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Information Exchange Groups

Since 3 February 1961 the National Institutes of Health have operated, on an experimental basis, a facility for rapid dissemination of unevaluated preprints. The experiment began modestly with one Information Exchange Group (IEG), consisting of 32 members, working in the field of electron transfer and oxidative phosphorylation. New participants were added through nomination by existing members or by application. Membership was open internationally to those actively engaged in the research area served by the group. Participants sent manuscripts to NIH, where they were copied and forwarded to members. No charge was made for the service. The IEG memoranda were intended to be informal instruments for discussion, even polemics, but most of them have been scientific papers.

During the first year the average number of members was 56, and ten preprints were circulated. The enterprise expanded rapidly. During 1964 and 1965 six more IEG's were added. By 1 October 1966 total membership had increased to 3625. The number of preprints rose to 151 per month. During 1966, NIH estimates, more than 1.5 million copies of preprints will be sent out.

Potential for further growth in IEG membership is large. E. C. Albritton of NIH has proposed that "all scientists around the world [except for scientists in countries with which the U.S. has no diplomatic relations] capable of independent research in any IEG's research area be permitted to join." Continuation of current trends for another 2 years would result in a membership in all the established IEG's of as many as 14,000, with a distribution of perhaps 30 million copies of preprints. Given unlimited financial support, there would be additional room for growth. Albritton estimates that 200 IEG's might be formed. Ultimate annual costs for an expanded service might be in the range of $10 to $100 million.

It is unlikely that NIH will conduct this experiment. Partly this is because of tight budgets. Partly it will be a response to increasing criticism of the IEG experiment (*Science*, 12 August and 21 October).

In their early stages the IEG's were a useful medium for transfer of information. They provided active workers a timely and concentrated view of developments in their field. However, with inflation of membership (which NIH could not feasibly prevent), the quality of the average communication has suffered.

A principal argument for the IEG is its comparative speed of publication. Yet, at times, backlogs at the NIH printshop have resulted in delays of up to 2 months. On some occasions reports have appeared in *Science* before they have been distributed as IEG preprints. IEG sponsors speak of time savings of 6 to 9 months over conventional journals. This is an exaggeration. In several journals the time required for publication of a first-class manuscript is less than 2 months more than the average processing time at NIH. Longer delays in journal publication arise partly because the average manuscript submitted is of doubtful scientific value or is poorly written. In an era of information explosion, who needs government-subsidized shoddy merchandise?

The median interval between receipt and publication of short manuscripts can and should be less than 4 months. The explosive growth of the IEG's is in part a mass protest against the inefficiency of many publications. The growth also reflects a desire on the part of some scientists to avoid a discipline essential to the integrity of science.

—PHILIP H. ABELSON