

Of course there are reasons for social concern over the use of marijuana—just as there are reasons for social concern over the use of aspirin and butter, not to mention alcohol and tobacco. If we confuse the issue of whether an individual should use a substance with that of whether society should forbid his doing so, we may be laying the foundation for tragic errors in public policy.

Reliance upon the criminal law to control marijuana is, in terms of cost-effectiveness, a very bad policy—even though it sounds tough and hardheaded. There are several reasons for this.

1) Marijuana use, compared to many things which are freely tolerated in our society, is not *that* much of a cause for concern. For instance, not only is it clear that the percentage of users harming themselves with marijuana is much less than the equivalent percentage of those using alcohol, but, with respect to the driving of automobiles, studies indicate that the driver who is socially intoxicated on marijuana is very little, if any, more dangerous at the wheel than the nonintoxicated driver (as opposed to a vastly larger effect with alcohol). Indeed, this follows from the fact that it is so difficult to tell whether someone is under the influence of marijuana.

2) The criminal law does not really have a great effect in discouraging marijuana use—at least by the population at greatest risk. The drug is freely available to the young today, both in the United States and Canada, and only the more mature, stable, and older elements of the population are significantly influenced by the criminal law in this regard.

3) When the criminal law is used as a means of marijuana control, we pay a price out of proportion to the benefits. Drug education tends to be nullified, since it inevitably comes to be regarded as the handmaiden of law enforcement. Moreover, the danger to the individual's mental health and future from being arrested is much worse than from using marijuana.

4) All of the above are reasons both for decriminalization (no penalty for the user but no legal sales) and for licensed sale. The provision of licensed sale will come when we realize that prohibiting legal sales of marijuana has simply resulted in turning over to the drug culture the marketing of a product which cannot be suppressed. When we understand this we will regard the licensed, taxed, sale of the drug to adults

as a better method of “discouraging” use than is our present across-the-board prohibition—regardless of the “grounds for social concern” about the drug itself.

JOHN KAPLAN

*Stanford Law School,
Stanford, California 94305*

Source of PCB's

The Research News report “DDT: An unrecognized source of polychlorinated biphenyls [PCB's]” by Thomas H. Maugh II (11 May, p. 578) requires critical comment, as three observations conflict with the hypothesis Maugh describes.

1) All PCB's lighter than heptachlorobiphenyl are more volatile than DDT (1).

2) The PCB's found in the environment by my group (11 May, p. 643) and others are almost always the 54 to 60 percent chlorinated mixture, that is, penta- and hexachlorobiphenyls. Di- and trichlorobiphenyls, which could be from DDT, are almost never found.

3) The ratio of PCB's to DDT in the atmosphere, water, and biota of the East Coast and the open Atlantic is always greater than 10. That would require DDT to be converted in very high yield to all penta- and hexachlorobiphenyls, which is clearly impossible by vapor-phase photolysis.

The idea is a good one, but none of the worldwide observations of PCB's in the environment support it.

GEORGE R. HARVEY

*Department of Chemistry,
Woods Hole Oceanographic Institution,
Woods Hole, Massachusetts 02543*

Reference

1. I. C. T. Nisbet and A. F. Sarofim, *Environ. Health Perspect.* 1, 21 (1972).

Psychosurgery

In her report on psychosurgery (16 Mar., p. 1109) Constance Holden brings up fears of certain individuals that psychosurgery is being used to “manipulate” or “repress and vegetabilize the helpless: the poor, the women, the black, the imprisoned, and the institutionalized.”

Such a movement, either local or widespread, is news to me. As a neurosurgeon who has performed most of the different types of psychosur-

gery mentioned in Holden's report, my purpose in becoming so involved has been to give selected patients greater freedom to live a normal life—freedom from pain, freedom from self-destructive impulses, or freedom from aggressive antisocial impulses. The alternative for many of these patients is to be kept in restraints almost continuously, tied to a bed or chair, restricted to a locked room essentially bare except for a mattress on the floor.

Neurosurgeons ought to favor sensible guidelines and criteria being set up by qualified medical and governmental agencies to protect patients from useless or unduly risky experimentation, whether by surgery, drugs, or electric current. Knowing that certain safeguards existed, the general public would have more confidence in the legitimacy of surgical procedures that are designed to improve overall brain function and enable a disturbed individual to have self-control over irrational impulses. Brain surgeons do not seek to control other peoples' thinking and behavior, only to help mentally handicapped individuals think and act in a way that will not cause their own destruction or that of some other innocent individual.

JOHN G. ZOLL

*State University of New York,
Buffalo 14215*

Trans-Science and Responsibility

Alvin M. Weinberg's distinction between “science” and “trans-science” (Editorial, 21 July 1972, p. 211) may be yet another device by which some scientists can evade their responsibility to protect the public against the hazards of low-level radiation. What Weinberg calls “trans-science” is not necessarily beyond the limits of science; it is merely beyond the narrow concept of science that currently prevails in the physical and biological sciences. It is well inside the limits of science from the standpoint of epidemiology or public health.

Weinberg's illustration of a “trans-scientific” issue is “the biological effect on humans of very low level radiation.” He doubts that this can be “fully ascertained, simply because of the huge number of animals required to demonstrate an unequivocal effect.” This tacitly assumes that the only “scientific” way to study the problem is, for example, to expose huge numbers of inbred mice to low doses of radiation. This assumption