

Sensitivity to quantity maxims in children with autism and language impairment

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Pragmatic ability in typical and atypical populations has received significant attention from linguists and clinicians, yet questions remain regarding specific pragmatic competencies in developmental disorders such as Autistic Spectrum Disorders (ASD) and Language Impairment (LI). Experimental work on Gricean pragmatics has focused on the sensitivity of speakers and addressees to the quantity, relevance, quality and manner of information which interlocutors exchange, and we continue in this approach by combining theoretical insights from linguistics with experimental methodologies used by developmental psychologists. Within this interdisciplinary framework our project addresses the relationships between semantic, pragmatic and social cognition, examining Gricean reasoning in two atypical populations, and narrowing the scope of pragmatic competence by looking specifically at the operation of the Maxim of Quantity.

In atypical cognition, a significant body of research (e.g. Happe, 1993; 1995; 1997; Surian et al, 1996; Jolliffe & Baron-Cohen, 1999; 2000) has found that the linguistic pragmatic competence of people with ASDs is severely restricted in tasks such as metaphor comprehension and lexical disambiguation. However, more recent contributions in this area have found that when the language level of the ASD population is taken into account, low performance on these tasks is actually associated to low language level and not to ASD (Norbury, 2005a; 2005b). The next step in this research is to take into account the language level of ASD populations and to administer tasks which directly measure pragmatics while minimising the role of vocabulary and other levels of language.

Research questions:

1. How does the sensitivity to pragmatic informativeness in children with ASD and LI compare to that of typically developing children?
2. Are delays or deviations in informativeness due to impaired social cognition or low language level?

The project will employ a methodological paradigm used in a recent study with typically developing children and adult controls (Davies & Katsos, in press). It incorporates production and ratings tasks on informativeness, which from the speaker's perspective is the ability to give as much information as one can, but not more than is required, In the hearer role, utterances which violate either maxim of quantity should generate a quantity implicature, by which the hearer looks for some reason why the speaker has elected to give either more or less information than the context demands. If no rational reason is found, then the hearer should reject or penalise such infractions.

This type of task tests pure pragmatics, since no lexical, semantic, or general judgment abilities beyond those demonstrated in the control items are required. If the atypical participants pass the semantics (i.e. score similarly to language-matched controls), and fail the pragmatics, such a result would indicate a specific impairment to the pragmatic module.

We predict that participants with ASD-only will perform well on judging semantically appropriate or inappropriate control utterances, whereas those with LI are likely to show impaired performance. If ASD is associated with a deficit in linguistic-pragmatics, then ASD-only and ASD+LI will not consistently reject under- and over-informative utterances. Conversely, we expect the LI-only and age-matched typically developing children to correctly reject such utterances. The resulting discussion will explore the links between adherence to Gricean maxims, flexibility to adjust to context, impaired Theory of Mind, and language level.