

**Archivum Immunologiae et Therapiae Experimentalis**  
presents articles based on presentations delivered at the international conference  
“The Past, Present, and Future of the Impact Factor and Other Tools of Scientometrics”  
held in Warsaw, Poland, September 26, 2008

**Part I\***

I accepted the invitation of Prof. Andrzej Górski to participate in this conference on “The Past, Present, and Future of the Impact Factor and Other Tools of Scientometrics” (their use in comparing the scientific quality of researchers, journals, institutions, and countries), with the understanding that I would not have to prepare yet another paper reviewing this topic. My long-time colleague David Pendlebury has done an excellent job in summarizing the technical aspects of using the Web of Science for bibliometric studies and Henk Moed has ably supplemented David’s presentation with his expert comments on the use of citation analysis in research evaluation. And Jonathan Adams has demonstrated how bibliometrics are used in the United Kingdom’s Research Assessment Exercises.

It has been about forty years since my first visit to Poland and I was happy to return here again not just as a scientist, but also as a tourist to see the remarkable changes in Warsaw and also the beautiful city of Krakow. I came to Poland not long after the launch of the Science Citation Index, but I was best known to Polish scientists because of Current Contents. Over the past five decades I have published hundreds of papers and essays about many aspects of citation analysis and information retrieval. All of my work, including my book “Citation Indexing”, is available on my open-access web page. However, I agreed to answer any questions from this enthusiastic audience of over 200 Polish scientists. I realize that many of you are very concerned about the possible misuse of the impact factor in making judgments about funding, but this has always been true of any type of statistical data. In the wrong or uninformed hands, much harm can be done. However, there are many myths about these data. I myself have tended to confine my use of citation data to look at the top 10 per cent of cited scientists because among scientists “of Nobel Class”, I have rarely encountered examples who were not only well cited, but had indeed published one of more citation classics. I would remind you to look at my web page for the 4000 published commentaries by authors of citation classics.

In order to be brief I would like to mention here a myth about citation data with respect to non-journal material, particularly books, not only in natural science, but also social science and humanities. While the ISI citation indexes cannot include as source material every article and book ever published, it must be noted that after processing over 700 million cited references, the Thomson ISI database has included at least seventy million references to books or monographs. If one looks up a specific book, whether it is Darwin’s “Origin of Species” or any other topic, it is rare indeed that one cannot confirm the impact of that work in the literature. A book that is cited in hundreds of published articles will rarely be cited in more than a dozen or so books on a related topic, so even when Google processes citations to all books in the future, I do not think this will change the measurable impact of books.

Another myth that we refuted years ago concerns the alleged minimum length of time needed before papers are cited in the literature. But when a paper makes an immediate impact in the literature, one can observe that it is a “hot” paper within months and certainly within the first year after publication. Of course, if one published in a small field of research one cannot expect that papers will be cited very often or very soon, but there are exceptions even to this rule of thumb.

In closing let me remind you why statistical measures of publication and citation became popular in the first place. We are all familiar with the traditional methods of peer review. Knowing how biased and subjective those methods can be, it was not surprising that administrators and others would find it attractive to use a less subjective indicator of performance. I am sure that if you carefully weigh the pros and cons of scientometric analyses you will come to the conclusion that it will aid in supporting peer judgments, and usually at much lower cost. I also would remind you that I am happy to correspond with any member of the scientific community who wishes to direct questions to me about this field. The literature on the impact factor has grown exponentially over the past decade of more so that it has become more difficult even for experts to recall all that has been written on this topic. That is why we need to urge scholars to regularly write critical reviews of the literature.

*Eugene Garfield*

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\* The second part of these articles will be presented in Arch. Immunol. Ther. Exp. vol. 57 (2009).