

## PERCEIVED SOCIAL PROXIMITY INFLUENCES CONVERGENCE IN DIALOGUE

Christina S. Kim and Gloria Chamorro (University of Kent)

Evidence from phonetic imitation studies has shown that listeners adapt their speech to be more similar to that of a speaker they have prior exposure to [1-2].

Furthermore, the extent of convergence appears to be modulated by listeners' perceptions of speaker characteristics such as the attractiveness of their voice, or the typicality of their accent [3]. Both social and cognitive explanations have been proposed: convergence could be motivated by the listener wanting to increase their similarity to an 'in-group' or socially well-positioned individual, or by automatic processes that detect speech characteristics like typicality or distinctiveness [3-5]. The current study extends the logic of this work to the structural domain, asking whether listeners' adaptation of syntactic forms they produce depends on their perceptions about their interlocutor's social proximity and linguistic competence.

We use structural priming [6-7] as a measure of listeners' convergence with their interlocutor. Structural priming has been a useful tool for probing abstract syntactic representations in large part due to its implicit nature [8], which has led some researchers to liken it to implicit procedural learning [9]. Here, we compare priming in conversations between (i) pairs of native speakers of the same dialect (Exp1-2), (ii) native and non-native speakers (Exp1-2), and (iii) native speakers of two dialects of the same language (Exp 2), to assess to what extent interlocutor characteristics influence convergence or divergence of syntactic forms in dialogue.

**Experiment 1.** Participants played a picture-matching game which involved taking turns with another speaker to describe scenes depicting ditransitive events (e.g. "Harry showed Hermione the painting") using the verb provided. Participants heard a recorded voice and were told to make their descriptions to be maximally clear to the speaker in the recording, who would have to perform the same task using the participant's descriptions. Speaker type (native British English speaker/NS, non-native Spanish-accented speaker/NNS) was manipulated between subjects. All recordings used double object (DO) structures. Half were acceptable in English; the other half used verbs that do not participate in the dative alternation in English, creating anomalous sentences (e.g. "Hermione described Ron the monument").

Responses were coded as DO, PD (prepositional dative), or other.

Unaggregated responses were fitted with separate mixed-effects regression models predicting DO responses, with subject and item included as random effects. Verb type (alternating, non-alternating), trial number, and speaker type (NS, NNS), and all two-way interactions were included as predictors. Fixed effects were removed from the model using stepwise model comparison if they did not improve model fit or were collinear with other model terms. Unsurprisingly, alternating verbs were more effective primes than non-alternating ones ( $\beta=.15$ ,  $p<.05$ ). However, this advantage was stronger for NNS than NS ( $\beta=.31$ ,  $p<.0001$ ): participants produced more anomalous DO structures when interacting with a NS who also used those structures (see [10] for another priming study involving syntactically anomalous sentences).

Why might listeners be more likely to produce anomalous structures if it means converging with the syntax of another native speaker? First, listeners may adapt more to speakers that they perceived to have native competence in the language, which is indicative of their level of certainty with respect to the acceptability of syntactic forms (*Competence hypothesis*). This is supported by [11], who show that ungrammaticality is more likely to be interpreted as misperception for typical native speakers than for native speakers with atypical dialects or L2 speakers.

Second, listeners may adapt more to speakers that they perceived to be socially similar to themselves, as indicated by the accent associated with their dialect or non-native status (*Social proximity hypothesis*). Existing work suggests that at least phonetic alignment is sensitive to social signalling pressures [5].

Finally, listeners may treat different dialects and different L1s alike in terms of their likelihood of having syntactic differences from their native dialect (*Different grammars hypothesis*). [4] show that same-dialect dyads show greater phonetic convergence than both different-dialect and different-L1 dyads. The same pattern at the syntactic level would suggest that listeners assess not nativeness, but the plausibility of a speaker having a different grammar (as with a different dialect or L1).

**Experiment 2.** The same procedure was used as in Experiment 1, with two changes. First, live confederates were used instead of recordings. Participants and confederates communicated over headsets from adjacent testing rooms. Second, there were three Speaker types, manipulated between subjects: native British English/BrE, native North American English/NAm, and non-native (Spanish-accented)/NNS. The NAm speaker condition provides an important test case for the above hypotheses: it is predicted to pattern with the BrE condition (showing more priming/convergence than the NNS condition) if competence is what drives convergence, but with the NNS condition (less priming than the BrE condition) if listeners are assessing the likelihood of the speaker's grammar allowing different syntactic forms. If convergence is driven by perceived social distance as approximated by the speaker's accent, the BrE condition should show the most priming, followed by NAm, with the least priming in the NNS condition.

To assess listeners' perception of their interlocutors, they were asked where they thought the speaker was from, and how they would describe their usage of English (Fig. 1). As their perception of the speaker's origin became more distant, listeners became less likely to respond that the speaker spoke similarly to them (UK: 48.3%; US: 84.0%; Europe: 93.9%). Listeners were less likely to indicate that the speaker used language differently from themselves when the speaker was perceived to be from the UK (UK: 51.7%; US: 16.0%; Europe: 3.0%), despite the fact that all confederates used scripts, and therefore produced the same grammatical and anomalous forms.

Preliminary data suggest that rates of structural priming for non-alternating verbs follow listeners' judgments: the extent of convergence is predicted by perception of social proximity, arguing against an explanation of convergence that relies solely on perceptions of native competence.

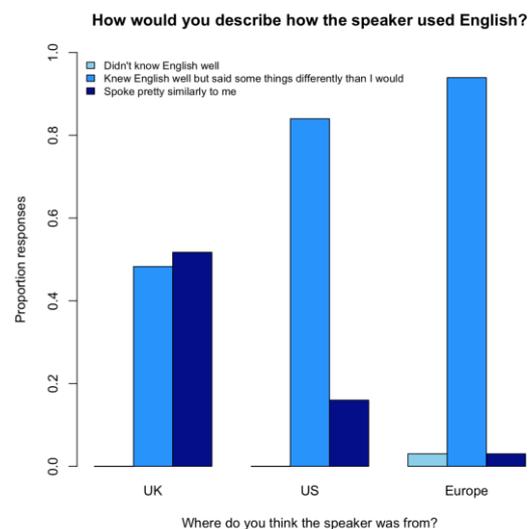


Figure 1. Listeners' perceptions of interlocutors.

**References.** [1] Goldinger. 1998. *Psych Rev.* [2] Namy, et al. 2002. *J Lang Soc Psych.* [3] Babel, et al. 2014. *LabPhon.* [4] Kim, et al. 2011. *LabPhon.* [5] Babel. 2010. *Lang in Society.* [6] Bock. 1986. *Cog Psych.* [7] Pickering and Branigan. 1998. *JML.* [8] Bock & Griffin. 2000. *JEP: Gen.* [9] Chang, et al. 2000. *J Psycholinguistic Res.* [10] Ivanova, et al. 2012. *JML.* [11] Brehm, et al. 2018. *Quarterly J Exp Psych.*