Understanding Social Cognition in Autism | Diverse Intelligences – short video

Video Transcript

[hopeful piano music]

Caption The Experiment

A close-up of Catherine in her office is shown, with the caption 'Dr. Catherine Crompton, Postdoctoral Researcher, Patrick Wild Centre, University of Edinburgh.'

Catherine The study that we're running is to look at social intelligence in autism. We were interested to find out whether there are differences in how autistic people interact with other autistic people than to how they interact with non-autistic people.

Sue places handfuls of raw spaghetti onto the coffee table for the participants (Fiona, Sonny and George) to build spaghetti towers.

Sue Okay, so we'll all just make towers. So I'm going to give you each a little handful of spaghetti.

A close-up of Sue in her office is shown, with the caption 'Dr. Sue Fletcher-Watson, Senior Research Fellow, University of Edinburgh.'

Sue We decided to focus in on information transfer, so the way in which people transmit information to each other. Eight people came in, and essentially you would teach the first person in the chain something, and they would demonstrate it to the next person in the chain, and so on, for eight people.

A close-up of hands placing single raw spaghetti strands into balls of play-doh on the table is shown. This transitions into a diagram titled 'Task Chains', which depicts the three types of chains involved in the experiment. The first chain is called '1. Autistic Group', and is represented by eight triangles in a row, with arrows pointing from each triangle to the next one in the chain. The second chain is called '2. Non-Autistic Group', and is represented by eight squares in a row, with arrows pointing from each square to the next one in the chain. The third chain is called '3. Mixed Group', and is represented by eight alternating squares and triangles, with arrows pointing from each shape to the next one in the chain.

Catherine So we've had groups of people who are autistic, we've had groups of people who are non-autistic, and we've had groups of people that have had both autistic and non-autistic people in them, and in those chains we've alternated between a non-autistic person and an autistic person in the chain. One of the inclusion criteria that we had was that people who were participating had to have an IQ of more than 70. The reason that we did that is because this is a very new, very experimental piece of research and we wanted to minimise the amount of noise in the data.

Caption The Findings

A close-up of Sue is shown speaking.

Sue What we found was that an information transfer between autistic people is just as effective as information transfer between non-autistic people.

A page of diagnostic criteria for Autism Spectrum Disorder appears, where the phrases 'deficits in social communication and social interaction', 'deficits in social-emotional reciprocity', 'deficits in nonverbal communicative behaviours used for social interaction', and 'deficits in developing, maintaining, and understanding relationships' are highlighted.

Next, a square labelled 'Non-Autistic' and a triangle labelled 'Autistic' are shown, with an arrow pointing from the square to the triangle. The text on the bottom of the screen reads 'Drop in rapport and data transfer.'

Catherine The clinical diagnosis has been, and still is, that autism is - at its core - something that causes real deficits in communication with other people and social interaction. What we've found is that autistic people have just as good interactions with other autistic people as non-autistic people do. When we have autistic and non-autistic people together, we see this drop in scores, this drop in rapport, this drop in data transfer.

Two squares labelled 'Non-autistic (neurotypical)' appear under the words 'Non-autistic group' with an arrow pointing from the left square to the right square. The text on the bottom of the screen reads 'High rapport.' Next, two triangles labelled 'Autistic' appear under the words 'Autistic group' with an arrow pointing from the left triangle to the right triangle. The text on the bottom of the screen reads 'High rapport.' Next, one square labelled 'Non-autistic (neurotypical)' and one triangle labelled 'Autistic' appear under the words 'Mixed group' with an arrow pointing from the square to the triangle. The text on the bottom of the screen reads 'Lower rapport.'

Sue So two neurotypical people will experience relatively high rapport, two autistic people will experience relatively high rapport, and a pair of autistic and neurotypical people will have a little bit lower.

A close-up of Catherine is shown as she speaks, intercut with footage of the participants building spaghetti towers.

Catherine We found from kind of multiple lines of evidence in our research that we need to rethink what we mean by social deficits in autism, because we have found that it is a selective deficit that occurs when interacting with non-autistic people, and that's a really important finding.

The end screen depicts the Developmental Autism Research Technology (DART) logo, with the link 'dart.ed.ac.uk.'