Letters

Aiding Vietnam

The case for increased cooperation between American and Vietnamese scientists is ably stated in the letter by E. Cooperman and J. H. LeVan in the 10 August issue of *Science* (p. 540). Several of its assumptions should be treated with some caution, however.

In particular, the authors state that the people of the northern and southern parts of Vietnam "have nearly identical diets," thereby presumably ruling out diet as a factor in the supposedly anomalous increase in liver cancer in the south since 1962. During the 7 years I lived in Vietnam as a news correspondent, I became aware that the diets in the north and the south are far from identical. Apart from the large differences in food preparation that stem from cultural differences between the two regions, high-quality protein has always been much more plentiful in the south because of the great extent and fertility of the Mekong River Delta. There are even differences in such staples as rice; the amino acid balance of the protein in northern "sticky" varieties is quite different from the balance of those in the south.

Natural differences between the diets of the two regions were strongly enhanced from 1962 on by the massive influx of American food into southern Vietnam, as a result of Public Law 480 and because of the legal and black markets. If nothing else, this influx may have increased the consumption of nitrosamines by southern Vietnamese.

I think scientists can agree that epidemiological and other studies of dioxin would be useful in Vietnam. At the same time, assertions by Vietnamese scientists should be subject to the same rigorous evaluation as those of any other scientists. Unfortunately, science in some parts of the world is clouded by the official manipulation of propaganda, and dioxin has become a propaganda word as well as a chemical species. Furthermore, I can attest from recent visits to Hanoi and Ho Chi Minh City that Vietnam is currently a nation as closely controlled as the Soviet Union; and it is one in which information, scientific included, is subordinated to political purpose. One hopes that future Vietnamese-American scientific relations can be kept wholly untainted by political polemics, but this will be difficult to achieve.

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The sentiments expressed by Cooperman and LeVan in favor of scientific cooperation with Vietnam would be persuasive were it not for one overwhelming omission. Namely the massive human rights violations by the Vietnamese government, particularly in its exploitation and expulsion of the "boat people," many of whom are ethnic Chinese. Those who favor "friendship, mutual respect, and trust" would do well to question the present policies of the Vietnamese government before committing themselves to its aid.

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Flurazepam and Insomnia

We congratulate *Science* for eliciting an extraordinary discussion of the long-neglected problems of insomnia and its therapy. We wish to comment on an issue raised by Bruce Medd of Roche Laboratories (Letters, 6 July, p. 6) about the Institute of Medicine (IOM) study *Sleeping Pills, Insomnia, and Medical Practice* (News and Comment, 20 Apr., p. 287). While acknowledging that the accumulation of the long-acting metabolite of the hypnotic flurazepam (Dalmane) may result in adverse effects on daytime coordination of normal subjects, Medd states that such daytime impairment "has not been proved" in insomniac patients. In reply, R. Jeffrey Smith (Letters, 6 July, p. 7) notes a study (*1*) cited in the IOM report (*2*), in which anxious, insomniac patients from a British general practice are reported to have had increased hangover and showed impaired performance on two psychomotor tests (tapping speed and pursuit rotor test) after 1 week on flurazepam (30 milligrams) as compared with a placebo. Furthermore, in a newly published study (*3*) of middle-aged "poor sleepers," Oswald reports persistently and *cumulatively* decreased mental concentration and performance on a variety of daytime tests (manual dexterity, alertness), as well as a disturbingly high incidence of "crises" (automobile accidents, depression and homicidal threats, uncharacteristic weeping and quarreling) during 3-week, double-blind, placebo-controlled trials of flurazepam (30 milligrams). The patients themselves recognized the diminution in their psychomotor skills during the first week but *not* in the third—when their test performance was objectively worse. In addition, Church and Johnson recently reported (*4*) that young adult "poor sleepers" showed a persistent and *cumulative* daytime impairment in reaction time during a 10-day, double-blind, placebo-controlled trial on flurazepam (30 milligrams).

Medd cites two studies (*5*) reporting that side effects of flurazepam are most likely to occur during the first few days of treatment, but these results were obtained in short-term settings. In residential homes for the elderly, where patients are often treated with hypnotics for weeks or months on a regular basis, Marttila and associates (*6*) also observed a cluster of adverse reactions to flurazepam during the first week of treatment; but 78 percent of all such problems appeared during the subsequent 12 or more weeks of continuous treatment, which was considered consistent with the gradual accumulation of the long-acting psychoactive metabolite.

Several other studies—cited in the IOM report or published after the report's release—document daytime adverse effects of flurazepam (and some other hypnotics) in normal volunteers (*7*). While it sounds superficially reasonable to recommend hypnotics only for insomniac patients and not for normal individuals, it should be emphasized that "insomnia" is a subjective complaint that may be associated with little, or even no, objective disturbance of sleep. In clinical practice, insomnia is caused by many different factors with wide differences in duration and severity. It is likely that hypnotics are prescribed to many persons who are, therefore, essentially "normal."

