Letters

MRC Funding: No Freeze

I was disturbed by inaccuracies in the News briefing "Hard times for MRC" (30 Nov., p. 1202). We have not canceled all new funding for at least 6 months. The Medical Research Council (MRC) continues to award grants, fellowships, and studentships. What we have done is inform our own establishments that they must defer new staff appointments for 5 months and defer delivery of equipment authorized but not yet purchased for a similar period.

This action is to help deal with a projected overspend this year of about 2% of the MRC's budget, an overspend caused directly by inflation levels in the United Kingdom in the second half of 1990 turning out to be considerably higher than we (and others in the United Kingdom) had been anticipating earlier in the year. It is therefore inaccurate to talk about financial problems being hushed up—earlier this year they simply did not exist.

Finally it is not true that we have recently imposed a ban on staff speaking out on MRC policy. Like any employer, however, we do take exception to the very rare occasions when employees make inaccurate or misleading comments about MRC decisions in a way that is damaging to the MRC's interests. I would suggest that *Science* itself is hardly contributing to an improvement in the morale of MRC staff by printing incorrect allegations.

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Testing Special Relativity

The article by Robert Pool (Research News, 30 Nov., p. 1207) about ever increasing precision in explicit tests of Einstein's special theory of relativity creates a misleading impression of the progress over the years. Pool states that the beautiful Hils-Hall experiment (*1*) represents an increase by a factor of 300 in precision (from 2% to 70 parts per million) in testing Einstein's second postulate, namely, that there is a limiting speed (of emission of electromagnetic radiation, in the case at hand) independent of the motion of the source. The factor of 300 is actually the measure of improvement over the classic 1932 experiment of Kennedy and Thorndike.

There are a number of equivalent ways of testing the second postulate, some that use the exquisite precision possible by comparison of frequencies to examine the speed of light for sources differing by modest speeds and others that use modest precision with sources differing in speed by the maximum possible amount. When one considers the various experiments, the Hils-Hall experiment is an improvement of a factor of 2, at best.

In a paper published more than 25 years ago (*2*), a group at CERN reported a dramatic explicit test of the second postulate. The experiment was made with highly relativistic neutral pions moving at speeds greater than 0.999 times the speed of light in vacuum. Such neutral pions decay into two light quanta. The time of flight of the 6 gigaelectron-volt (GeV) photons emitted by these extremely rapidly moving sources was measured over a distance of 80 meters by using the radio-frequency structure of the 19.2-GeV proton beam that produced the neutral pions. Within experimental error, the speed of the photons emitted by the moving sources was equal to the speed of light in vacuum. If the observed speed is expressed as $c' = c + kv$, where c is the speed of light in vacuum and v is the speed of the source, then the experiment showed that $k = (0 \pm 1.3) \times 10^{-4}$, or zero within 130 parts per million. This powerful proof of Einstein's second postulate has been part of the textbook literature for 15 years or more (*3*).

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Women and AIDS

The most recent report on AIDS issued by the National Academy of Sciences (NAS), entitled *AIDS: The Second Decade* (*1*), describes the changing face of the AIDS epidemic. Women, the report points out, will constitute the fastest growing proportion of new cases of AIDS.

We feel that, although the NAS publication clearly sounds the alarm by warning of the increased threat of AIDS to women and children, it offers little substance or guidance above the issues facing them. In short, it awakens our concern but offers no direction.

The report devotes only one chapter to women and, while the authors elegantly refute the outworn concept of the prostitute as vector, they single the prostitute out only to assert that her risk is similar to that faced by any woman who is sexually active or who uses intravenous drugs. Minimal space is allocated to the host of critical questions that have been raised for American women by the HIV (human immunodeficiency virus) epidemic.

When we protested to NAS about this dearth of information on women, it said that hard data resulting from large-scale quantitative gender-specific research were unavailable and that the available data focusing on women and AIDS were "too soft" for inclusion in the report.

We believe that the judgment of NAS not to use existing data because they are "too soft" is a grave error. First, such an approach suggests that we lack the tools to provide a careful analysis of preliminary data. This is not so. Each of the sciences has developed methodology for the critical review of data that are collected by observation, from qualitative studies, or in research with the use of uncontrolled or unblinded designs. Such review cannot provide firm answers—those must await future investigation—but it can provide an estimate of both the state of the art and future research directions.

Second, such an approach denies policymakers and planners a presentation of the existing material. Public health officials are often forced to make decisions on the basis of incomplete data, and this instance is no exception. The use of incomplete data for policy decision is greatly facilitated by careful, exhaustive review, and in this case NAS might have provided for such review.

Finally, many unresolved clinical questions are intimately interwoven with complex behavioral issues. AIDS will spread among women to the extent that they are unable to adopt the protective behaviors shown to work among intravenous drug users and among gay men. But it is unclear that women, given their relative lack of power in sexual and drug-using relationships, will be able to assert themselves and insist on protective behaviors. What are the strategies through which women can learn sexual self-protection? Are there new ways that women themselves can use to prevent infection? These questions will be answered through intervention research. We have adopted vigorous campaigns to urge pregnant women to have HIV testing even