

Semantics, pragmatics, and noise in the acquisition of quantification

A central tension in many experimental tests of quantificational development is the problem of differentiating the contribution of core semantic representations from the outputs of pragmatic inference (whether classically Gricean, grammatical, or otherwise). I argue that some popular tests of semantic competence currently used in the acquisition literature, and frequently examined in my lab, likely exacerbate this problem by violating Gricean maxims of conversation, slowing progress. In particular, many of Piaget's assessments of semantic knowledge proffer information that is not relevant to the intended question under discussion (QUD), violating the maxim of relation. When children accommodate this proffered information, they converge on alternative and often unpredictable QUDs, leading to apparent failures. These tasks showcase children's deep sensitivity to Gricean maxims, but otherwise fail to make progress on the central questions of semantic development. To show this, I begin by demonstrating how tests of implicature, quantifier spreading, and quantity judgment violate Gricean maxims, and then focus on the case study of number to show how these violations open up a range of alternative interpretations that children entertain, resulting in unpredictable noise. I argue that when we move away from these tasks to measures that sharply delineate the intended question, real progress can be made in understanding semantic development.