The controversies about the relative risks and benefits of hypnotics in medical practice will not be resolved until there is

a series of carefully controlled clinical trials that take into account etiological and diagnostic issues in insomnia, and objective and subjective assessments of sleep, mood, and performance, as well as side effects resulting from various types of treatment. The new studies by Oswald (*3*) and by Church and Johnson (*4*) appear to be genuine contributions along these lines. They both point to cumulatively adverse daytime effects of flurazepam on coordination when it is used continuously at night by poor sleepers. Among other implications, this delayed action suggests potentially serious and unrecognized hazards in automobile driving and in the consumption of alcohol, tranquilizers, and other central nervous system depressants. Moreover, Church and Johnson emphasize their inability to document any improvement in various dimensions of daytime mood or performance, even in those insomniacs whose sleep apparently improved because of medication.

It is unfortunate that Medd did not include a reference to the Church and Johnson study in his letter to *Science*; in their article the authors acknowledge the support this work had received from Hoffmann-La Roche Inc., and we believe Roche deserves full credit for its part in sponsoring this research. The IOM report recognizes the contribution of the pharmaceutical industry to clinical investigations of sleep problems and therapeutics, and it anticipates an extension of such research in years to come. It also calls for federal and philanthropic support for studies in this area of widespread human distress; as pointed out by Daniel Kripke (Letters, 6 July, p. 8) this support has been insufficient—the common problems of unsatisfactory sleep having held a surprisingly low priority on the nation's science agenda.

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Education of the Handicapped

Recently the Supreme Court ruled that handicapped persons have no right to attend school if they can't meet the physical qualifications (*1*). I, and many other handicapped scientists, disagree, and we would hope the majority of educators will not feel obligated to actively implement this decision. As education aims to help people develop the total dimensions of their lives by providing some knowledge to satisfy their souls together with other necessary and useful knowledge of practical value in living, it is not fitting to deny any citizen of this country access to the source of such benefits.

Unfortunately, many handicapped persons have been and continue to be denied this opportunity. Many of us have not been given the same educational opportunities available to our somewhat more able-bodied brethren. We are stereotyped as to what we are able to do, that is, you can't do ____ or ____ or ____ if you are blind or deaf or in a wheelchair or whatever. Individuals without knowledge of what it means to be handicapped make major decisions for us in light of what *they* think a handicapped person is capable of doing. Limits imposed upon our involvement in the educational system and the institution of constraints upon the pursuit of knowledge, regardless of individual talents, by those who may or may not be aware of what can be or has been accomplished by the handicapped are discriminatory actions.

Handicapped persons are presently represented in professions ranging from medicine and law to computer sciences and pure physics (*2*). Their achievements are positive indications that physical impairments do not necessarily interfere with the practice of any profession. However, people with physical and mental disabilities must adjust to their problems on their own terms, and the psychological aspects of this adjustment are not understood. Why do some handicapped persons succeed while others do not? We do not know. Some people are highly independent; they neither want nor need help. Others require much assistance. Flexibility of approach coupled with a sensitivity for individual needs is necessary when educational institutions decide about admitting a handicapped student. Those who have the *ability* and possess the *desire* and *will* to succeed should have *access* to further personal and professional development. The admissions committee of any institution should only be concerned with whether a handicapped person's desire and pride are equal to his or her ambition. The particular handicap is not relevant.

Handicapped scientists have had considerable interaction with the educational establishment. Some of them belong. We are aware of the social, political, and financial crises that have developed since 1960. But many of us feel the establishment has only reacted, blamed the outside environment, with few creative effects being made to resolve the problems. The emphasis has been on maintaining the status quo. We wish to ensure that the handicapped are not burdened by this lack of creativity but are educated in programs that do more than pay lip service to our problems. If this requires alternative uses of the funds appropriated from our tax money and close surveillance to ensure needs are met and the handicapped are not being excluded from activities for which they are "otherwise qualified," then ways must be found to do these things.

It should be understood that changes in the physical state of the human body are sometimes difficult to accept by casual observers of the phenomena because many such observers look upon these transformations as tragedies. For those minds which must live within the physical limits of the transformation, the capacity to struggle and adapt provides a means to make life whole and coherent even if painful and inconvenient. Human development as a primary goal of institutions purporting to maintain and advance civilization should include such people without subterfuge. We believe Congress, by including Section 504 in the Rehabilitation Act, wished to spur the development of inspired educational programs to prepare the handicapped academically and psychologically for life.

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