

EDITOR'S NOTEBOOK/Bernard Rimland, Ph.D.

Rain Man and the savants' secrets

It started with a phone call in late 1986. A woman's voice asked if I were the Dr. Rimland who had written several articles on idiot savants. I admitted I was. The woman, Gail Mutrux, then asked if I would be willing to look at a film script involving an idiot savant. "Sure," I said, "send it down." The film, I was told, was titled *Rain Man*. The two leads were Dustin Hoffman and Tom Cruise; the director was Martin Brest.

I read the script and felt it had great potential, but I did have several suggestions. The key suggestion was that Raymond, the role to be played by Dustin Hoffman, be an autistic savant, rather than an idiot savant. There were several reasons for that suggestion. For one, savant type skills are very rare in the retarded population, occurring only in one retardate per 2,000. However, about 10% of autistics show some unusual abilities. In addition to that statistical reason, the eccentricities of the autistic would make the film far more interesting. The *Rain Man* crew liked the idea. Gail (an associate producer) and the writer came to San Diego to visit us, and left with an armload of books and articles about autism and autistic savants. (Historical note: I believe that my August, 1978 article in *Psychology Today* was the first time the term "autistic savant" appeared in print, but psychologist Joan Goodman has reminded me that she had sent me an unpublished paper using the term "autistic savant" some years earlier; she is apparently the originator of the term.)

Dustin Hoffman considered our printed materials, studied educational films showing autistic individuals; then made the fateful decision: Raymond would be a high-functioning *autistic savant*.

I had heard that Dustin Hoffman took his work very seriously, and prepared intensely for his various roles. I was nevertheless surprised to learn firsthand how intense that dedication is. Dustin wanted to meet some autistics with savant skills, so I phoned several families for permission to have him come visit. All the families were pleased to help.

Of the half dozen or so prospective role models we suggested, Dustin concentrated his attention on two. One of these was Joseph Sullivan, the son of Drs. Ruth and Bill Sullivan, of West Virginia. Joe and his mother have appeared on at least three nationally broadcast television shows in the aftermath of *Rain Man's* opening. The other savant is "Peter," a young man with truly extraordinary savant skills, who prefers to remain anonymous. Peter is one of the most amazing savants on record. I used him in my very first paper on autistic savants, as an example of versatility: "He has apparently total recall for statistics, such as baseball, football, hockey, basketball scores, individual records, etc. He knows capitols and heads of governments for all countries of the world, their flags, can make a good

outline map of any of them (and keep them current). He reads almanacs, encyclopedias and dictionaries. You never have to look anything up if Peter is around He could draw an outline of the 48 states and place the capitol cities when he was two years old He writes beautifully in Japanese, can print old English as fast as he can print normally He has a working knowledge of French, Spanish, Japanese and Russian — knows at least the alphabet and pronunciations of Arabic, Hebrew and several others."

Rain Man went through many changes during my several years of involvement with it. Sydney Pollack, Steven Spielberg and finally Barry Levinson succeeded Martin Brest as director. I reviewed and commented on three versions of the script—there were other versions as well. The writer changed also. The only constants were the title, *Rain Man*, the leads, Dustin Hoffman and Tom Cruise, and Hoffman's unflagging desire to do the job *right*.

My 32-year-old son Mark and I visited Hoffman and Levinson to discuss the script and give Dustin a chance to see Mark. Noticing that Dustin was growing slightly gray at the temples, Mark, trying to be friendly, remarked, "My father has a picture of you in his office when you were younger." Dustin laughed, and later remarked on how refreshing it was to work with people who are so devoid of guile.

I imagine that most of you reading this have already seen *Rain Man*, and thus you already know how extraordinarily well Hoffman played his role. It is considered a near certainty that Hoffman will win the "best actor" award—again. It will be well deserved. (Academy Awards recognize the best performance of a given year. It seems to me that Hoffman's astonishingly accurate portrayal of Raymond Babbitt, certainly one of the most difficult roles ever attempted, should earn him an all-time Academy Award—if there were such a thing.)

Rain Man brought about a huge upsurge in awareness and understanding of autism. Ruth Sullivan stated it well when she said, on the Oprah Winfrey show, "*Rain Man* has advanced the field of autism by 25 years!"

It seems that *Rain Man* has stimulated almost every newspaper and magazine in the country to run an article on autism. Being listed in the credits has resulted in dozens of phone calls from writers and reporters asking, among other things, "How do the savants do such amazing mental feats?" Since none of the articles I've seen so far have quite presented my answer in words I like, let me record my answer here:

How do they do it?

First, let's recognize that none of us—certainly not me—can explain how we do even such simple things as sign a check or bring a cup of coffee to our lips. It seems

that we create a mental image of the desired outcome, and God takes over from there. You can't expect the savants to explain.

How does the savant mind differ from ours?

As I explained in my book *Infantile Autism* (1964), a normal mind can be tuned, at will, to focus upon fine details which it can process with considerable fidelity, or, alternatively, it can deal with broad concepts at the expense of detail. It cannot do both at the same time. There is a trade-off of fidelity of information processing for conceptual breadth. To illustrate: if you were given 10 minutes to study a book, you could choose to memorize verbatim the first paragraph or two (high fidelity information processing) or you could instead choose to skim the chapter titles and first few sentences of each chapter to get a conceptual overview of the book. The choice is yours: focus on high fidelity *physical* stimuli (letters or words), or instead focus on lower fidelity, but conceptually richer ideas and concepts. Another example: if I handed you a key from a box of 100 keys, and offered you \$1,000 to find that same key when I mix all the keys together, you will intently focus upon the size, shape, color, wording, and so forth of that key—its physical characteristics, so you can identify it later. But, while your mind is locked on this mode (the high fidelity mode), you cannot think conceptually about Glasnost, the budget deficit, religion, the impression you are making on me, or anything else.

Unlike normals, who can shift, as the occasion demands, from high fidelity processing to conceptual thought, the savant mind is perpetually locked into the concrete, high fidelity mode, which permits (compels) him to deal with numbers, sounds, and other physical data with great precision, albeit at the cost of the ability to deal with concepts.

It is difficult for the normal mind to achieve, much less remain in, the high-fidelity mode. Try squaring a three-digit number, and the process will quickly disintegrate under pressure from here-and-now intrusive thoughts: Is it time for lunch? Does the spot on my shirt show? Should I phone the plumber again? The savant, locked into his (relatively) distraction-free world, is oblivious to what we call reality. His reality is of a different sort—one we can rarely, and fleetingly, enter. His skills are those achieved by the computer, tape recorder, and camera — devices which process data precisely and without distraction.

Certain drugs, such as amphetamines, and certain experiences, such as fear, can bias the normal brain toward the high fidelity mode. Some day a gifted researcher may be inspired by *Rain Man* to explore such clues, and thereby give us a better understanding not only of the neurophysiology of autism, but of the normal brain.