

Cross-linguistic influence in multilinguals: Do dominance and recency play a role?

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The literature is divided in terms of whether dominance plays a role in crosslinguistic influence (CLI) in third language acquisition (L3A): While some scholars have found that dominance is a factor (e.g., Fallah & Jabbari 2018), others have found that it is not (e.g., Lloyd-Smith et al 2021). This paper focuses on morphosyntactic CLI at the beginning stages of acquisition, the point at which it is posited to have the greatest effect, before input-induced and overt learning has occurred. This design also allows for us to test the effect of recency, a little-investigated factor relevant for all experiments on CLI. Recency in this study is operationalised as the language of instruction and the language of the experiment.

Participants are L1 Polish L2 English speakers living in either Poland or the UK, who do not know the target language, Norwegian, prior to the experiment. They are exposed to thirty-six Norwegian words (with pictures) as many times as desired for memorisation (Figure 1), followed by a picture-sentence matching task. They only proceed to the main experiment if they obtain at least 80% accuracy on the lexical items. The main experiment is a forced-choice judgement task, wherein participants must choose between two sentences in Norwegian using the words they learned – one with Polish-like and the other English-like morphosyntax (Figure 2). The constructions are ditransitives, articles, number agreement on adjectives, and pronominal semantic gender for inanimate objects.

Dominance is operationalised primarily through an assessment of domains of use, using the Language and Social Background Questionnaire (LSBQ; Anderson 2017). Participants are also tested on their performance on the relevant structures in English and Polish. We predict that participants who are more dominant in Polish would choose more Polish-like sentences, and those who are more dominant in English more English-like sentences. These effects would be mitigated by the recency effect, wherein, for example, Polish-dominant Polish-recency participants are predicted to choose the most Polish-like constructions, followed by Polish-dominant English-recency participants. Additionally, participants are expected to perform differently for different properties, as the difference in complexity and saliency for different grammatical constructions can affect CLI (Jensen et al 2023), though it is not clear how the response variable would differ for these constructions.

To test our hypotheses that dominance and recency would affect the percentage of Polish-like choices made by participants, we created a linear binomial mixed effects model with random intercepts for participant and item, and a random slope for participant by construction. The model showed no main effects of LSBQ score ($p = 0.19$), recency ($p = 0.76$), or their interaction ($p = 0.82$), and the random effects explained the majority of the variance (conditional $R^2 = 0.37$, marginal $R^2 = 0.006$). We then conducted exploratory analyses including construction as a fixed effect, with interactions between LSBQ score, recency, and construction type. We found that for the Polish recency group only, in the article and ditransitive conditions, the more dominant participants were in Polish, the more English-like choices they made (article $p = 0.0001$, ditransitive $p = 0.007$). For the number agreement condition, dominance in Polish led to more Polish-like choices ($p = 0.02$). We discuss these results in light of the CLI during sentence processing model and cognitive control (van Dijk 2021), foreign language effects (Falk & Bardel 2010; 2021), the Bottleneck Hypothesis (Slakabova 2019), and the L3 dominance literature. Our results also indicate that participant behaviour is different depending on the language of the experiment and the construction chosen, showing that these factors are crucial considerations in experiment design.

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Figures:

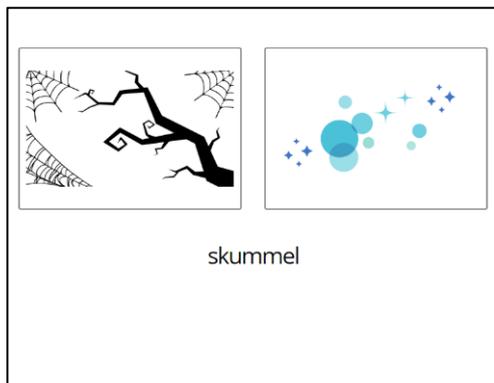


Figure 1: Vocabulary exposure



Figure 2: Forced-choice judgement task

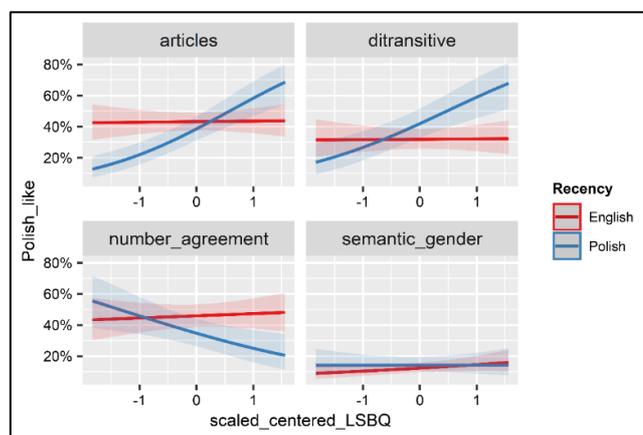


Figure 3: Exploratory analysis – predicted probabilities of Polish-like choices by LSBQ score, Recency and Construction