## LETTERS

### Newton and Mercury Poisoning

Tongue-in-cheek articles such as "Sir Isaac Newton: Mad as a hatter" (News and Comment, 18 Sept., p. 1341) are fun to write and fun to read. But *caveat lector*. Such articles are not to be taken seriously. Granted Newton carelessly exposed himself to a variety of potentially harmful chemicals, including mercury. Granted that at one time hatters suffered from occupational mercurialism in which erethism was a frequent manifestation. (I have seen many such.) But the most common sign of chronic poisoning from inorganic mercury is an intention tremor. In fact, this tremor is a sine qua non in diagnosing chronic poisoning. Jerky handwriting is routinely used as a means for eliciting this finding. I suggest that an examination of samples of Newton's handwriting before, during, and after his "episode" would provide more reliable evidence for or against mercury poisoning than does analysis of a hair. No mention of tremor is made in William J. Broad's article, although other symptoms are listed.

More distressing is the reappearance of the notion that the Mad Hatter was a victim of mercury poisoning. Alice's Mad Hatter has been identified as one Theophilus Carter, an eccentric and erratic furniture dealer in Oxford who earned his sobriquet from never appearing in public without wearing an outlandish top hat (*1*). The expression "mad as a hatter" is most likely a cockney corruption of "mad as an adder," common in the mid-19th century.

Broad, in his article, mentions "Newton folklore." I see nothing wrong with folklore as long as it is recognized for what it is and it does not masquerade as fact or science.


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#### References


1. L. J. Goldwater, *Mercury: A History of Quicksilver* (York, Baltimore, Md., 1972), pp. 267, 273–274.


### Cost of Research

The "prospects for research libraries" (Editorial, 14 Aug., p. 715) are indeed grim. However, the answer does not seem to be in interlibrary loans and computer technology. What we lack is aggressive management of information by both librarians and researchers.

Librarians must be aggressive in writing treaties of cooperation. Without a national library for direction the heads of our libraries should fill the vacuum. We need more agreements on who is going to collect which subject areas; the treaties must include arrangements for efficient delivery. Perhaps some innovative agreements with area business libraries would help the funding.

Researchers, who benefit from the information, also must be aggressive. We need strong critiques of the new (and old) journals coming out. Which editorial boards are doing their work (or, at least, which are capable of doing their work)? As it is now, anything published must be bought. Yet, everything cannot be good. Professional societies could help in this analysis of quality, and editors themselves could give us direction.

Computer technology will help in the management of information, but only if we actively decide what needs to be done.


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George Black's editorial accurately describes the problems research libraries face—maintaining subscriptions to an adequate number of journals, purchasing new books, and maintaining their present inventories in a time of rising costs and shrinking budgets. His proposed solutions, increasing interlibrary loans and cooperative stocking, are clearly necessary for the continued operation of our library system. . . . While I do not suggest that inadequate libraries are the cause of all our ills, I feel they may be a place to do something about our decline. Printing technology is inadequate for the huge amount of information necessary in today's technological society and is rapidly becoming too expensive. Something better is needed and fortunately is available in computer and telecommunications technology.

Implementing a nationwide electronic library system is a very large challenge for a variety of reasons, notably the lack of standards and direction; but most of the hardware is available. The software required would probably take several man-centuries to write, to say nothing of its cost. (New and current material can easily be entered, but I shudder when I think of the job of getting all previously published material on the system.) It is in everyone's best interest to start planning now for such an electronic library.


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. . . Black, in his reporting of statistics from the Association of Research Libraries (ARL), compares median figures for volumes added and expenditures for 1969–1970 to figures for 1979–1980. In 1969–1970 there were 76 university library members in ARL; by 1979–1980, 33 more university libraries had been added to the membership. Because the largest university libraries were already members in 1970, the 33 new members tended to be smaller, "developing" research collections. This had an effect on the median figures for the overall membership.

A 10-year analysis (*1*) of only those libraries that were members of ARL in both 1969–1970 and 1979–1980 indicates that expenditures for materials increased by 91 percent, while the number of volumes added decreased by 22.5 percent. Although the precise figures differ from Black's, the general trend is as he describes.

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**References**

1. C. A. Mandel, *ARL Statistics* (Association of Research Libraries, Washington, D.C., 1980).

## Future Planetary Missions

The Research News article "To the planets, cheaply" by M. Mitchell Waldrop (18 Sept., p. 1350) gives a misleading impression of finality to the reader and to the planetology community in particular. The six recommendations presented to the administrator of the National Aeronautics and Space Administration (NASA) by the Solar System Exploration Committee (SSEC) were strictly stopgap, addressing only immediate issues. These included emphasizing the high scientific priority of the Galileo mission to Jupiter and of the Venus Orbiting Imaging Radar mission; endorsing the Halley Intercept Mission as a budget add-on, not at the expense of an approved program; expressing concern over the cancellation of the U.S. Solar Polar spacecraft; examining the immediate and ongoing dependence of the planetary exploration program on the availability of a high-energy upper stage for the space shuttle (for example, Centaur); maintaining the readiness of low-thrust (for example, solar electric) propulsion technology; and strengthening international cooperation and commitments in general, with special attention to those with the Soviet Union.