

# The level and nature of autistic intelligence II: What about Asperger Syndrome?

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Autism spectrum disorders, including Asperger syndrome, have generally been associated with uneven intellectual profiles and impairment, but according to a new study of Asperger individuals published in the online journal *PLoS ONE*, this may not be the case - as long as intelligence is evaluated by the right test. Both autistic and Asperger individuals display uneven profiles of performance in commonly used intelligence test batteries such as Wechsler scales, and their strongest performances are often considered evidence for deficits.

However, this study reports that Asperger individuals' scores are much higher when they are evaluated by a test called Raven's Progressive Matrices, which encompasses reasoning, novel problem-solving abilities, and high-level abstraction. By comparison, scores for non-Asperger individuals are much more consistent across different tests. Interestingly, Asperger participants' performance on Raven's Matrices was associated with their strongest peaks of performance on Wechsler.

A previous study by the same group found very similar results for autistic individuals as well, whose peaks of ability are perceptual, rather than verbal as in Asperger individuals. This suggests a common information processing mechanism applied to different aspects of information (verbal vs. perceptual).

According to co-author Michelle Dawson, "while we know autistics process information atypically, very little thought has gone into how to fairly assess their abilities. In fact there is so little understanding of what autistics do well that their strong abilities are often regarded as dysfunctional. Here we have again found that measurable strengths in autistic spectrum individuals are not "isolated islets of abilities" as previously thought, but are in fact representative of autistics' intellectual abilities. This in turn raises questions about how we can provide

autistics with the kinds of information they can process well, as we do with non-autistic individuals. We consider the effort to understand and encourage autistic strengths to be of paramount importance. "

Based on these results, the authors emphasize that autistic spectrum intelligence is atypical, but also genuine, general, and underestimated.

**More information:** Soulières I, Dawson M, Gernsbacher MA, Mottron L (2011) The Level and Nature of Autistic Intelligence II: What about Asperger Syndrome? *PLoS ONE* 6(9): e25372. [doi:10.1371/journal.pone.0025372](https://doi.org/10.1371/journal.pone.0025372)

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