

The Impact of Citation Counting On Bibliographic Comprehensiveness In the Journal Literature Of the Social Sciences

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Joseph C. Donohue suggests that one of the tasks to which Information Science addresses itself is the identification of those segments of the total corpus of literature which are most potentially useful.¹

The process known as citation analysis assigns itself to the identical problem.

Perhaps the definitions of two critical terms should be delineated at this point. As suggested by Derek J. de Solla Price, a distinction should be made between the term "reference" and the term "citation."² An author makes a "reference" to the work of another through the use of a bibliographic entry or footnote. Conversely, the author who has been referred to has received a "citation" from the author who has made the bibliographic reference.

The purpose of this study is to attempt to gain answers to the following questions: How will citation counting effect bibliographic access to journal literature of the social sciences? Will bibliographic coverage

of journal literature of the social sciences be reduced to coverage of only the most cited journals, thus leaving more esoteric or less popular journals inaccessible?

One of the products offered in the Institute for Scientific Information's *JOURNAL CITATION REPORTS* is a Journal Ranking Package, wherein the 1,000 journals cited most often are enumerated along with supporting and supplementary data.³ While researchers and librarians might make good use of such a bibliometric product, the use of the Journal Ranking Package by indexers and abstracters could be damaging to comprehensive bibliographic control. The Institute for Scientific Information itself recognizes the importance of comprehensive bibliographic control over the total corpus of journal literature by abstracting and indexing services.⁴ In order for input into the citation index data to be valid, authors citing articles must have at least considered the existence of all

relevant articles. Such comprehensive consideration of relevant articles is impossible without adequate bibliographic control over the entire corpus of relevant information. This means that abstracts and indexes must cover more than just the 1,000 journals cited most often. Editorial selection policies of abstracts and indexes must have a sufficiently wide scope to off-set any danger of bibliographic bias created by citation counting.

While citation counting may be a valid source of data concerning patterns of information flow, it should not be relied upon heavily as a source of data for predicting future user needs. J. M. Brittain has asserted that unfilled user needs can not be identified through the application of systematic methods of analysis like citations indexing.⁵ Citation counting should be viewed as a device to reassess patterns of information flow but not patterns of information needs. Comprehensive bibliographic access is the most reliable answer to unforeseen user needs.

The need for comprehensive bibliographic control over the total body of social science literature is also important because social scientists do not have a highly adequate invisible college. William D. Garvey, Nan Lin, and Carnot E. Nelson have examined the informal communication networks which transmit information presented at meetings but not yet published.⁶ They have demonstrated that these informal networks are far less effective among social scientists in comparison with physical scientists.

If the informal communication networks among social scientists are indeed inadequate, the necessity for comprehensive bibliographic control over the total corpus of published social science literature becomes all the more evident.

It is undeniable that bibliometric treatment of social science literature can yield a rational basis for collection development, and this point should not be understated. However, such analytical treatment should not be used as a device to excuse the

selection of certain materials for bibliographic coverage and the total exclusion of others. Although "selective bibliographies" are numerous in the social sciences, there is still the hope that materials which are not within the scope of one bibliography will fall with the scope of another. A danger to bibliographic comprehensiveness, and thus to access, would occur if a significant percentage of indexers, abstracters, and bibliographers used the same bibliometric tools as a means of defining the scopes of their respective works. Once again, it should be emphasized that while the careful selection of materials is laudable on the level of collection development, it is hazardous on the level of bibliographic coverage, because such selectivity would render many less popular materials virtually inaccessible.

In the spring of 1974, letters were sent to the editors of seventeen indexes and abstracts of journal literature in the social

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sciences. (Religious Studies were included under the heading "social sciences" because of the close relationship between that discipline and Psychology, Sociology, and Anthropology.) Contained in the letter was the following two questions:

1. Does citation counting now enter into your choice of journal coverage? If so, to what extent?
2. Do you foresee a future increase in your use of citation counting as a tool in your choice of journal coverage? Please explain.

Replies were received regarding nine abstracts and indexes. These abstracts and indexes are listed below:

Accountants' Index (666 Fifth Ave., New York: American Institute of Certified Public Accountants)

Business Periodicals Index (950 University Ave., Bronx, New York: H.W. Wilson Co.)

Education Index (950 University Ave., Bronx, New York: H.W. Wilson Co.)

Index to Legal Periodicals (950 University Ave., Bronx, New York: H.W. Wilson Co.)

Personnel Management Abstracts (Ann Arbor, Michigan: Graduate School of Business, University of Michigan)

Psychological Abstracts (1200 Seventeenth St., N.W., Washington, D.C.: American Psychological Association)

Readers' Guide to Periodical Literature (950 University Ave., Bronx, New York: H.W. Wilson Co.)

Religious and Theological Abstracts (121 South College St., Myerstown, Pa.)

Social Sciences & Humanities Index (950 University Ave., Bronx, New York: H.W. Wilson Co.)

All of the respondents stated emphatically that citation counting was not employed presently as a method of determining which journals to cover. However, while *Accountants' Index* does not presently use citation counting in its choice of journal coverage, its editor stated the following: "We intend to investigate citation counting to determine whether it could be useful to us."

In conclusion, the following remarks seem warranted. On the basis of the replies

of editors representing nine of the social science abstracts and indexes, it may be assumed that citation counting, at the present time, does not effect the scope of bibliographic coverage of journal literature in the social sciences. However, it should be remembered that citation counting in the social sciences is still relatively young, and it is quite conceivable that a future study of this nature would yield different results. Therefore, it is advisable to conduct a follow-up study at a later date in order to reassess the impact which citation counting will have upon bibliographic control of journal literature in the social sciences in the future.

NOTES

¹Joseph C. Donohue, *Understanding Scientific Literatures: A Bibliometric Approach* (Cambridge, Mass.: M.I.T. Press, 1973), p. 3.

²Derek J. de Solla Price, "Citation Measures of Hard Science, Soft Science, Technology, and Nonscience," in *Communication Among Scientists and Engineers*, edited by Carnot E. Nelson and Donald K. Pollock (Lexington, Mass.: D.C. Heath, 1970), p. 7.

³Institute for Scientific Information, *ISI Journal Citation Reports: Users Guide to the ISI Journal Citation Reports*. (Philadelphia: Institute for Scientific Information, 1973), p. 5.

⁴*Ibid.*, p. 2.

⁵J. M. Brittain, *Information and Its Use: A Review with Special Reference to the Social Sciences* (New York: John Wiley & Sons, 1970), p. 125.

⁶William D. Garvey, Nan Lin, and Carnot E. Nelson, "Some Comparisons of Communication Activities in the Physical and Social Sciences," in *Communication Among Scientists and Engineers*, edited by Carnot E. Nelson and Donald K. Pollock (Lexington, Mass.: D.C. Heath & Co., 1970), pp. 69-76.

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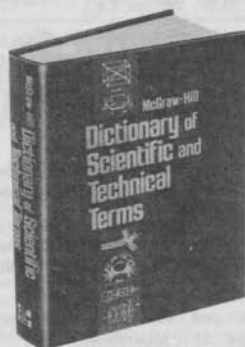
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