cation and Labor and Interior committees and chairman of Interior's subcommittee on mines and mining. She has demonstrated an interest in international science and technology issues and, for example, served on the U.S. delegation to the Law of the Sea Conference.

Benson, who is from Massachusetts, achieved public prominence through her work in the League of Women Voters at both the state and national levels. She was national president of the League from 1968 to 1974. In 1974 she served in Massachusetts Governor Michael Dukakis's cabinet as human services secretary but resigned in a budget dispute.

A harsh but rather widely held view in sectors of the scientific community interested in international issues is that these were "affirmative action" appointments made essentially to satisfy the demand for the naming of women and minorities in the State Department hierarchy. By this analysis, supporters of presidential candidate Jimmy Carter and members of his campaign staff who advised him on international affairs took what they regarded as key policy posts in State for themselves and their associates and then distributed posts of lesser importance to accommodate other constituencies. Such an action is by no means unusual when administrations change, but critics object that it perpetuates the attitude which has consigned science and technology to second-class status at State. Some of those in the woman's movement are not pleased with the Benson appointment because she is not a "professional," having served primarily in voluntary organizations and lacking formal administrative experience.

The coolness toward Benson and Mink seems not to be personal, but rather to be the product of the long-cherished hope in the scientific community for appointment to the top scientific post of an eminent scientist with experience in international scientific affairs. The assumption that a prominent scientist in the job could set things right for science and technology at State, however, looks like an increasingly dubious formulation. It is possible that this ideal might have been achieved in the days when the science office's primary responsibilities were to run the science attaché program and help negotiate and administer programs of scientific cooperation and exchange. But the office's functions have multiplied greatly and the emphasis has shifted in the last decade from science to technology.

In discussing whether it is necessary to have a prominent scientist heading OES, the Glennan report points out that

Peer Review Reviewed

Two detailed studies of the peer review process have assigned remarkably high merit scores to the systems operated by the National Institutes of Health and the National Science Foundation. The NIH study suggests nonetheless that an ombudsman and appeals board should be appointed for the benefit of those who believe their grant applications have been unfairly judged.

The NIH review* was prepared by an in-house committee chaired by Ruth Kirschstein, director of the National Institute of General Medical Sciences. Its basic finding is that the NIH peer review system is "extremely effective in identifying biomedical research activities of high quality."

A questionnaire sent out to all members of NIH study sections and advisory councils indicated that the peer review system is perceived by those who operate it as being substantially free of bias. Some 95 percent of respondents rated the system as good or excellent on the count of fairness and lack of bias. A similar preponderance said they had observed no bias, or insignificant amounts of it, on the basis of either race or sex.

But the questionnaire indicated a certain perception of cronyism in the review of applications, which 9 percent of respondents rated as significant or very significant, 19 percent as moderate, and 72 percent as none or insignificant. The perception was stronger among advisory council members than with those most directly involved in peer review, the study section members. The NIH committee is making a further analysis of the questionnaire to ascertain what particular aspects of cronyism the respondents citing it had in mind.

In addition to the questionnaire, the NIH committee in its year and a half study drew upon some 1500 letters of comment received from the scientific community and others, as well as upon three public hearings.

Besides the appeals board, the committee recommended that vacancies on study sections should be announced, so as to allow outsiders to suggest candidates, and that the summary statement reviews of applications should routinely be sent to the principal investigator.

The committee notes that the NIH peer review system cost $15,800,000 to operate in 1976, or about 1 percent of the $1.4 billion the NIH awarded.

Another study of peer review, of the system practiced in the National Science Foundation, has been conducted by Stephen and Jonathan Cole, sociologists of science at the State University of New York at Stony Brook and at Columbia University, respectively. The study will be published soon by the National Academy of Sciences, which commissioned it, but a preview of its conclusions was given to the House science subcommittee by NAS president Philip Handler. The Coles looked at 1200 peer review decisions made by NSF program managers in fiscal 1975 and, he reported, were unable to detect any evidence of systematic bias, such as for Ivy League reviewers to favor Ivy League applicants, or for eminent researchers to fare disproportionately better than their obscurer colleagues.

Under the "rich get richer" hypothesis, one might expect that the more eminent, productive, and prolific scientists would stand a significantly better chance of receiving an NSF grant than those at lower levels in the social stratification system of science. Surprisingly enough, the Coles' data suggest that this is not the case. "An investigator's current circumstances seem almost irrelevant to success in securing NSF funds," Handler reported.

To what extent are NSF program managers guided by the recommendations of their reviewers? Quite considerably, but not totally: only 92 percent of those whose applications that were rated highly by the reviewers received awards, and 10 percent of those who scored low were nevertheless funded, the Cole study finds.

Jonathan Cole, while concurring with Handler's summary of the report, says that before he would be willing to make a conclusive statement about the equitableness of the system, further questions need to be resolved, such as whether the peers are fairly selected by the program managers, and whether those who apply to the NSF are typical of the scientific community as a whole.—N.W.

*"Grants Peer Review, Phase 1." Three volumes. Available on request from NIH.