Group membership impact on referential communication

Arriving at the speaker's intended meaning involves linguistic, cognitive and social processes, which include incorporating knowledge concerning the speaker's identity. Previous research focused on social characteristics of the speaker or listener, but often overlooked effects of group membership and specifically intergroup interactions (i.e., when speaker and listener are not part of the same social group). Intergroup interactions have been shown to deplete executive functions resources (Richeson & Trawalter, 2005) and interfere with theory of mind abilities (Hackel et al., 2014).

Additionally, previous research showed that intergroup settings affect interpretation when the content is group-relevant (Beltrama & Schawrz, 2021). Importantly, this is also the case in group-neutral interpretations for jokes (Morisseau et al., 2017), as well as regularized scalar implicatures (the authors, in prep).

In the current study, we expand our finding to another well-tested case, which is directly related to ToM abilities, the communication of referring expressions. To effectively use referents, interlocutors have to consider which objects are shared and which are privileged. This requires representing the knowledge of the others (Heller et al., 2012). If the ability to represent the knowledge of outgroup members declines, then a more egocentric perspective is expected in intergroup settings.

To test this hypothesis, we employed the Director's Task (Keysar et al., 2000). In this task, participants are presented with an array of objects in grid display (Fig 1.). A confederate director instructs them on which object to choose. Critically, some of the cells in the grid are only privileged to the participants. In critical trials, privileged objects are competitors for the object mentioned by the director. If participants are able to represent the director's perspective, they should ignore those cells completely. Yet, previous studies have shown that participants do consider the competitor to some extent (e.g., Barr, 2008). We assume both more errors and longer processing times when interacting with an outgroup member than when interacting with a neutral speaker.
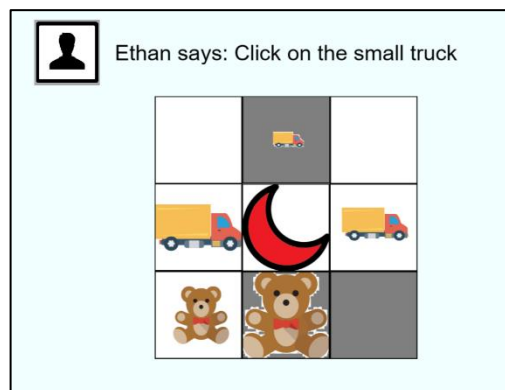

Fig 1. An example of a critical trial – the smallest truck is privileged (as indicated by the grey background) so an accurate response would be to choose the medium sized truck.

We conducted an online experiment (N=72, preliminary results). Participants were American native English speakers who identified themselves as Democrats. To avoid intergroup task effects, we divided the participants into three groups: (i) an ingroup condition where the director was a member of their own group (democrat), (ii) an outgroup condition where the director was a member of the other group (republican), (iii) a control group, to serve as a baseline (no party affiliation mentioned).

In the experimental groups, participants first had to indicate their political affiliation by clicking on the appropriate party logo and to answer a group identification questionnaire (adapted from Leach et al., 2008). All the participants were then told they will play a "game" with another player (who was actually a virtual-decoy) who played as the director in the game. In the experimental groups, the party affiliation of the speaker was constantly highlighted.

We modelled the rates of correct (non-privileged) responses with a fixed effect group (control/ingroup/outgroup; Fig 2a.). The model did not reveal an effect of group (p = 0.11). We then modelled the RTs for correct responses in both control (no privileged option) and critical trials with fixed effects of group and trial-type, as well as the interaction between the two (Fig 2b.). The model revealed an interaction ($p < 0.05$) where RTs for critical trials were significantly longer than for control trials in the outgroup condition ($p < 0.05$), but not in the ingroup and

control conditions. There were no main effects of group or trial type ($p =0.64$ and $p = 0.51$). We did not find correlations for level of identification.
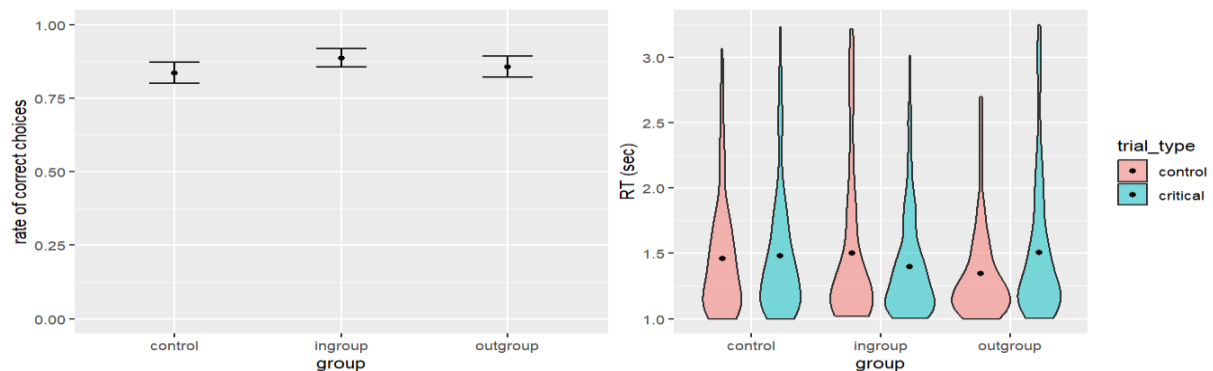

Fig 2. a. rate of correct responses in critical trials by group; b. RT for correct responses in the control and critical trials.

Our preliminary results show that a high-threat intergroup setting impacted the processing time of referring expressions, though it did not affect accuracy. This suggests an egocentric perspective is considered more often in cases where the speaker is an outgroup member, perhaps due to difficulty in representing the knowledge of the. This processing cost can, in turn, result in more inefficient communication.

Notably, Savitsky et al. (2010) suggested that increased familiarity between interlocutors (friends rather than strangers) causes listeners to adopt a more egocentric perspective. They argued that this is because listeners erroneously attributed a similar perspective to their familiar interlocutors. Thus, these results are interesting in that they show: a. that an egocentric perspective may also be reached by a lesser identification with the speaker; b. that increased *similarity* between the interlocutors in terms of group membership (i.e., ingroup interactions) do not lead to the adoption of egocentric perspectives. This may suggest a difference between two types of 'familiarity' - frequency of interaction or similarity between interlocutors (as dissociated by Brown & Levinson, 1987).

References:

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