Letters

Policy on TV Violence

The report and conclusions of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior (News and Comment, 11 Feb., p. 608) point to some recurring themes in the development of policy recommendations based upon scientific evidence. While the translation of research findings into policy recommendations is difficult, the degree to which an issue becomes embroiled in and subjected to economic, socio-political, and related pressures undoubtedly compounds the problem.

In such situations, perhaps the research results could be placed somewhere between the poles of "Clear Substantiation" and "Clear Rejection" of the stated hypotheses. It seems understandable that individuals and groups will tend to be somewhat more or somewhat less convinced by the available evidence. The degree of support for, rejection of, or expressed uncertainty about the results will not be a function only of the scientific rigor of the research and the conclusiveness of the findings. Reactions will also tend to be influenced by the particular theoretical, ideological, economic, or other preferences and commitments of the persons making such judgments.

I am not suggesting that acceptance or rejection of research findings are based largely on considerations of theoretical, ideological, or other biases, but rather that we need to recognize that such factors seem to play a part in the process. One way to approach this problem would be to determine how we would wish to hedge our bets with regard to the suspected causal relationship between viewing televised violence and its effects on behavior, given the nature of the available evidence. In arriving at a decision we should certainly consider the kinds of harm we would like to avoid, and thus the kinds of errors we should try to avoid—assuming that such errors could be demonstrated. Would we wish to err on the side of trying to prevent what appear to be harmful effects on children exposed to violent television fare? Should we be equally concerned about avoiding economic or other complications for the television industry? What kind of balance or compromise might have to be arrived at with regard to competing interests? (A similar problem is presented by the issue of stricter regulation and control of firearms, especially handguns.)

Since most decisions pertaining to the findings and implications of scientific research tend ultimately to become matters of social policy, they are inevitably pushed into the socio-political arena. It seems both desirable and essential to expect, indeed to demand, that greater consideration be given to the larger societal interests, rather than to the more parochial and vested interests. If we insist on delaying important policy decisions until the evidence is absolutely conclusive and glaringly obvious, we will most likely have limited our opportunities and options for dealing with the problems. Our belated efforts at remediation might be far less effective, and the harm done to the health and welfare of many persons might well be difficult to reverse.

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Aharon Katzir-Katchalsky

The senseless murder of Aharon Katzir-Katchalsky at Lod Airport in Tel Aviv has deeply shocked the world. Many scientists and nonscientists have conveyed their outrage and sorrow to the people of Israel and to the Weizmann Institute of Science. We have received a flood of letters and cables, all expressing a profound sense of loss at the tragic death of a scientist whose personality and impact were, literally, unique.

Many of these letters and cables have indicated a desire to participate in the creation of a memorial worthy of Aharon Katzir. We are all most deeply moved by this response. While we have not yet been able to make any detailed plans for a suitable way of commemorating Katzir, we are clear on one point: the wish, at one and the same time, to perpetuate his memory on this campus and to further those fields of endeavor that were closest to his heart.

In order to make possible some kind of coordinated action, an international committee is being formed, and a Katzir Memorial Fund has been established at the Weizmann Institute of Science. Ideas and offers of help will be gratefully received.

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Many scientists from around the world had the privilege of knowing Aharon Katchalsky, his brilliant scientific work, his extraordinary faculty to communicate science, and his warm personality. Those who worked with him, were his students, or merely heard him lecture will carry equally the intellectual excitement which Aharon Katchalsky could invoke.

On 30 May, Aharon Katchalsky, returning to Israel from one of his frequent trips abroad devoted to international scientific cooperation, was gunned down at the Tel Aviv airport, along with Puerto Rican pilgrims and other innocent bystanders, in a vicious and senseless terrorist attack.

We have requested that a suitable memorial symposium be held at the forthcoming Fourth International Congress of Biophysics sponsored by the International Union of Pure and Applied Biophysics. Katchalsky was a past president of this organization and an honorary vice-president at the time of his demise. Because so many of his friends, students, and scientific colleagues will gather in Moscow for this meeting, we feel that it is a unique opportunity to honor Katchalsky's scientific and intellectual accomplishments. Such a symposium would be an especially significant and fitting tribute to this outstanding international scientist, whose leadership and example in international scientific cooperation played a major part in making such international meetings possible.

