

NEWS

Double empathy, explained

BY RACHEL ZAMZOW

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Difficulty navigating social interactions pervades even the **earliest accounts of autism**. This defining trait of the condition has informed prevailing theories of its roots as well as the design of many autism treatments.

But an emerging line of work supports a more nuanced look at the social abilities of autistic people. Proponents of an idea called the ‘double empathy problem’ believe that communication breakdowns between autistic and non-autistic people are a two-way issue, caused by both parties’ difficulties in understanding. This ‘double problem’ challenges long-held theories of autism that point to social shortcomings of people with autism as the reason interactions flop. It also echoes principles of neurodiversity in its assumption that autistic people simply have a different way of communicating rather than a deficient one. “As a theory, it matches autistic phenomenology coming from insider accounts,” says autistic researcher **Damian Milton**, lecturer in developmental and intellectual disabilities at the University of Kent in the United Kingdom.

Although scientific support for the theory is building, it is not yet rock solid. And not all researchers are tuned in to this new direction, says **Matthew Lerner**, associate professor of psychology, psychiatry and pediatrics at Stony Brook University in New York. “The double empathy problem is a younger theory empirically,” he says.

What is the double empathy problem?

The basis of the theory is that a mismatch between two people can lead to faulty communication. This disconnect can occur at many levels, from conversation styles to how people see the world. The greater the disconnect, the more difficulty the two people will have interacting.

In the case of autism, a communication gap between people with and without the condition may occur not only because autistic people have trouble understanding non-autistic people but also because non-autistic people have trouble understanding them. The problem, the theory posits, is mutual. For example, difficulty in reading the other person's facial expressions may stunt conversations between autistic and non-autistic people.

What are the origins of the theory?

This conception of social issues in autism as a two-way street is decades old. **Autistic activists** such as Jim Sinclair have argued since the 1990s that autistic modes of communication conflict with neurotypical ones.

Milton first coined the term '**double empathy problem**' in a 2012 paper. For him, the idea offered a way to reframe the long-held notion that individuals on the spectrum have impaired **theory of mind** — the ability to infer the intentions or feelings of others — to include potential misunderstanding by non-autistic people.

What evidence supports it?

Instead of focusing on how people with autism perform in social situations, new studies probe how non-autistic people perform when interacting with autistic people. The results hint that non-autistic people's blind spots contribute to the communication gap. For example, in one study, non-autistic people had trouble **deciphering the mental states** autistic people portrayed through animations. Other work shows that non-autistic individuals struggle to accurately interpret autistic people's **facial expressions**.

Non-autistic people may also make snap judgements of autistic people that prevent, curtail or sour interactions between the two. For example, non-autistic people may be prone to having **negative first impressions** of autistic people without knowing their diagnosis — rating them less approachable and more awkward than neurotypical people — or to misjudging them as deceptive.

But aren't social difficulties a core trait of autism?

Yes, plenty of evidence shows that people with autism differ from those without the condition across several social domains, such as **facial expressions**, **speech patterns** and **eye gaze** (though the **last notion may be shaky**).

But a number of studies also show that autistic people's social and communication issues are not evident when they interact with other people with autism. For example, in the game of "telephone," in which a message is relayed in whispers from one person to the next, chains of eight autistic people maintain the **fidelity of the message** just as well as sets of eight non-autistic people do. It's only in mixed groups of autistic and non-autistic people that the message quickly degrades.

There are other signs that people on the spectrum connect well with one another. Autistic people report feeling **more comfortable** with other autistic people than with non-autistic people. Many adolescents with autism prefer to **interact with autistic peers** over non-autistic ones. And people with autism often build a greater **sense of rapport** and **share more** about themselves when conversing with others on the spectrum. One reason for this pattern may be that autistic people are less concerned with **typical social norms**, such as conversational reciprocity, and so **don't mind as much** when these rules are not followed.

The principle of social compatibility may **extend beyond autism** diagnoses to autism traits. For example, the more similar two non-autistic people rate themselves on an autism trait assessment, the **closer they rate their friendship**.

So how does this theory mesh with current thinking about autism?

The double empathy problem stands at odds with several widely adopted ideas about autistic people, namely that their social difficulties are inherent, Milton says. For example, one of the main diagnostic criteria for autism, as outlined in the Diagnostic and Statistical Manual of Mental Disorders, is “persistent deficits in social communication and social interaction across multiple contexts.” Similarly, the social motivation theory of autism holds that people with autism have a **diminished drive for social interaction**.

But the new theory isn't necessarily incompatible with these ideas, says **Simon Baron-Cohen**, professor of developmental psychopathology at the University of Cambridge in the U.K. Instead, the theory highlights the importance of examining both sides of social interactions instead of focusing solely on the ways autistic people diverge from the norm.

Are autism researchers changing their approach in light of the double empathy problem?

Some are. For instance, scientists are rethinking **how they examine social skills**, calling for a revamp of autism studies to gauge the strengths, rather than the limits, of autistic communication. Researchers are also finding ways to probe the **dynamics of social interactions** instead of studying the isolated behavior of people lying in a brain scanner or sitting at a computer, says **Noah Sasson**, associate professor of behavioral and brain sciences at the University of Texas at Dallas. “I had grown a bit jaded iterating on the same face-processing and eye-tracking studies I had been doing that really didn't tell us too much new,” he says.

In addition, researchers who study **predictive coding** — the way people form internal models of the external world — are exploring how a **mismatch in people's predictions** could hinder their interactions. For example, if an autistic person's expectations about how a conversation might unfold diverge from a non-autistic person's, their interaction may falter.

Still, not everyone is convinced, or even aware, of the theory, Lerner says. Some questions at the

core of the theory remain unanswered, he says. For example, researchers are still figuring out why communication is smoother when people with autism interact with one another than it is when they engage with non-autistic people. And much of the existing evidence for the theory rests on anecdotal reports and small studies.

If the theory pans out, what are its implications?

In addition to suggesting new research angles, the double empathy problem may help explain why some autism assessments and treatments fall short, Sasson says. For example, standard measures of social abilities **don't seem to predict** how autistic people fare in actual social interactions.

And therapies designed to teach autistic people normative social skills **are not all that effective** in helping them navigate real-life situations, such as forging friendships, studies suggest. "The emphasis is purely on the autistic person to change, a lot of the time," Milton says. Evaluating the social situations surrounding autistic people and finding ways to facilitate their unique communication styles may be a more useful approach, he says.

Similarly, the double empathy problem underscores the importance of training programs — say, for **doctors** or **law enforcement professionals** — that help non-autistic people interact appropriately with autistic people.

The theory also hints at possible **causes of mental health problems** in autistic people, a team of researchers suggested in a paper published in January. Being routinely misperceived can lead to loneliness and **feelings of isolation**. And attempts to conform to social norms **by suppressing who you are** can be exhausting, many experts say.

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