

Language adapts to its environment: The case of morphosyntactic reduction in Paamese and North Sámi

Simon Devylder¹, Laura Janda¹ & Lene Antonsen¹
¹UiT, The Arctic University of Norway

Keywords: Linguistic Niche Hypothesis, Indigenous Languages, Possession, Morphosyntax

The *Linguistic Niche Hypothesis* (Lupyan & Dale 2010) proposes an explanation of linguistic diversity that is based on mechanisms of cognitive pressures associated with social dynamics. It claims that if we know the size of an ethnolinguistic community, and the proportion of adult second language learners in a population, we can predict the morphological complexity of a language. The hypothesis is based on the logic that L2 speakers rely more on lexical storage and less on combinatorial processing of morphologically complex words than speakers who learned the same language as their first (Silva & Clahsen 2008, Clahsen et al. 2010), which makes the paradigms of highly inflected languages difficult to learn for adults (i.e., the cognitive pressure). L2 speakers are therefore assumed to speak a morphologically-simplified version of highly inflected languages. In a given population of speakers, if the proportion of L2 speakers is high enough relative to the size of the population (i.e., the social environmental pressure), the L2's individual simplified linguistic signature will spread to the whole population and over time simplify the morphology of the whole language. Hence the claim that 'grammatical structure adapts to social structure', just as biological organisms adapt to ecological niches.

The vast majority of the 5,000 indigenous societies of the world find themselves in a situation where the language they speak have been institutionally minoritized by active discriminatory assimilation policies, or by passive discrimination resulting from a lack of opportunities to access education in the L1. Previous findings (Janda & Antonsen 2016) suggest that such societal situations prevent whole generations of speakers from acquiring their native language in childhood, which leads to morphosyntactic reduction over a few generations of speakers. Does this situation, which is overwhelmingly common in indigenous societies, have an impact on the structure of indigenous languages over time?

We address this question with a cross-sectional and cross-linguistic study involving two indigenous linguistic communities, who live a world away from each other, but find themselves in a similar societal situation. We collected linguistic and social data from 60 Paamese speakers (Austronesian, Vanuatu) and 60 North Sámi speakers (Uralic, Northern Norway) with a behavioral experiment, where participants described video prompts pertaining to possession. North Sámi and Paamese speakers can express possession with a synthetic construction (1 & 3) and an analytic construction (2 & 4).

- | | | | |
|-----|---|-----|---|
| (1) | <u>Tamo-k</u> (Paamese)
Father-1SG
'my father' | (2) | <u>Tata ona-k</u> (Paamese)
Father POSS-1SG
'my father' |
| (3) | <u>Áhččán</u> (North Sámi)
father.N.SG.Nom.POSS.SG1
'my father' | (4) | <u>ležan áhčči</u> (North Sámi)
Refl.1SG father
'my father' |

The results of our study show that the younger generations of both communities use significantly more often the morphosyntactically simpler structure (2&4), and that this effect is amplified by a lower degree of language use at school. We argue that because Paamese and North Sámi have no shared ancestry and live in vastly different environment that our results are generalizable to the larger scale of highly inflected indigenous languages. More broadly, the results of this study suggest that language adapts to its (sociolinguistic) environment confirming the findings of previous studies using different methods (Nölle et al. 2020, Trudgill 2010, Nettle 2012).

References

- Clahsen, Harald, Felser, Claudia, Neubauer, Kathleen, Sato, M., & Silva, R. 2010. Morphological structure in native and non-native language processing. *Language learning*, 60(1), 21-43.
- Janda, Laura & Antonsen, Lene. 2016. The ongoing eclipse of possessive suffixes in North Saami: A case study in reduction of morphological complexity. *Diachronica*, 33(3), 330-366.

- Lupyan, Gary, & Dale, Rick. 2010. Language structure is partly determined by social structure. *PloS one*, 5(1), e8559.
- Nettle, Daniel. (2012). Social scale and structural complexity in human languages. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 367(1597), 1829–1836.
- Nölle, Jonas, Fusaroli, Riccardo., Mills, Gregory J., & Tylén, Kristian. 2020. Language as shaped by the environment: linguistic construal in a collaborative spatial task. *Palgrave Communications*, 6(1), 1-10.
- Silva, Renita, & Clahsen, Harald. 2008. Morphologically complex words in L1 and L2 processing: Evidence from masked priming experiments in English. *Bilingualism: Language and Cognition*, 11(2), 245-260
- Trudgill, Peter (2011). *Sociolinguistic typology: Social determinants of linguistic complexity*. Oxford University Press