Although we realize the difficulty of making late changes in a carefully prepared program, we hope the organizing committee of the Fourth International Congress of Biophysics will see fit to

so honor Katchalsky with a memorial symposium.

We ask our colleagues throughout the international scientific community to express the appropriateness of such a memorial symposium and their appreciation to the organizing committee for efforts to arrange a tribute.

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Report on Airborne Lead

Many readers of Robert Gillette's report "Lead in the air: Industry weight on academy panel challenged" (News and Comment, 19 Nov. 1971, p. 800) have probably been left with the impression that the National Academy of Sciences lead report is biased in the direction of understating the hazards of lead in the environment. Much space is devoted to those who tried to discredit the report in one way or another. Most of the criticism relies for its impact on guilt by association. A good example is provided by Gillette's statement, "A medical consultant to the Ethyl Corporation since the late 1920's, Kehoe had the distinction of being cited in the lead panel's list of references a dozen times, more than any other researcher." This clearly implies bias on the part of the panel. It happens that no one else has provided the kind of critical data on lead metabolism in man that Kehoe has. His data are of crucial importance to the assessment of lead metabolism in man. We were looking for solid data wherever they might be found.

I am also puzzled by Gillette's sentence, "Although the panel noted that some groups of workers and children in inner-city neighborhoods might potentially be at risk, it found that the amount of lead in the air of most major cities 'has not changed greatly' in the past 15 years." This is a most curious apposition of unrelated panel conclusions. The hazard to "some groups of workers and inner city children" exists *irrespective* of any future changes in the concentration of lead in ambient air. The hazard is there today, and it will be there a year from now, even if the concentration of lead in ambient air doesn't increase.

At the time the study was initiated we were clearly informed that we were to provide the "scientific underpinnings for a national air quality standard to control lead." This reflects our purpose accurately. We assessed as best we could the contribution of airborne lead to the total assimilation of lead by biological systems of value to man (including man himself). We indicated what level of assimilation we considered hazardous, and we provided the rationale for this in great detail. If the hazards we cited are not adequate grounds for controlling lead emissions, then the Environmental Protection Agency is more timid than I had thought.

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The criticism of the National Academy of Sciences report on the health effects of airborne lead apparently stems from the congruency of the report with what are judged to be the biases of the panel's industrial members. The hypocrisy of the criticism lies in the implication that representatives of the "public" are without bias, and therefore greater "public" representation would have resulted in a more objective report.

If there is a bias on the question of keeping the lead in, there is a bias on the question of getting the lead out. Scientists are not immunized by their profession to the emotions experienced by other men, and the environmental movement is an extremely emotional one.

The academy is on sound ground in filling appointments to its panels with a balance of conflicting philosophies. To conduct its affairs otherwise would be truly naive.

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In my long career in the field of public health, with emphasis in occupational health and air pollution, I have been witness to the biases of industrially employed experts a great many times. In fact, I have seen professionals change their outlook (and the expression of their views) on technical and scientific matters when they moved from the public to the private sector. It is pure naiveté for the National Academy of Sciences and National Research Council not to recognize such facts. It is foolhardy to ask any biased scientist to interpret facts, the explanation of which may be variable, without taking into consideration his biases. Even in our courts of law the juries and judges evaluate the credibility of witnesses.

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Demand for Nuclear Engineers

In these times when we are reminded daily of the unemployment situation of scientists and engineers, it is refreshing to find an area in which the situation appears to be reversed. In a recent review of the traineeship proposals that the Atomic Energy Commission's Division of Nuclear Education and Training received from departments of nuclear engineering at universities, we learned that advanced degree graduates are having no difficulty finding employment in this field. On the average, each 1971 graduate received 1.7 offers of employment and would probably have received more except for the fact that many accepted the first offer because they had heard that the job market was extremely tight.

A recent telephone survey of departments of universities offering advanced degrees in radiation science and protection indicates that graduates in this field received an average of four employment offers each. Some departments indicated that they had requests for referrals for more jobs than they could possibly fill.

A tremendous growth in nuclear power over the coming decade and an increased use of nuclear techniques in industry have been predicted. These forecasts, coupled with the present employment picture and the decrease in engineering enrollments, indicate that there will soon be a shortage of well-trained nuclear engineers and radiation protection specialists. This information should be of interest to many students now contemplating the choice of a career, and to those who are advising and motivating these students.

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