Letters

Reform of Peer Review

Lest the published response (Letters, 19 June, p. 1335) to Rustum Roy's editorial (27 Mar., p. 1377) on peer review leave the impression that the readership is uniformly negative on his proposed "alternative funding mechanism," I wish to offer a minority report.

As a critic of peer review, especially as practiced at the National Science Foundation and the National Institutes of Health (*1*), and in agreement with at least three social science studies (*2*), I applaud Roy's recommendations as provocative and potentially constructive reforms. They take cognizance of a needed realignment of scientists' sacrosanct research values, such as autonomy and rewards for performance, with broader cultural values of accountability, egalitarianism, national excellence, and improved quality of life. Can this multitude of often competing values be accommodated by a single "proposal-review system" (as Roy calls it)? I think not.

The research community must be weaned from the view that the demands of patrons and policy-makers (from the Office of Management and Budget to local university administrators) are an incursion into its boundless creativity. Although Roy's formula for efficient, merit-based research allocations is no panacea, the system he outlines and details elsewhere (*3*) *is* a step toward reform.

Another such step was recently taken by George Kurzon. In a suit originally brought against the Department of Health and Human Services, Kurzon sought disclosure, under the Freedom of Information Act (FOIA), of "the names of scientists who have made grant applications to the National Cancer Institute (NCI) and whose applications have been turned down" (*4*). He took this action contending that the peer review system does not work well where the scientist is unconventional in his or her thinking. The case in point: Albert Szent-Györgyi (*5*). The government argued that the names of scientists denied grants are immune from the provisions of the FOIA. On 21 August 1980, the District Court of Massachusetts upheld the government's position.

In support of his appeal, Kurzon requested that I submit an affadavit to augment one by Rustum Roy submitted in behalf of the original suit. On 22 May 1981, the First Circuit Court of Appeals sustained Kurzon's appeal, reversing the district court's decision. The names and addresses of scientists declined in the last 2 years for NCI funding will soon be released. This will allow research on the effects of peer review—wasteful and facilitative alike—by tapping the experiences of those whose proposals were either declined NCI support or approved with too low a study section priority rating to receive support.

In sum, the lawsuits of the Kurzons and the proposals of the Roys may help allay public skepticism about the conduct and eventual benefits of scientific research. They may also make some scientists squirm by subjecting one of their private rituals to public scrutiny. But it is far better, in my view, to seek reform of a system than to disregard or bemoan its existence.

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References and Notes

1. I. I. Mitroff and D. E. Chubin, *Soc. Stud. Sci.* **9**, 199 (1979); D. E. Chubin, *Contemp. Soc.* **9**, 204 (1980). For a cross-cultural perspective and a first-person case history of peer review in Australia, see C. Manwell, *Search* **10**, 81 (1979).
2. G. Carter, *Peer Review, Citations and Biomedical Research Policy: NIH Grants to Medical School Faculty* (Report 1583-HEW, Rand Corp., Santa Monica, Calif., 1974); D. R. Hensler, *Perceptions of the National Science Foundation Peer Review Process: A Report on a Survey of NSF Reviewers and Applicants* (prepared for the Committee on Peer Review, National Science Board, and the Committee on Science and Technology, U.S. House of Representatives, by the National Science Foundation, Washington, D.C., 1976); S. Cole, L. Rubin, J. R. Cole, *Peer Review in the National Science Foundation: Phase One of a Study* (National Academy of Sciences, Washington, D.C., 1978).
3. R. Roy, "Statement to the subcommittee on science, research, and technology" (U.S. House of Representatives, Washington, D.C., 29 July 1975).
4. G. M. Kurzon, "Brief of the Appelles" (submitted to U. S. Court of Appeals, 1st Circuit; heard on 12 February 1981).
5. See T. M. Vogt, *Science* **203**, 1293 (1979).

Cousins' Recovery

Constance Holden's article (News and Comment, 20 Nov., p. 892) about Florence A. Ruderman's comments on *Anatomy of an Illness* refers to my "self-cure." I was not involved in any "self-cure." The emphasis in my book was on the importance of the patient-physician relationship. I gave my physician principal credit for my recovery. The initiatives I took were first discussed with him; nothing was done without his support. It would be unfortunate and indeed harmful if seriously ill persons were encouraged to ignore competent medical attention in favor of supposed self-cures. At the same time, I believe patients must participate directly in efforts at recovery.

I have no comment to make on Ruderman's article in *Commentary*—or her various talks based on that article—other than to say she has not asked to see any of the original medical records. Her credentials for commenting on my medical condition are not clear.

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Hayflick–NIH Settlement

In March 1976, the National Institutes of Health released reports in which several serious allegations were made against Dr. Leonard Hayflick. Immediately thereafter Dr. Hayflick brought suit against the U.S. government. Now, after nearly 6 years of litigation, the parties have reached an out-of-court settlement that we believe to be just and counter to the NIH's (the defendant's) claims.

