

AUTISM AND EVOLUTION

by

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Autism. This has become such a [loaded word](#). Sometimes a specific image comes to mind when you hear this; perhaps the face of a family member or a close friend, as over 3 million individuals in the United States are affected by the condition.

Some of these ideas may be negative, others positive, and others still are more hopeful.

But [autism](#) as an evolutionary success?

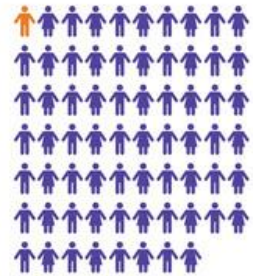
That's just what some researchers of a recent [study](#) suggest: Autism could have played a major role in the [evolutionary success](#) of [modern humans](#).

CHANGES

About 100,000 years ago a slight but profound change occurred in our evolutionary history, allowing people who thought and behaved differently--such as those individuals with autism--to be fully integrated into society, leading to greater [diversity](#), and quite possibly playing a vital role in shaping the path of [human evolution](#).

The change happened with the materialization of [collaborative morality](#), and meant people displaying [autistic traits](#) would have been accepted and respected for the unique skills they possessed.

NUMBER OF CHILDREN IDENTIFIED WITH ASD



1 in 68



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

GENETIC EVOLUTION

With [genetics](#) suggesting autism has a long evolutionary history, it's very likely our ancestors would have had this condition.

"We are arguing that diversity, variation between people, was probably more significant in human evolutionary success than the characteristics of one person," said [Penny Spikins](#), senior lecturer in the archaeology of human origins at York University.

"We are arguing that it is the rise of collaborative morality that led to the possibility for widening the diversity of the human personality."

WHAT IS AUTISM?

Autism and [Autism Spectrum Disorder \(ASD\)](#) are general terms for a variety of brain development disorders. Individuals tend to be characterized by difficulties in verbal and non-verbal communication, repetitive behavior, and problems with social interaction.



Figure 2. Skills in perceptual and analytical domains associated with AS. (authors)

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Many people with ASD display exceptional skills in music, mathematics, and art; possess enhanced memory abilities; and have a more heightened understanding of natural occurrences like animal behavior.

COMMUNITY CRUCIALITY

The researchers of this study, which was published in the journal of [Time and Mind](#) argue that the integration of people with these skills into a community would have played a crucial role in the development of [specialists](#).

A 2005 [ethnographic study](#) of an elderly reindeer herder from Siberia revealed he held a remarkably detailed memory of the parentage, character, and medical history of each of his 2,600

reindeer. The man-made significant contributions to the management and survival of his herd, and to the community as a whole, despite being uneasy in the company of other people.

DISTINCT EVIDENCE

Unfortunately, finding clear evidence of autism in [archaeological records](#) poses major challenges for researchers.

"The archaeological record doesn't give us a skeletal record for autism, but what it does do is give us a record for other people who have various differences and how they have been integrated," Dr. Spikins explained.



Lascaux II - Image from the *Reconstruction of Lascaux Cave*. [Jack Versloot](#)

While other clues concerning autism's lengthy history can be found in [cave art](#) and other artifacts, there's been a "long-lasting debate about identifying traits of autism in [Upper Paleolithic](#) cave art."

Dr. Spikins also said, "We can't say some of [the cave art] was drawn by someone with autism, but there are traits that are identifiable to someone who has autism. It was also roughly at that time that we see collaborative morality emerging."