

Mr. Day is not alone in his concern. Virtually every peer review journal has seen its number of scientific pages dwindling to half their former numbers.

Dr. Leland Stoddert, treasurer of the International Academy of Pathologists, said in a recent paper:

Let me speak clearly about the importance of editorial review and the publication of sound, critically reviewed and edited papers in scientific journals. The demands of editorial review sharpen the work of scientists and refine their conclusions. It would be an unhappy day if the edited journal disappeared from the scientific world for economic reasons because scientific standards would not be maintained.

I might add here that the National Institutes of Health has tried to set up currently a special committee to deal with the problem of dissemination of medical information and technology, and that this committee would concentrate on such problems as the failure to disseminate research findings of potential value as rapidly or as effectively as they might.

Senator NELSON. Where are you now?

Mr. SCHERAGO. That is not in the text, sir. We just discovered that.

Most societies have increased membership fees to the point where fewer and fewer scientists can afford them. Mr. Day says that the subscription price for the "Journal of Bacteriology" has tripled since 1968, and by 1985 will triple again. Most society officials agree that they have reached the point where no further reduction in scientific papers and increases in membership dues and subscriptions can be made.

Let me dwell a minute here on the current state of scientific research.

Each year this country spends almost \$18 billion on scientific research. A substantial portion of those research funds are supplied by the Federal Government. The National Institutes of Health alone spends almost \$2 billion in grants and intramural research.

Senator NELSON. Two billion dollars?

Mr. SCHERAGO. Two billion dollars.

This colossal investment in research activity has in recent years produced an avalanche of new important scientific and medical information.

Dr. Donald S. Frederickson, Director of the National Institutes of Health, said in a speech at the recent meeting of the American Association for the Advancement of Science, "Biomedical knowledge, like all scientific knowledge, has been accumulating at an exponential rate, as reflected in the output of scientific literature. One sampling of biomedical publications suggests an average annual increase in scientific papers of between 4 percent and 5 percent for each year, from 1965 to 1978," and that is only in the biomedical field.

Not all papers which are delivered before a society are published in peer review journals. Some authorities estimate that less than 60 percent of scientific papers ever appear in established scientific or medical journals. It is ironic to think that much of the productive research generated by this enormous expenditure in research dollars is never seen by the scientists and doctors who could best utilize it.