Rare and Singular Talent

I object to the usurpation of the word "savant" to refer to a clever autistic individual—and to the destruction of its original meaning of a scholar, a person of learning in literature or science—as used by Oliver Sacks in his letter "Musical ability" (5 May, p. 621).

When the talents of some of these autistic children were discovered, the seeming paradox gave rise to the term "idiot savant." The word "idiot" has apparently become politically incorrect, so was dropped, without any replacement.

It is ironic that this usage is perpetuated by one of the foremost true savants of our day, Oliver Sacks, as well as by his respondents. Can we compromise by using "autistic savants?"

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Response: I share Frey's objections to the misuse of the word "savant" (in such terms as "idiot savant," "savant syndrome," and so forth) even though this usage goes back more than a century. One needs an entirely different word for these rare and singular skills, which sometimes seem so remote from anything in common experience.

I do not think that "autistic savants" is a satisfactory compromise, for it not only perpetuates the misuse of the word "savant," but implies that such skills may be confined to the autistic. Although they are, indeed, far commoner in the autistic, by a factor which may approach 1000, they may, on occasion, appear in "normal" people too. This is especially true of extraordinary calculating gifts—and these, interestingly, have a markedly increased incidence in mathematicians, although no consistent relation to general mathematical powers. Thus, while prodigious calculating powers appeared in early childhood in Euler and Gauss, there was no hint of these in Newton, Leibniz, or Galois (*1*). The talent is thus analogous, in this and other ways, to absolute pitch.

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References

1. S. Smith, *The Great Mental Calculators* (Columbia, New York, 1983); E. T. Bell, *Men of Mathematics* (Penguin, London, 1953).

IL-12 Possibilities

In his Research News article about the cytokine interleukin-12 (IL-12) (9 June, p. 1432), Stephen S. Hall lists some of the diseases that might be treated or prevented by the use of IL-12 as a drug (AIDS, leishmaniasis, malaria, tuberculosis, and schistosomiasis). This list reads like Niger's serious disease roster. Later in the article, a drug company executive is indirectly quoted as saying that developing a drug for a disease that affects people in primarily poor countries could be a "disaster" for a company, as this could lead to huge costs and little or no revenues (p. 1434).

In a land where suffering is an everyday occurrence, it is both extraordinary and ordinary that there could be an exploitable link between the illnesses listed—extraordinary because we have the opportunity to relieve some of this pain, ordinary because this chance could be abandoned for the sake of profit. What is the purpose of science if not to aid humanity?

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Although IL-12, as described by Hall, appears to be one of the most promising of all cytokines, I regard the results obtained so far with guarded optimism.

The studies on IL-12 are still relatively few, as revealed by a quick database search. Considering the potential harmful effects noted by Hall (symptoms resembling toxic shock, atherosclerotic plaques, and aggravation of other ailments), thorough laboratory studies should be conducted before clinical trials begin.

Most of the studies to date have been about the ability of IL-12 to switch immune responses from a pathogenic to a protective type by modulating the development of T cell phenotype. However, IL-12 is apparently unable to induce these changes in the absence of endogenously produced interferon gamma. The adjuvant-like activity of IL-12 is important, but for IL-12 to be useful in vaccination, the repertoire of relevant antigens for the diseases in question needs to be identified. Also, the antigens considered protective in the developed world may not be protective in developing countries; the tuberculosis vaccine is an example of variations in effectiveness from country to country.

Treatment of clinical disease, which will require the modulation of an ongoing immune response, is critical to developing an effective therapeutic approach. Few IL-12 studies have addressed this issue.

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Funding Italian Research

In the article "Funding reform fights on against researchers' apathy" (News & Comment, 30 June, p. 1843), Susan Biggin reports the views of several Italian investigators, including myself, on Italy's National Research Council (CNR) and the creation of "national institutes" for the different sciences.

I told Biggin during a short phone interview that I was not updated on the specific plans of the Biotechnology Committee for the national institutes, and because I knew the committee was working on them, I advised her to directly contact its members for more information. My remarks do not justify Biggin's statement that "the biotechnology committee is lagging behind." On the contrary, the Biotechnology Committee has always been active in pressing ahead with innovative proposals.

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Biggin reports about the alleged new trend in the CNR's funding policy. If only this trend were in operation! One example: 1 May 1994 was the deadline for submitting funding proposals. In accordance with CNR's new policy of favoring large consolidated projects rather than the many single ones financed in the past (this latter the so-called "rainfall" funding), researchers were encouraged to propose "coordinated" projects involving several groups. In late June 1995—more than 1 year later—none of the applicants had yet been officially notified of the outcome of their applications. Nonetheless, as is CNR's tradition, progress reports on the previous year's work under the mythical grants "awarded" were requested along with funding proposals for 1996. Finally, single projects were "coordinated" officially by CNR committees: Sev-