Studying cross-linguistic influence in L3 by means of artificial language learning experiments

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In this paper, we will discuss several potential designs investigating crosslinguistic influence (CLI) in specifically designed artificial languages with speakers of Polish, English, and Norwegian.

Artificial languages (AL) have proven to be a useful tool when studying Ln acquisition. Jensen and Westergaard (in press) used four artificial languages to investigate the effect of linguistic similarity in third language acquisition, specifically in terms of syntax and the lexicon. Use of artificial languages allowed the authors to have full control over the stimuli.

Previous studies have shown that bilingual speakers of a language with a case system (Russian) and one without (Norwegian) are able to recognise case in an AL, while monolingual speakers of the language without a case system (Norwegian) are not (Mitrofanova, Leivada, & Westergaard, 2022).

The ALs will be designed so that they show similarities/differences with the previously acquired languages, which will allow us to determine potential instances of CLI. We will focus on articles and case as our target properties. Polish is a language that has case but does not have articles, whereas English and Norwegian have articles but are not generally recognised as having a case system (beyond e.g., pronouns in English and Norwegian). The designed AL should reflect these properties, and we will thus design an AL similar to the one in Mitrofanova, Leivada, & Westergaard (2022) with case, another AL with articles, and a third AL type with case on articles. Following Jensen & Westergaard's (in press) design, the ALs will reflect the phonotactics of either the L1 or the L2, which yields a total of six ALs (table 1).

The participants that we will recruit are Polish-Norwegian bilinguals with English as an L2.

These sets of ALs should reveal the interplay between syntax, morphology, and phonology in CLI; additionally with the dual syntax AL we will be able to observe if the syntactic influence comes from both previously acquired languages or just

from the language to which the target AL is phonotactically similar. This will also allow us to investigate how CLI occurs when the target language has properties from the previously acquired languages (i.e. articles, case) but when these properties are not identical (i.e articles with case, case on the article and not the noun).

Table 1: Set of ALs

	Case system	Article system	Case system on articles
Polish phonotactics	Polish syntax Polish phonology	Norwegian syntax Polish phonology	dual syntax Polish phonology
Norwegian phonotactics	Polish syntax Norwegian morphology	Norwegian syntax Norwegian morphology	dual syntax Norwegian morphology

References

Jensen, I.N. & Westergaard, M. (in press). Syntax Matters: Exploring the Effect of Linguistic Similarity in Third Language Acquisition. *Language Learning.*
Mitrofanova, N., Leivada, E. & Westergaard M. (2022) Crosslinguistic influence in L3 acquisition: Evidence from artificial language learning. GASLA 16 Trondheim, May 13-15.