

Has Citation Analysis 'Arrived'?  
or: A Footnote to  
"The Footnotes of Science"

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When Hollywood finally makes a movie about a group of social outcasts—the Hell's Angels, campus radicals, rock stars—the group is said to have 'arrived.' But when has a scientific discipline 'arrived?' If 'arrival' signifies capturing the attention of the communications media, and thus the interest of a large, multidisciplinary audience, then perhaps the field of citation analysis has now 'arrived.'

While Hollywood has not yet produced *The Citation Connection*, two articles popularizing citation analysis have appeared recently in national magazines. The first was "The Footnotes of Science"<sup>1</sup> by Steve Aaronson, who edits the *ISI Press Digest*. Since it is reprinted on the following pages, I will let it speak for itself. Its appearance in *Mosaic*, a bi-monthly publication of the National Science Foundation, is significant.

The second article, "Citation Analysis: A New Tool for Science Administrators"<sup>2</sup> by *Science* staff writer Nicholas Wade, was sparked by Aaronson's article and parallels it in many ways. However, Wade presents some more recent data, additional interviews with citation researchers and NSF officials, and a well-balanced assessment of the potential impact of citation analysis. Both articles make the field of citation research—formerly obscure to all but specialists—more easily comprehensible to the layman or

general scientist, who has good reason to be interested in it. Besides the basic research in the history and sociology of science which citation analysis facilitates, citation studies are proving a useful tool to evaluate scientists, to assess the efficiency of research, and to help decide national science policy.

My only criticism of these articles on citations, which is actually a criticism of the editorial policies of the magazines in which they appear, is that the articles themselves lack citations! There is a peculiar kind of reverse snobbism here which assumes that footnotes or references make an article unreadable—especially a 'popular' or 'news' article.<sup>3</sup>

I suggest that the reverse is true. The consistent use of well-chosen references makes any article—and particularly an article introducing neophytes to a complex scientific discipline—not only *more* readable but also more useful, more authoritative, and more informative. If the article happens to interest a casual reader, the reader knows how and where to satiate his curiosity.

If the time for citation analysis has arrived, so has the time for discrete use of citations in news articles. As Wade concludes, "For those who wish to influence the way the technique of citation analysis is applied to the practice of science, the time is probably now."

1. Aaronson S. The footnotes of science. *Mosaic* 6(2):22-27, March/April 1975.

2. Wade N. Citation analysis: a new tool for science administrators. *Science* 188(4187): 429-32, 2 May 1975.

3. Garfield E. Citations in popular and interpretive science writing. *Science* 141:392, 1963.