

To Cite or Not to Cite:
A Note of Annoyance

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Sociologists often talk about the "reward" system in science and scholarship. Publication of papers, especially in prestigious journals, adds to an author's credits. When an author's work contributes to your own work he is entitled to some "reward" for adding to the world's knowledge. These rewards are usually given in the form of reference citations. This is, of course, an over-simplification, but it reflects the mores or ethics of international research. Later authors "reward" the work of their predecessors, so when an author fails to cite relevant earlier work the uncited author may be justly annoyed.

This happened to me (again) recently, and has caused me to reflect once again on the citation habits of scientists. I must confess that the article in question elevated my blood pressure. But I know that this feeling is shared by many colleagues. It is, I believe, only human and natural to feel this way. However, I will not embarrass the particular author concerned, who seems to have been unaware of the specific uncited work.

Ironically, the article involved concerned the citing behavior of scientists. Since citation practices are a social characteristic of science, and sociologists are interested in the analysis of such characteristics—which encompass the feelings of the individuals being studied—I will help the author in question by explicitly characterizing my feelings: *I am annoyed.*

I am annoyed because my existence has been denied, and I believe that my reaction is typical of researchers whose contributions are used but not acknowledged. Even though the author of the article clearly has studied my work; even though my contributions were essential for the development of the tools he used; even though his work would not have been possible without my contributions; he has failed to acknowledge in any way the debt he owes me. This kind of treatment helps me understand the feelings of certain "dissident" scientists whose names are erased from bibliographies.

I have been told that the failure of authors to cite my work in socio-

metrics is the result of the obliteration phenomenon.¹ Obliteration occurs when authors assume that the source of a previous contribution is part of the common wisdom of everyone working in the field. Thus if a physicist mentions the word *relativity* it is reasonable to assume that the reader knows it is associated with Einstein, and explicit citation of Einstein is superfluous. But if someone uses the *Science Citation Index*[®] (*SCI*[®]) or some form of citation analysis, is it equally reasonable to assume that the average sociologist, historian, or other scholar knows the papers which I or my colleagues at ISI[®] have published on this subject? I think not. It is a fact of life, however, that the public availability of the *SCI* and the *Social Sciences Citation Index*[™] (*SSCI*[™]) will lead to their use without explicit citation. I therefore join the ranks of those "honored" by obliteration.

Sociometrics is not yet at a stage where it can be assumed that all scholars are familiar with the primordial work in this field. But it may say something about the provinciality of some sociologists to mention that I have never published in a sociological journal. Editors and referees of such journals ought to be particularly sensitive to citation of work outside the sociology establishment. But I suppose that some either do not recall or are not aware of such work.

Reference citations are required

for a variety of reasons: to help trace the development of the present contribution, provide background reading, criticize or dispute previous work, authenticate data and identify methodology. In these situations authors should be as careful about references as they are about titles, authorships, abstracts, and the substance of the data being presented. Editors and referees should insist that authors not cite too many or too few references, and that those cited be strongly relevant to the new contribution.² But certainly the mere quality of citations in a paper is not a guarantee of its quality.

Citations are also used as a social device for validating priority claims. Unlike such scientists as Galileo, Hooke, and Kepler, who announced their discoveries in cryptograms in order to reserve priority without helping their rivals,³ today's researchers generally announce their significant findings as clearly and as early as possible. Priority of discovery is preserved and validated by means of the modern pattern of explicit citation to previous work, which first appeared around 1850.

An author who cites previous work formally recognizes the "property" rights of those he cites. Thus the citation is an important institutional device for coping with the imperative to communicate scientific findings freely and openly while at the same time protecting individual claims to recognition.⁴

Unfortunately, some editors, writers, and referees in all fields of science are not as concerned as they should be about the proper use of cited references. Some authors fail to cite pertinent papers, or cite for reasons which are frivolous, misleading, or dishonest. Citations may represent an author's attempt to enhance his own reputation by associating his work with greater works, or to avoid responsibility by leaning heavily on the work of others. Citations can also be intended to curry favor with influential colleagues or referees, to honor a mentor or friend, or to convey the impression of exhaustive knowledge.

Naturally, I am disappointed when I see the reward system of science abused or distorted—just as I am when citations are effectively vitiated through typographical or other errors. But it is all too easy to forget that the vast majority of citations are accurate and the vast majority of papers do properly cite the earlier literature. Unfortunately, there has never been a definitive study of this assertion. Moravcsik⁵ and others have studied the reasons why people cite, but it would be a formidable task to determine, in a large enough random sample, how often papers fail to cite accurately and comprehensively.

With the advent of the *SCI* and *SSCI*, and related tools, there is an added reason why you should be cautious to include all relevant

documents in your list of references. When your putative colleague elsewhere searches the *SCI* and begins by looking up where his paper has been cited, yours may be missed!

I wish that I could cite a definitive study to prove that the situation is improving. The existence of the *SCI* has increased citation consciousness because of its uses in evaluation studies. This raised consciousness seems to have led to more care in the use of the cited references. Citation practices are scrutinized when ISI evaluates new journals for inclusion in *Current Contents*[®], and most conform to accepted international standards.

Apart from the annoyance we all feel when an error of omission occurs, deliberately or unwittingly, such errors are merely insignificant background noise in most statistical studies. How much does it matter in selecting citation classics if even a dozen authors wrongly cite, or fail to cite, a paper which is correctly cited 1,000 times? On the other hand, when tracing the development of a particular idea it is of significant historical interest to find that one author did or did not cite another. Without evidence to the contrary, we always assume that the uncited author was unknown to the authors who did not cite him.

Outside of the formal journal literature, of course, articles without references abound. Most newspapers and magazines—even those

that purport to cover scientific and technical news—are almost completely void of references. This omission not only throws doubt on the reporter's authority and credibility, but can also be extremely frustrating to those readers with a real interest in the subject. Their curiosity is aroused but cannot be satiated. It seems like links to the primary literature sometimes are deliberately eliminated to add to the mystique of the reporter's sources. Some newspapers and magazines—notably the *New York Times* and *Science News*—usually supply at least one reference in text for major articles. It usually consists of a statement such as "in the latest issue of the *New England Journal of Medicine*." But this amounts to little more than a token effort. There is no reason—aside perhaps from a low opinion of its readers—why the "popular" press should not supply references with articles that deal with scientific and technical

material.

What newspaper and magazine editors—as well as many scientists and journal editors—don't realize is that citations are a form of communication. Like words, they can be used to mean a variety of things. They can be accurate or approximate, serious or frivolous, honest or dishonest. But in order to communicate effectively and intelligently about scientific and technical subjects, explicit citations are essential.

Perhaps that helps to explain my annoyance. Authors communicate with the entire population of working scientists, as well as with scientists of future generations. So an author who improperly cites or fails to cite does more than merely weaken his own contribution or inconvenience the readers of his paper—he retards the communication system of science, impedes information retrieval, distorts the historical network, and ignores the rights of his scientific predecessors.

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