

## **Morphological convergence in a simulated dyadic interaction**

**Background:** Speakers converge in interactions across a wide array of linguistic domains, including inflectional morphology (Rácz et al 2020). The present study looked at how social and lexical factors shape morphological convergence in a dyadic interaction. We used an online word matching game with nonword stimuli (Von Ahn 2006). Our questions were: Can participants converge to the responses of a simulated co-player during the game? Does this convergence involve a shift in lexical distributions towards the co-player's distributions? Do these response patterns persist upon subsequent retesting? Is the task easier with a socially more salient morphological pattern (Eckert 2008)?

**Stimuli:** The study used non-word stimuli derived from Hungarian verb inflection. Two types of patterns were examined: one exhibiting morphological levelling, which is productive, systematic, and socially salient, and the other involving vowel deletion, which is heterogeneous, highly variable and lacks clear social indices in Hungarian.

**Methods:** An online experiment was conducted where Hungarian native speakers participated in a matching game with an artificial co-player to simulate social interaction. The two players had to complete a target sentence with one of two variants of the same verb form. Participants had to match the co-player's response to gain points. That is, an effective participant had to converge to the co-player. Co-player responses were based on different lexical distributions for levelling or vowel deletion. After the matching game, participants were retested with new nonwords to see whether learning persisted. Participants were retested immediately and with a 24-hour delay. We used hierarchical generalised linear models to predict participant responses in the matching game and the post-test, based on co-player lexical distribution. Methods and analyses were pre-registered.

**Results:** Results indicated that participants could learn and apply variable morphological patterns from the game. Participants adapted to the co-player's distribution patterns, demonstrating qualitative changes in lexical usage rather than merely quantitative adjustments in variant frequency. The study found no significant difference in the ease of learning between socially salient levelling pattern and non-salient vowel deletion pattern. Thus, social indices appear not to facilitate learning, at least within the scope of this experiment. Both learning and adaptation persisted during retesting, suggesting robust integration of learned patterns.

**Context:** The findings contribute to the broader understanding of how language varies and stabilises across social contexts. Importantly, the study offers insights into the automated nature of language processing. Our results suggest that while social meaning influences language use, learning and morphosyntactic adaptation function independently of these social contexts.

## **References**

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