

## Responding to “Rain Man”

(Previously submitted to Wired and Autism/Aspergers' Digest)

One of my more interesting undergrad courses was a community college course on the military history of the Southwestern US. Naturally, the course included much discussion of Indians. In one of the reading assignments for that course, I read something interesting that I think is very apt to start a discussion of autism. The assigned article included a discussion of the famed senses of the Indians. (I recall a John Wayne movie line: “I could find you in the dark, and I’m only half Indian!”) In the wilderness, Indians fully lived up to their reputation, performing feats of detection at which whites could only marvel. But, when the white doctors and scientists got around to studying the Indians’ physiological state, they made a startling discovery: The Indians’ eyesight, in general, was inferior to that of white men. An Indian in the desert might see a quarry’s track where a white man would see only dust. But if the same Indian and same white man were assigned to read an eye chart, the white man would most likely perform better.

The reason, presumably, was not a matter of biology, but of culture, environment and motivation. An Indian in the desert had to be the best Indian he could with whatever senses he was endowed with, or else most assuredly become a dead Indian. Most, apparently, got to be very good Indians indeed. Those who did not would have ended up dead Indians. Meanwhile, the white population, likely through better nutrition and care, developed physically superior vision. But in the comparatively hospitable farms and cities, they never learned to use their vision the way Indians did.

This, I think, is the best starting point for answering what has been called the “Rain Man myth”. The film *Rain Man* was a major basis for public awareness about autism. It showed Dustin Hoffman’s character Raymond doing incredible things: Memorizing phone books, reciting airline statistics from memory, counting cards from multiple decks, and so forth. All of these were based on things which the autistic can really do. The overall impression given is of someone who is superhuman. I have frequently observed similar reactions in my own life. While I could not match the kinds of things seen in Raymond, I have greatly impressed people with the things I can do. A typical reaction (which got me thinking about what I am writing in this article) was that I must be “one giant brain”.

Recently, to prepare for this article, I watched *Rain Man*. For the most part, I thought it was well-done and accurate, but two things bothered me. One was that the character Raymond showed so many different skills. In reality, by all indications, autistic savants are as specialized as professional scientists or athletes. They will become very good at one skill or subject, but remain comparatively unskilled in other areas. So, the chances of, for example, a savant in math also displaying savant-level skills in music are no better than those of a track star winning a rugby game!

The other element which bothered me, much worse, was the scene where Raymond wins \$80,000 at a casino by counting cards. I have never heard of this ability being observed in savants, but it seems credible that one might do it very successfully. The catch is *where* a savant might do it. If the savant and dealer are together alone in a very quiet room, all is well and good. But asking the savant to replicate the feat in a casino would be like using a compass next to the world’s biggest electromagnet! Even the movie script inadvertently highlights the preposterousness of the scene: Later, we see Raymond rendered catatonic by a single fire alarm, in a quite realistic portrayal of an autistic sensory meltdown. How could the same person function (never mind win a card game) despite the lights and noise of hundreds of slot machines?

Lately, the “Rainman Myth” has been getting a kind of revival with reports about autistics performing some tasks better than “neurotypicals”. I am extremely skeptical of such claims. For starters, it can be

objected almost rhetorically that one area in which a person scores well does not necessarily represent mental function better than one where scores are poor. Second, it is vital to recognize at the start that autistic ability is for practical purposes dependent on environment, and that the lab setting is in many ways *too* ideal. The factors which a lab minimizes or excludes, especially noise, are the very ones which take the worst toll in a "real world" environment. Third, the high scores do not invalidate the other low scores as evidence of real handicaps. Fourth, any solid claim to improved ability must first rule out acquired ability, even compensation for handicap.

For some time I have had a strong suspicion about my own abilities and those of diagnosed savants. It seems to me that many if not most of the savants' feats are about memory and concentration. This potentially separates their (our) abilities from what would be considered higher reasoning and creativity: Memorizing a book, for example, is qualitatively different from writing an original work of any length. If concentration is indeed the basis of these abilities, then it is virtually certain that they have nothing to do with any basic feature of autism. Concentration is not a characteristic autistic strength; if anything, it is one of the more obvious areas of weakness. After all, autism closely overlaps with Attention Deficit Disorder. (I, personally, was diagnosed with the latter first.) Sensory sensitivity is the simplest explanation for this. If an autistic individual is more sensitive to a stimulus, he will more easily be distracted by it. Increased concentration is predictable as *compensation*, like that of the Indians to the desert. This gives me one more suspicion: In theory, any feat of the savants might be not only matched but outdone by a "neurotypicals", if they were only able to replicate the kind of concentration which the autistic *need* to have.

In conclusion, I can do no better that point back to the lesson of the Indian trackers. Their abilities clearly had more to do with the demands of a harsh environment than any real genetic factors. I suspect the same is true of autistics. Only, our Sonora is everyone else's familiar, workaday world. While you, the prosaic public, wonder at what we can do, you do things that any of us would struggle even to attempt on a daily basis, without even thinking about it.. Now, does anyone want to trade?