Letters

Behavior Modification

It is unfortunate that Constance Holden, in her report "Butner: Experimental U.S. prison holds promise, stirs trepidation" (2 Aug., p. 423) speaks of "psychosurgery; the administration of drugs for purposes of aversive conditioning; and other punitive techniques, ranging from shock treatments to solitary confinement, that now commonly go under the rubric of 'behavior modification.'" The term arose in connection with the management of human behavior through contingencies of positive reinforcement specifically designed to replace the punitive techniques that are commonly observed in prisons and used by parents, teachers, employers, and others. It is true that psychosurgery and aversive methods "modify behavior," but so do religious rituals, military and police operations, advertising, state lotteries, piece-rate wages, protective tariffs, traffic signs, and wage and price controls. The original use of the term deserves to be respected, and it *excludes* the practices which Holden cites to define it.

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The Tragedy of the Sahel Commons

The report on the Sahelian drought by Nicholas Wade (News and Comments, 19 July, p. 234) is a dramatic illustration of "The tragedy of the commons" as described by Hardin (*1*).

When I first read Hardin's article, I wondered if the users of the early English commons weren't prevented from committing the fatal error of overgrazing by a kind of "bioethics" enforced by the moral pressure of their neighbors. Indeed, the commons system operated successfully in England for several hundred years. Now we read that, before the colonial era in the Sahel, "overpasturage was avoided" by rules worked out by tribal chiefs. When deep wells were drilled to obtain water "the boreholes threw into chaos the traditional system of pasture use based on agreements among tribal chieftans." Thus, we see the tragedy of the commons not as a defect in the concept of a "commons" but a result of the disastrous transition period between the loss of an effective bioethic and its replacement by a new bioethic that could once again bring biological realities and human values into a viable balance.

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References

1. G. Hardin, *Science* **162**, 1243 (1968).

Watergate Tape Erasure

Nicholas Wade (News and Comment, 22 Feb., p. 732, and 21 June, p. 1261) reports the conclusion of Allan D. Bell of Dektor Counterintelligence and Security Inc. that the famous erasure on the 20 June 1972 presidential tape might have been due to a tape-recorder malfunction. White House aide John McLaughlin, S.J., referred to these reports in his defenses of Mr. Nixon. One of us was present recently at such an occasion.

If *Science* is to present one side of such an issue in its news section, then at the very least it should verify the validity of the technical arguments adduced for the conclusions reached. In this case, some of the major arguments are of dubious quality. As one example, the explanation that the change in phase shown in figure 3 (21 June, p. 1264) was due to a change in motor speed of less than 1 percent fails utterly to account for the *discontinuity* in phase which accompanies the change in slope. This discontinuity, it would appear, can be accounted for most readily, as the court-appointed experts stated, by a stop-restart sequence.

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Shadow of the Sun

In the abstract of the interesting report on "Mariner 10 Mercury encounter" by James A. Dunne (12 July, p. 141) there is the statement: "The spacecraft trajectory passed through the shadows of both the sun and Earth."

There is a story of a scientist who proposed a soft landing of a spacecraft on the sun. When asked if the surface of the sun wasn't just a bit hot for such an operation, the scientist replied that he planned to have the spacecraft arrive at night. The shadow of the sun can apparently permit some remarkable things.

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Teratogens and the Delaney Clause

The following resolution was approved overwhelmingly by the members of the Teratology Society in reference to possible extension of the Delaney Clause to include teratogens.

The Teratology Society, an international scientific organization concerned with the study of the causes and nature of birth defects, recognizes that because of public need, governmental decisions limiting human exposure to potentially teratogenic substances must often be made before definitive proof of an effect in human beings is available. The Society notes, furthermore, that such decisions are hampered by the fact that there are as yet no precise rules by which teratogenic effects in humans may be inferred from experimental results in lower animals, and that, more generally, observations on birth defects cannot be extrapolated uncritically from one species to another.

The Society believes, therefore, that policy decisions concerning possible teratogenic dangers that are mandated by rigid legislative or administrative action may be counterproductive. Where these decisions ignore questions of exposure levels and species differences, they may falsely implicate agents that are or would be of social value. Conversely, they may create an illusion of safety, since it is conceivable that human beings may be sensitive to substances found harmless in any set of prescribed testing procedures in lower animals.

The Society is opposed, therefore, to the imposition of a "Delaney regulation"* for

* The term "Delaney regulation" is used here in a broad sense to refer to a regulation that mandates as law inferences about human hazards from observations in any lower organism at any dose of exposure. The term derives from the name of the amendment to the Food, Drug, and Cosmetics Act of the United States concerning the possible carcinogenic potential of food additives. It is emphasized that the resolution of the Society applies only to a "Delaney regulation" for birth defects, not for cancer.