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## The Case of Mistaken IQ

 by *Mary Beckman* on 20 February 2006, 12:00 AM | [Permanent Link](#) | [0 Comments](#)
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**ST LOUIS, MISSOURI**—Most autistics are mentally retarded, according to the prevailing wisdom. But new research shows that their measured IQ could be off by 30 to 90 percent. The results support the idea that autistic people process information differently than healthy individuals.

Estimates for the prevalence of mental retardation in autistic children and adults range from 25 to 70 percent or more, and when autistics do exhibit phenomenal skills (like Rain Man), researchers don't consider that "true" intelligence. Health workers routinely assess autistics using a standard IQ test known as the Wechsler test. But this test requires that children understand oral commands, a trait that many autistic children have trouble with. Cognitive neuroscientist Laurent Mottron of the Hôpital Rivière-des-Prairies, Montreal and colleagues noticed that autistic children did poorly on the verbal comprehension part of the Wechsler but exceedingly well on a part that tests non-verbal intelligence and reasoning.

So the researchers decided to test 30 autistic children and 30 autistic adults with a different IQ test called the Raven's Progressive Matrices test, which is written rather than oral. Healthy children and adults performed similarly on both the Wechsler and the Raven test. But speaking autistics scored up to 30 percentile points higher on the Raven test than the Wechsler test, the researchers reported here 19 February at the annual meeting for the American Association for the Advancement of Science (which publishes *ScienceNOW*). "Thirty percentile points could raise a retarded person to normal or a normal one to a superintelligent one," says Mottron.

He also tested a mute autistic, often considered to be among the lowest functioning of those with the condition. The adult failed the Wechsler, predictably, but scored above the 90th percentile on the Raven test. Researchers know that healthy people perform the Raven test using verbal skills (for example, people who can't comprehend language do poorly on it), and Mottron suggests that autistic people may be using different skills to get the job done, such as visual perception. This idea is further supported by brain imaging studies in which healthy people use linguistic areas of the brain for problem solving while autistics use their visual processing areas.

Other autism researchers find the results illuminating. "People assume that children suffering from autism are mentally retarded, but that's because we did not know how to evaluate their talent," says behavioral geneticist Irving Gottesman of the University of Minnesota in Minneapolis. The data appear to be robust and representative, says cognitive scientist Morton Gernsbacher of the University of Wisconsin, Madison. "It has far reaching implications for how we could potentially be underestimating the core competence of many individuals."

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*ScienceNOW*. ISSN 1947-8062

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