

Speaking of quantifiers

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According to generalised quantifier theory, quantifying expressions in natural language denote relations between sets. This ostensibly simple idea forms the basis for a compelling explanation of many otherwise puzzling findings about, e.g., the inferential potential of quantifying expressions and the order in which they are acquired during language development. However, the crisp and lean meanings postulated by generalised quantifier theory sit uneasily with the vague and complex ways in which quantifying expressions are used in actual speech situations. In this talk, I critically discuss a computational model that we developed to bridge the minimalist meanings postulated by generalised quantifier theory with the complex ways in which quantifying expressions are actually used. This model revolves around two key assumptions: (i) interlocutors try to optimise the probability of coordination by taking each other's perspective, and (ii) interlocutors' perception and representation of large numerosities is fallible. I show how this model is able to explain complex patterns in the use of quantifying expressions while preserving the minimalist semantics from generalised quantifier theory. Furthermore, I show how this model can be applied to study the source of differences in the use of quantifying expressions between neurotypical and autistic individuals. Finally, I address recent findings by Ramotowska and colleagues (2023) and Cummins and Franke (2021) that may be taken to challenge some of the assumptions that underlie our model.