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Citation Studies Indicate that Two Copies May be Cheaper Than One!

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In the days before ecology became a popular term in everyday use, ISI ® was already planning ahead for coverage of this field. At that time, there was a great concern about oceanography. I reported to an NSF Committee that coverage of the literature had to be considered from two viewpoints-the literature of oceanography and the literature of interest to oceanographers. The former comprises a relatively small group of journals-the latter is essentially the same large group that I have repeatedly mentioned as the hard core of science.1 So we added to our data base as many "oceanographic" journals as we could identify. Naturally, we continued to cover the hard core as we had before.

We adopted this same strategy for ecology and numerous other fields. That is why the Science Citation Index and the associated ASCA service already provide such comprehensive coverage of these "new" fields. At ISI we have learned that fields like "pollution" or "pesticides" basically are the "partitionings" of the hard core. The size and scope of the partitions will vary according to the particular slant one brings to a problem.

We have been "preaching" this message now for at least ten years. We will have to continue for at least another decade. It takes a full generation to educate an entire community of scientists and librarians.

Sociology is a field that ISI has examined recently, in the same way we examined oceanography, ecology, pollution, noise control, etc. This is in part due to our plans to publish a Social Sciences Citation Index next year.2 Once again we find that there is a relatively small group of sociology journals but a very large number of socalled "peripheral" journals of interest to sociologists. What else do we find? One of the most frequently cited journals in sociology is Science, and among the highly cited are the psychology journals which we have included in the Science Citation Index all along.

Thus, in the social sciences as a group, or even in sub-fields like sociology, mental health, drug abuse, etc., Garfield's Law of Concentration still applies.3 The same basic core of journals accounts for 90% of the citations. This finding affects certain libraries that have felt compelled to amass and store huge journal collections. The savings that can result from reducing journal collections from five thousand to less than two thousand can be quite significant. However, individual library directors must determine which parts of the collection are most heavily used and in which departments they should be stored.

I am confident that such studies will

in fact reveal the need to obtain current and sometimes retain duplicate sets of heavily used journals. Arbitrarily limiting all journal acquisitions to a single subscription is self-defeating. If the approach to library management I suggest is followed, the least used journals are stored in regional, national, or even international library centers.

ISI's own library has become one of the leading libraries of the world. It is relied upon as back-up to thousands of smaller library collections throughout the world. We call it *Original Article Tear Sheet* (OATS®) service, but it is really just a mail-order library service. We receive several copies of all journals and "tear" out articles one at a time. In

traditional libraries this is called an interlibrary loan. Other libraries would be well-advised to consider using the same technique as OATS.

And if publishers would adopt the suggestion that two copies of each journal be sent to all library subscribers this practice might increase. It might also reduce the tensions that arise because of copyright questions. In the final analysis two copies may prove to be cheaper than one—not only for libraries and publishers, but also for the ultimate consumer scientists who use them. The slight additional cost of printing a second "tear sheet" copy may be the simple solution to the technological terror of the Xerox machine.

- 1. Garfield, E. Citation analysis as a sociometric tool for journal evaluation and science policy studies. *Science*, in press.
- 2. The new Social Sciences Citation Index (SSCI) will add a new dimension to research on man and society. Current Contents ® No. 22, p. 5-7, May 31, 1972.
- The mystery of the transposed journal lists, wherein Bradford's law of scattering is generalized according to Garfield's law of concentration. Current Contents No. 31, p. 5-6, August 4, 1971.