolution: a Bayesian mixture model to detect geographic areas of language contact". In: Journal of The Royal Society Interface 18.181, p. 20201031. doi: 10.1098/rsif.2020.1031.

