

CROSS TALK

Scientists discuss selfhood in autism

BY GREG BOUSTEAD

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Defining selfhood is slippery business. The perception of one's self is as ineffable as it is intimate. But **decades of research** — starting with Leo Kanner's **pioneering work** in 1943 — have consistently shown anomalies in how people with autism refer to themselves, prompting many researchers to hypothesize that the disorder may influence the sense of self. A study we **reported on in February** found abnormal personal pronoun use among deaf children with autism. Our article prompted a lively discussion about selfhood in autism, baring heartbreaking personal experiences. One **reader wrote**: “I am autistic and I feel no sense of self; I feel I don't exist.”

But do these findings betray a fundamentally different view of the self among people with autism? Or do they represent little more than a language mix-up? To examine this and related questions, we invited commentary from several researchers who study different aspects of self-representation in autism.

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Aaron Shield

Assistant Professor, Speech Pathology and Audiology, Miami University in Ohio

Pronouns, like selfhood, are imprecise

Aaron Shield is a linguist and is assistant professor of speech pathology and audiology at Miami University in Ohio.

The different ways in which people use language give us clues about their internal experiences, including their experience of the 'self.' Some of these clues emerge from the linguistic forms people choose when talking about themselves and others.

One common way is to use proper names or common nouns: ***Natalie** is standing over there; the **boy** is swimming.* We also regularly use pronouns, which take the place of nouns or names: ***She** is a very fine journalist; looks like rain to **me**.*

Most people tend to use pronouns to talk about themselves. To me, it feels odd to talk about 'Aaron' when I could use the pronouns 'I' or 'me.' Using my own name feels detached and strange (though I could do this for comedic effect). My own name feels like it belongs in others' mouths, whereas I feel closely connected to the pronouns 'I' and 'me.'

I work with deaf children who have autism and whose primary language is American Sign Language. My colleagues and I see a clear difference between how deaf children with and without autism refer to themselves and others: Children with autism **tend to sign their own names**, whereas typically developing children most often use sign language pronouns.

Hearing and speaking children with autism also refer to themselves **using their own names** rather than a pronoun in certain contexts — for example, when identifying a picture of themselves. This similarity is rather curious if you consider that sign language names are often more linguistically complex, semantically opaque and physically difficult than sign pronouns, in which a person points with the index finger to oneself or to another person.

The fact that both hearing and deaf children with autism use names rather than pronouns led my colleagues and me to speculate that there could be a difference in their experience of self that is reflected in this different use of language.

But there is a difference between talking about the self and subjectively experiencing the self. I have no direct way of knowing how it feels to be someone with autism, except by listening to people with autism articulate their own experiences. And how good are any of us at describing how it feels to be 'me' on the inside?

Some colleagues with autism have suggested that they dislike pronouns because they feel imprecise. When I use the pronoun 'me,' it designates one person, but when someone else says 'me,' it designates a different person. Names, by contrast, are consistent: They always designate the same person. It could well be that the differences we observe in language reflect not so much

different experiences of selfhood but different attitudes toward the perceived precision of linguistic forms.

The concept of a self is a squishy one. Why do we even have it? And how might our experiences of this self differ among all of us? I think that observing these differences between people with and without autism can actually lead us to a richer understanding of being human.



Geoff Bird

Senior Lecturer, King's College London

Social imitation may reveal something important about sense

Geoff Bird studies emotional processing at King's College London in the U.K., where he is senior lecturer in cognitive neuroscience.

The reported misuse of pronouns, whether spoken or gestural, in individuals with autism is fascinating. Whether it reveals a difference in a sense of self or just in the way individuals with autism use language to refer to the self is harder to determine.

These observations are interesting in light of findings regarding imitation and mirror neurons, which help us to copy others' actions. Although old theories suggest that the mirror system might be impaired in autism, we now know **this is not the case**.