In view of the wide publicity given to NIH's original allegations we believe that publication of the settlement terms will set the record straight and redress some of the injustices suffered by Professor Hayflick; we also believe this exoneration of a fellow scientist might prevent the occurrence in the future of similar violations of individual rights.

Many of the undersigned favored Hayflick's continued pursuit of his charges against the government through a trial and the inevitable appeals and delays because the suffering by the Hayflicks professionally and financially seemed to warrant an award of damages. However, the case has been settled out of court and litigation ended because the alternative could well have taken additional years out of a limited lifetime and because the costs of litigation against a defendant with unlimited resources would have posed insuperable burdens on Hayflick and indefinitely delayed the resolution of key principles of justice.

Therefore, in light of these practical considerations, an out-of-court agree-

ment has been reached which stipulates the following main points:

1) The NIH originally alleged that (i) all frozen ampules of the human diploid cell strains WI-38 and WI-26 that were developed by Dr. Hayflick belong to the U.S. government, (ii) funds realized by Dr. Hayflick from the sale of the cells be transferred to the U.S. government, and (iii) the Privacy Act did not apply to the release of the original reports. Contrary to these original allegations NIH now agrees that all of these claims are "in reasonable dispute." The NIH's original report, incidentally, recommended that Dr. Hayflick be denied future opportunities for NIH research grant or contract support.

2) Contrary to the NIH claim of ownership of all original ampules of WI-38 and WI-26, title to six original (8th passage) ampules of WI-38, 11 WI-38 ampules at higher passage, and 18 ampules of WI-26 now in the possession of Dr. Hayflick shall remain with him.

During the 6 years of litigation the Department of Health and Human Services made efforts to thwart administratively the award of a grant to Dr. Hayflick that had been approved by a study section and for which funding was specifically requested by the Advisory Council of the National Institute on Aging. After 2 years of Council efforts, Hayflick was awarded a 3-year research grant by the NIH in August 1979 in the amount of $562,000. Because the work involved in this grant utilizes WI-38, in part, Dr. Hayflick will use such WI-38 cells as necessary for his present and continuing research.

3) Title to up to 19 original ampules of WI-38 now in the possession or control of NIH shall remain with them. However, any original WI-38 ampules held by Hayflick and found to be unusable by him will be considered for replacement by NIH.

4) Contrary to the NIH claim that the funds belong to them, the NIH concedes that all proceeds realized by Dr. Hayflick from the sale of WI-38 or WI-26 plus accrued interest, which totals approximately $90,000, are the property of Dr. Hayflick.

5) In order to avoid any future misunderstanding of the content of the original NIH report, NIH agrees that copies of the Settlement Agreement will be placed and transmitted with any copies of the reports now held in their files. Furthermore, copies of the Settlement Agreement will accompany any future distribution of the reports by NIH that may be made under Freedom of Information Act requests.

With respect to another charge made in the NIH report, it should also be noted that WI-38 cultures, sterilized with antibiotics, have been and continue to be distributed by the government for research purposes whereas untreated, sterile cultures are distributed by them for human virus vaccine production. This practice, which was already adopted by the government at the time their original report was released, is precisely the same practice for which the NIH report so gravely condemned Dr. Hayflick as the distributor of "contaminated" cells.

We are happy to note that in 1980, Dr. Hayflick was given the Brookdale Award by the Gerontological Society of America—one of its most prestigious research awards. In 1981 he was voted President-elect of that Society—further reflecting the esteem in which he is held by thousands of his scientific peers and colleagues.

This happy outcome of Dr. Hayflick's courageous, sometimes lonely, emotionally damaging, and professionally destructive ordeal provides several important object lessons for the future. In light of the settlement terms and other government actions cited above, few will disagree that release of the original allegations against him was entirely unjustified. Second, the effects of the negative publicity Hayflick received probably can never be fully reversed, because it is most unusual for the media to give the same coverage to the exoneration of individuals as they do to unsubstantiated but sensational allegations [see, for example, the article by Nicholas Wade, *Science* **192**, 125 (1976)].

Despite the pleasure we have in reporting the resolution of Hayflick's suits against the NIH, there remains the possibility that similar injustices may occur to other members of the scientific community in the future, because NIH procedures still permit release of such unsubstantiated charges. We believe that this situation must be changed. Therefore, we urge fellow scientists to join with us in efforts to persuade the NIH that the traditional principle of presumption of innocence be exercised in the future and that a system of peer review, similar to that now used for awarding grants, be applied whenever questions of propriety arise. Had such provisions or application of historical rights of citizens been applied in the NIH's treatment of Hayflick, his unnecessary suffering and that of his family and friends, the near destruction of an outstanding career, denial to the public for several years of important results from a world-renowned research laboratory, and the expenditure of hundreds of thousands of dollars in federal salaries and other expenses involved in these proceedings could have been avoided.

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*The affiliations of all signers will be given in a forthcoming issue of *Mechanisms of Aging and Development*.