The power of linguistic similarity for unlocking cooperation – Evidence from syntax and pitch experiments

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It is important to know who is a good cooperation partner, and current research highlights how language can be a key signal of cooperativeness (Henrich & Henrich, 2007; Matzinger et al., 2024). In particular, low-level mechanisms such as subconsciously matching others' language seem to be good signals to assess others' cooperative potential (Wacewicz et al., 2017; Pickering & Garrod, 2004). There are two possible explanations for this: First, low-level linguistic similarity (i.e., continuous "*alignedness*" from the start of a conversation) can indicate group membership (Dunbar, 1996; Axelrod et al., 2004), and it is known that in-group cooperation is more successful (e.g. Balliet et al., 2014). Alternatively, adapting to others' linguistic choices (i.e., progressive "*alignment*" throughout a conversation) can indicate others' willingness to cooperate, since it can signal an initial cognitive investment in the cooperation (Kulesza et al., 2014; Chartrand & Bargh, 1999).

We experimentally (cf. Bock, 1986) tested whether 100 English-speaking participants would rather cooperate with communication partners who did or did not match the participants' syntactic choices (e.g., "X lends Y to Z" vs. "X lends Z Y"; Matzinger et al., 2024). A logistic regression model showed that when participants could communicate in their own preferred structures, they predominantly chose linguistically similar conversation partners as cooperation partners (77.0%). However, when participants were forced to communicate in variants different from their natural preferences, they preferred those partners that matched their actual preference (59.3%), instead of those that were similar to their overt linguistic use. This suggests that the sheer act of adapting to someone's linguistic production is not as crucial for choosing cooperation partners, even if it involves an initial investment. Rather, the decisive factor is sharing someone's linguistic preferences and thereby indicating group membership.

To further disentangle the influence of *alignedness* vs. *alignment* on perceived cooperativeness, we will supplement those findings with results from a follow-up experiment on pitch similarity. Participants will rate conversation partners speaking with a pitch that is a) aligned from the start of the conversation, b) aligning throughout the conversation, and c) dissimilar throughout the conversation. In line with the results on syntactic alignment, we predict that interlocutors in group a) will be considered as most cooperative, followed by group b), while group c) will be assessed as least cooperative. Ultimately, understanding the relationship between language and cooperation in social groups will help us shed light on the evolution and stabilization of both of these particularly prominent human traits.

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