Understanding autistic communication

One of the curiosities of how autism research has developed over time is that it has traditionally focused on individual autistic abilities in an attempt to explain observed difficulties in social interaction. It’s curious, because social interactions are a two-way process (i.e. involving other people), and many other research disciplines (e.g. anthropology and sociology) have understood human interaction as a socially situated activity for decades.

To be social requires a combination of:

- individual skills, such as anticipating what people are thinking and feeling
- an environment which supports the way people interact, such as the cultural norms which govern how we interpret what is meaningful and appropriate behaviour.

Understanding one’s social-cultural environment for interacting is important because it includes rules and norms which guide people in how to develop shared understanding. However, we already know that many aspects of what might be termed a “neurotypical cultural norm” (i.e. the predominant way of interacting in culture) are problematic for autistic people.

A classic example (in Britain at least) is the unwritten rules about managing eye contact - too much in an interaction is deemed obsessive and too little is deemed untrustworthy. For autistic people who may have difficulties processing facial expressions or interpreting non-verbal communication, this presents a challenge - but critically it is a challenge situated in the relationship, not the
individual, because it arises from the mismatch of norms and expectations that autistic and non-autistic people use to make sense of each other.

This mis-alignment between people who hold different norms and expectations of each other has been termed the ‘double empathy problem’ by Damian Milton (Milton, 2012). It has been the subject of a rapidly growing body of research in recent years (Heasman & Gillespie, 2018b; Sasson & Morrison, 2017; Sheppard, Pillai, Wong, Ropar, & Mitchell, 2016) because it underpins many of the reciprocal challenges in social interaction autistic people experience.

Our research: understanding neurodiverse intersubjectivity

We wanted to study autistic interactions in an environment only involving autistic people, where there was no imposition of neurotypical norms (Heasman & Gillespie, 2018a). Our key question was to examine how shared understanding is achieved between autistic people in a naturally occurring daily activity. We also took many methodological steps to reduce the potential for bias in interpreting autistic behaviour from a neurotypical viewpoint.

Method

We mapped shared understanding between 30 young adults taking part in a naturally-occurring activity at a charity supporting autistic adults. The activity was video-gaming, which was the most popular social activity at the charity, and we filmed 20 sessions. Each session was transcribed verbatim and then each utterance in a conversation was scored in terms of how it related to the previous utterance.

This follows the principle of dialogue (Linell, 2009) and conversation analysis (Seedhouse, 2004), where each utterance by a speaker is part of a wider sequentially organised unit of meaning-making. In essence, when we communicate we externalise our thoughts and aim to build a shared understanding that both parties have access to, and which informs our future actions. This is known as building intersubjectivity (literally, the bridging of subjectivities; Gillespie & Cornish, 2010).

Importantly, we studied three aspects of how conversations related to each other, because there are many ways in which people may interact with each other.
For example:

1. Coherence, which relates to how logically connected an utterance is to the previous utterance in a conversation.
2. Affect, which relates to how similar in emotion an utterance is to the previous one.
3. Symmetry, which relates to how assertive or submissive the turn is in comparison to the prior turn.

These three dimensions are common properties of all social interactions. Using the scores we gave each utterance, we were able to develop a map of each interaction over time.

Findings

Our study identified two common properties across all interactions that enabled shared understanding to be established.

- autistic participants could make very generous assumptions of common ground
- autistic participants demonstrated a very low demand for social coordination

Generous assumptions of common ground

This may for example involve specific references which would only make sense with certain prior knowledge. Although often leading to many ignored turns, it could also have the social benefit of leading to fantastic rapport.
Example 1: assumptions of common ground (pseudonyms used)

While playing Assassin’s Creed and looking at the inventory of weapons collected:

1. Daniel: I need more knives because they (weapons collected) are not knives. (adopts Australian accent) “this is a knife”

2. Max: Ha! (adopts Australian accent) “no that’s a spoon”. “Oh you’ve played knifey spoozy before?”

3. Daniel: Yea I love that show

(1) Daniel references a scene from the film Crocodile Dundee.

(2) Max responds by quoting dialogue from an episode of The Simpsons which parodies Crocodile Dundee.

(3) Daniel understands the implicit shift of reference point since he refers to a “show” and not the film.

Low demand for social coordination

Participants would not be overly troubled if the interaction became disconnected and turns were not reciprocated. Far from being problematic, this provided participants with the freedom to switch between individual and cooperative ways of making sense of their experiences.
Example 2: low demand for social coordination (pseudonyms used)

While climbing a building with their avatar

Mark: They have put effort into this game
David: vehicle attacks-
Mark: -I look at buildings and I think "my god"
David: I know something that was a big deal was vehicle attacking. Like you could pull up to an enemy stage coach jump across and beat them up. I think that was a thing
Mark: I wouldn't even spend time playing the game I would just be walking around admiring the view [...] look at that! Westminster Church is amazing-
David: -the controls are a bit annoying sometimes you can't tell it what to do
Mark: Oh my god it makes me feel queasy
David: I never experience that with games I don't think I get vertigo
Mark: No don't jump! can you imagine this on VR?
David: Have you ever watched "Jack Septic Eye"? He plays a lot of VR games and he has a fear of heights [...] I have seen him play Spiderman and he was terrified.
Mark: Was he? was he genuinely?

(1) Mark and David talk about two separate topics without responding to each other.

(2) However unreciprocated turns are not a problem. Their loose coordination provides the freedom to explore and eventually discover a point of connect and build rapport around the topic of vertigo in computer games.

The advantage of these two approaches to conversation is that they enable diverse forms of social relating that would normally be restrained by conventional social norms. It provides the freedom to continually experiment with different ways of connecting with others without incurring a significant social cost if references or turns are not reciprocated.
Future areas of potential development

For neurodivergent intersubjectivity to work, both parties must have the same broad expectation about communicative style. This raises an interesting question about whether neurodivergent intersubjectivity can be taught to non-autistic people, to reduce gaps in mutual understanding.

Further research is certainly needed to understand how such patterns unfold in different social settings involving different activities. This can help us to understand, more accurately, what meaningful adjustments can be made to the context (e.g. the perspectives of non-autistic people, the physical environment, and group norms) that can reduce gaps in understanding between autistic and non-autistic people.

References


