

A Reading of  
Simon Baron-Cohen's

Precursors to a Theory of Mind: Understanding Attention in Others

Study of deficit disorder is a fruitful practice throughout the psychological field. Often the best way to assess and isolate a specific psychological capacity is by examining subjects who lack a certain capacity, or a certain trait that leads to the lack of a capacity. The research presented in Baron-Cohen's paper takes this approach towards the question of theory of mind, and in particular the development of the above. For that purpose autism, roughly described as a incapability in normative social behavior, is examined under the premise that the actual deficiency present in autistic children is that they don't have a healthy representation of other people's minds.

This basic premise is backed by prior research, comparing Leslie's theory of "metarepresentation" with Hobson's theory of "emotion grasping". On that point I easily agree with the author in preferring Leslie's framework over Hobson's, if only because the somewhat vague concept of grasping emotion in an unmediated fashion does not seem to be sufficiently explanatory.

Baron-Cohen refines Leslie's metaphysical approach by focusing on joint attention as an indicator of metarepresentation. Here he distinguishes between *proto-declarative* and *proto-imperative* modes of joint attention. This distinction proves valuable to isolate metarepresentative behavior from representative behavior. This follows from the fact that imperative attention sharing can be attributed to an agent who sees its collaborator merely at a behaviorist level.

This distinction, as well as the supportive empirical data, strikes me as very useful. The lack of social abilities in autistic children due to their inability for metarepresentation, and especially the empirical outcome of this (no declarative joint attention) can be used in reverse when designing socially capable agents.

Joint attention is naturally of vital interest to us when discussing collaborative behavior. The ability of a collaborator to share an object of attention is a necessary condition for their function. It is helpful, then, to think about designing proto-declarative attention behavior in addition to proto-imperative joint attention, to bring forth a more "social" way of interaction.

In addition, Baron-Cohen's schematic of Perception, Attention and Belief seems like a positive refinement of Wellman and Bartsch's simpler Perception - Belief mechanism, and one we should want to embrace.

That said, I did find one piece of data somewhat contradictory to the general theory, namely the tendency of autistic children to "lead" adults to objects of joint attention. While this can be construed as a imperative-behavioristic approach on part of the child, it seems counterintuitive to me to assume that this behavior does not result from a theory of mind in the child's psyche.