Letters

NIH Career Awards

The decision that there will be no new NIH career awards (News and Comment, 25 Dec. 1964, p. 1662) marks the end of one of the few attempts to evolve new fund-granting procedures to replace the present obsolete and ineffective systems. Clearly the decision to kill the program was not based on any yardstick of research production. If, for instance, the number of articles published by the award recipients in a year were divided by the amount spent on the program (or if a more sophisticated yardstick were used), the awards program would rate as one of the best NIH research investments. Nevertheless, the program was killed. The question is: Why?

One answer is that the career awards represented a radical departure from the tradition of "rewarding" research achievement by promotion to an administrative position. The career awards were designed to give the recipient *more* time for his research interests. The conditions of the awards set limits on nonresearch commitments, and recipients often had to divest themselves of administrative, clinical, or teaching responsibilities. For instance, I know of one recipient who flatly refused the teaching and administrative assignments that his chief gave him and had the temerity to point to the award conditions as a legal justification. Such episodes led to pressure on NIH to end this "intolerable" situation where an investigator was able to spend most of his time on the research that *he* wanted to do.

Other effects of the career awards were displeasing to some administrators. The award recipient was at least partly freed from the turmoil that goes with annual submissions or renewals or requests for grants. The award gave him added security, dignity, and independence. It created a more favorable research climate. But sometimes this made the recipient's colleagues envious. They also wanted a less hectic and harried research environment. Again an "intolerable" administrative situation resulted.

In other words, the career awards were stopped not because they were a failure but because their success brought out the inadequacies and inequities of the usual fund-granting procedures. I can only hope that the demise of the awards program will generate a demand for a thoroughgoing and realistic reappraisal of the present methods of allocating money for research. If this reappraisal is made by persons who are more interested in improving the productivity of medical research than in perpetuating the present power structure, I believe it will support the underlying principles of the career awards. These include (i) emphasis on creating a favorable research climate for competent and creative individuals rather than on hardware and other status symbols of research; (ii) allocation on the basis of past performance—on careful evaluation of the contributions of investigators to the understanding and control of the public health problems of our era; and (iii) sustained support, directly to the working scientists, to encourage long-term research on major problems—to stress life-work, not piecework.

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Japanese Zoologists Abroad

Japanese science has been the subject of several recent items in *Science*. These have dealt with observations of travelers, with international congresses, and sometimes with specific evaluations based on accumulated information of various kinds. To these we can now add the results of a survey of one group of Japanese scientists, the zoologists. The data are drawn from 73 responses to questionnaires sent to 90 colleges, universities, and biological research institutes in Japan in late 1963, in which we requested the names of zoologists who had spent three months or more abroad at one place doing research. The names reported totaled 243. Other information requested about these persons was: age, length of stay, places of stay, source of financial support, and titles of publications resulting from scientific collaboration abroad.

The most remarkable trend is in the simple number of Japanese zoologists who have left the country for foreign experience since 1950. This number has doubled approximately every 1.5 years at least up through 1960 (our data thereafter become unreliable). Most of the zoologists were between 28 and 36 years of age at the start of their foreign visits, but ages ranged from 22 to 62. Three percent were women. Only 16 of the 243 were full professors at the time of their foreign work.

About 40 percent of the sojourns were of one year's duration or less, about 30 percent were between one and two years, and about 30 percent were of two to eight years' duration. The countries in which they had worked were as follows:

U.S.	219	Finland	1
Hawaii	3	Holland	1
Canada	6	Australia	4
Germany	12	Ceylon	4
England	10	Thailand	2
France	7	Taiwan	1
Italy	6	India	1
Sweden	6	Egypt	1
Belgium	4		

Of the 250 grants and stipends the 243 zoologists had received for work and study abroad, about 75 percent were from sources in the U.S., and 14 percent were from the Japanese government. The sources named were as follows:

United States, total	192
National Science Foundation	4
National Institutes of Health	10
Rockefeller Foundation	37
Fulbright awards	15
University grants	89
University fellowships	37
Japanese government	36
German government	7
British government	7
French government	5
Italian government	3

It is clear that ready availability of American funds has stimulated travel to and research in the U.S. by Japanese zoologists. However, even when the