

Does cognitive capacity modulate pragmatic inferences triggered by informational redundancy? (Poster)

Freitag,
06.03.2020
13:15–14:15
ESA1 W Foyer

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Many studies on pragmatic inferences report individual variation in whether pragmatic inferences are drawn [1, 2]. In the literature, one can find a range of hypotheses that try to explain this variation through an interplay of different factors, depending on the type of pragmatic phenomenon. Among studies on scalar implicatures, individual variation among healthy adults is typically attributed to the participants' cognitive resources [2, 3] or participants' personality traits [4]. Considering figurative speech, namely metaphors, one can report importance of executive function [6, in schizophrenia], language ability in general and semantic skills specifically, as well as first-order theory of mind [7, in ASD].

The core idea of our experimental study is to test whether a limitation in cognitive resources leads to a lower rate of pragmatic inferences triggered by informationally redundant (IR) utterances. In order to modulate cognitive capacity of participants, we introduce a dual task design, and adopt the stimuli set from [5]. In the high load condition, participants perform a mouse tracking task while listening to a story. In the low load condition, they perform only listening. Stories establish a particular topic, thus making some topic-related activities a priori highly predictable. For example, given "going to the swimming pool" scenario, the "bringing a swimsuit" activity is anticipated from world knowledge and is hence informationally redundant. We manipulate the presence or absence of the IR utterance which describes topic-related activity ("Lisa brought her swimsuit!"). A pragmatic atypicality inference would involve participants inferring that Lisa often forgets her swimsuit and that it is worthwhile mentioning that she brought it. The presence of the inference is assessed by asking participants to rate how strongly they would assume that Lisa usually performs the IR activity.

Data analysis of ninety-eight German-native speakers showed a main effect of activity habituality ($\beta = -21.97$, $t = -6.14$, $p < .001$). Habituality estimates are significantly lower in the with-IR condition, showing that participants did draw the inference based on the IR utterance. This finding replicates results of a single task English study by [5]. Contrary to expectations, the inference is however **stronger** under high load than low load ($\beta = -8.07$, $t = -2.08$, $p < 0.05$).

Thus, the first pilot experiment has not shown the expected effect that pragmatic inferences get weaker when there is more load on cognitive resources, which might imply that dual tasking capacity in terms of cognitive control might not be a major factor in determining whether people draw pragmatic inferences or not.

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References: [1] Antoniou, K., Cummins, C. & Katsos, N. (2016). Why only some adults reject under-informative utterances. *Journal of Pragmatics*, 99, 78–95. [2] Bott, L. & Noveck, I. A. (2004). Some utterances are underinformative: The onset and time course of scalar inferences. *Journal of memory and language*, 51(3), 437–457. [3] De Neys, W. & Schaeken, W. (2007). When people are more logical under cognitive load: Dual task impact on scalar implicature. *Experimental psychology*, 54(2), 128–133. [4] Katsos, N. & Bishop, D. V. (2011). Pragmatic tolerance: Implications for the acquisition of informativeness and implicature. *Cognition*, 120(1), 67–81. [5] Kravtchenko, E. & Demberg, V. (2015). Semantically underinformative utterances trigger pragmatic inferences. In *CogSci*. [6] Langdon, R., Coltheart, M., Ward, P. B. & Catts, S. V. (2002). Disturbed communication in schizophrenia: the role of poor pragmatics and poor mind-reading. *Psychological medicine*, 32(7), 1273–1284. [7] Norbury, C. F. (2005). The relationship between theory of mind and metaphor: Evidence from children with language impairment and autistic spectrum disorder. *British Journal of Developmental Psychology*, 23(3), 383–399.