"I care for you" says the autistic moral brain



A new study disproves a common stereotype about autism

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"Autistic people are cold and feel no empathy." True? It is a pervasive stereotype, but when analyzed through the lens of science, reality turns out to be quite different. According to a study at SISSA, carried out in collaboration with the University of Vienna, when autistic people are placed in "moral dilemma" situations, they show an empathic response similar to the general population. The myth of coldness in autism is likely due to the presence of the subclinical trait of alexithymia, which is often associated with autism, but is distinct and can be present in the general population, and is characterized by the inability to recognize one's own, or others' emotions. The study was published in the journal *Scientific Reports*.

According to a Facebook post by a group called Families Against Autistic Shooters, "[Autistic people] are cold, calculating killing machines with no regard to human life." The group was created in response to the collective hysteria provoked by yet another mass shooting in an American school last October, in this case by a 26-year-old boy who was later reported to be affected by autism. The social stigma towards people with autism remains strong -- these individuals are often described as cold, antisocial, and disinterested in others, which only worsens their isolation.

But is it actually true that a person with autism does not care about the suffering of others? "According to our studies, it is quite the opposite: the autistic trait is associated with a normal empathic concern for others and is actually associated with greater tendency to avoid causing harm to others," says SISSA researcher, Indrajeet Patil, first author of a recently-published study in *Scientific Reports*. "The mistaken stereotype is most likely due to another personality construct, which is often found in the autistic population, but can also be found in those who are not afflicted, called alexithymia."

Autism is a neuropsychiatric disorder with a wide spectrum shared by individuals with varying degrees of cognitive skills (ranging from people with significant delays to those of above-average intelligence). Diagnostic criteria have changed over the decades (becoming more and more specific). Alexithymia, on the other hand, is a "subclinical" condition (as opposed to a disease), which can be found in the general as well as the autistic population (with an incidence rate of approximately 50% in the latter) and is characterized by an inability to understand one's own emotions and the emotions of others. "For a long time, the alexithymia trait in patients was confused with autistic symptoms, but today we know that they are distinct," says Giorgia Silani, former SISSA neuroscientist, now of the University of Vienna, who led the study. "In alexithymia, there is a lack of understanding emotions. In autism, however, we know that what is reduced is the theory of the mind, or the ability to attribute thoughts and mental states to others."

Moral Dilemmas

In the study, Patil, Silani and colleagues subjected people with high-functioning autism (high IQ) to moral dilemmas. A moral dilemma is a hypothetical situation where a decision must be made which could save lives of some individuals by sacrificing others'. In the classic moral dilemma one must decide whether or not to voluntarily take an action that will cause the death of one person, and, in so doing, save a large number of others, or do nothing, which means not killing anyone directly, but resulting in the death of other people. A "purely" rational attitude encourages the voluntary action (utilitarian), but an "empathic" attitude prevents most people from choosing to kill voluntarily.

The current investigation used advanced statistical modelling techniques to dissociated effect of autistic and alexithymic traits to see how they related to moral judgments. The results revealed that alexithymia is related to utilitarian choices on account of reduced empathic concern, while the autistic trait is linked to opposition to utilitarian choices due to increased personal distress. "Autism is associated with strong emotional stress in response to situations in which the individual tends to avoid performing harmful actions," says Patil.

The authors agree that tools for identifying and distinguishing between alexithymia and autistic disorders must be further enhanced. Their work, they add, is only an initial step in trying to define a model that can explain the complex relationship between various mutually-dependent personality traits and points to exciting new avenues for further research.

IMAGE:

- **Credit: Leo Grübler (Flickr: https://goo.gl/gYpqxk)**

USEFUL LINKS:

- **Link to the original paper on Scientific Reports: http://www.nature.com/articles/srep23637**

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