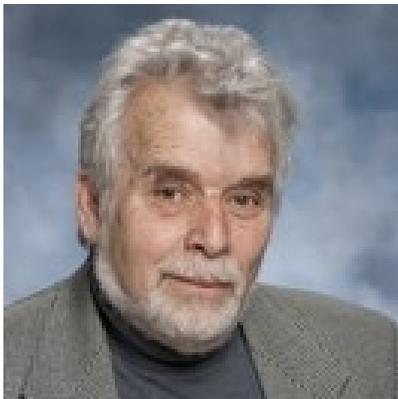
Many individuals with autism have **problems inhibiting imitation** rather than with imitation itself. Interestingly, difficulties in inhibiting imitation have also been linked to an impaired ability to differentiate between 'self' and 'other' in autism. In turn, these difficulties have been linked to problems with adopting a perspective different from one's own. All of these results point to the representation of the self, and of others, as atypical in autism. The inhibition of imitation — and presumably of mirror neurons — may be important for an intact sense of self versus other.

Aside from exploring imitation, my colleagues and I have been trying to disentangle the effects of autism and alexithymia. Alexithymia is a condition in which individuals are unsure which emotion they are feeling. They may be unable to tell whether they are angry, afraid or sad. One can imagine how distressing this can be. Individuals with alexithymia often have an uncomfortable degree of emotional arousal that they can't reduce because they are not sure whether to yell at someone, run from them or hug them for comfort.

Alexithymia is much more prevalent in people with autism, hovering around 50 percent, than in the general population, where the prevalence is about 10 percent. Interestingly, equally high rates of alexithymia characterize a number of other clinical conditions, including eating disorders and substance abuse.

Alexithymia may lead to an impaired sense of self. It makes intuitive sense that an individual who cannot determine what they are feeling may be worse at understanding and predicting their own behavior. That failure may, in turn, impair their ability to determine who they are and to get a sense of their own personality.

Unpublished work from my lab this year suggests that there may indeed be a link between alexithymia and self-processing. Preliminary data also point to a correlation between alexithymia and the inability to inhibit imitation. We found that people who rated themselves as more alexithymic had difficulty in controlling their automatic tendency to copy other people's actions. I think the presence or absence of alexithymia is going to be really important in characterizing autism, and in accounting for some of the huge heterogeneity in the abilities of individuals with autism. Only time will tell how crucial it will be to understanding their sense of self.



Michael Lewis

University Distinguished Professor of Pediatrics and
Psychiatry, Rutgers Robert Wood Johnson Medical School

Self-reflection is necessary for emotional development

Michael Lewis is university distinguished professor of pediatrics and psychiatry at Rutgers University in New Jersey, where he directs the Institute for the Study of Child Development. An absence of or delay in personal pronoun use, either in speech or signing, reflects one of many failures in self-representation found in children with autism. For more than 40 years, I have been studying the development of self-reflection in both typically developing children and children with autism.

My laboratory and others have examined self-reflection through the use of mirrors, personal **pronoun usage and pretend play**. I refer to these measures of 'consciousness,' or what others have called 'explicit consciousness,' in my book "**The Rise of Consciousness and the Development of Emotional Life.**"

Our work indicates that children typically recognize themselves in a mirror, use personal pronouns

and engage in pretend play by age 2. Yet only about half of children with autism **show these abilities** by age 5.

Without self-reflection, emotional and social development are arrested because self-reflection is necessary for these abilities. In particular, the self-conscious emotions of embarrassment, shame, pride and guilt require the ability to reflect on one's own behavior vis-à-vis culturally determined standards, rules and goals.

Without the ability to reflect upon the self, mature emotional life is difficult to achieve. In addition, social behaviors such as empathy and envy are unlikely to emerge, making friendships and sharing difficult. Lack of personal pronouns such as 'me' and 'mine' seem to be an indication of serious difficulties for children with autism.

Although children with autism are now classified in a single category, not all children with autism experience the same difficulties or to the same extent. The use of these self-reflection measures may aid in articulating a theory of individual differences in children on the spectrum.