Tibor Braun (ed.): The Impact Factor of Scientific and Scholarly Journals

Measuring Science

A compilation of the most interesting articles on scientometrics would be an advantage for everyone who wants to be informed about developments in the measurement of publication quality. This is exactly what this book is trying to do. A good read, despite a lot of mathematics and statistics.

Careers in science are not scientific. They depend on luck, social connections, the ability to impress influential people and referees, the foresight to join the right lab at the right time and to associate oneself with prestigious people and prestigious projects. Scientific ability and production is just one factor among many that determine social success. This is why gifted people who produce good papers suddenly disappear from the scientific landscape; most of them get fed up with taking yet another postdoc, whilst others with mediocre publication lists get faculty positions. Ironically, as professors, the latter are able to hire ambitious, productive scientists, thereby masking their own mediocrity.

Such systems waste scientific talent and produce resentment, particularly amongst older postdocs. Promotion strictly according to scientific merit would revolutionise scientific careers and make this risky business somewhat calculable for postdocs and PhD students. But is it possible to measure scientific merit? And if so, how?

Celebrating the author's 75th birthday in Vienna (Tibor Braun is 2nd from left).

Clearly the basis for any measurement of scientific merit should be scientific production and scientific production consists of published articles. The question, therefore, is how we measure the quality of scientific papers. Here is where *The impact factor of scientific and scholarly journals. Its use and Misuse in Research Evaluation* comes in. The book is volume 2 of the scientometric guide book series and consists of 47 selected articles most of them taken from the journal *Scientometrics*.

The science of science

The journal has been around since 1978 and publishes articles about all *"quantitative aspects of the science of science"*. What does this mean? Some examples: the November 2007 issue contains articles entitled *"Early recognition of high quality researchers of the German psychiatry by worldwide accessible bibliometric indicators"* by Jacob *et al.*, *"Row column association model applied to grant peer review"* by Bornmann *et al.* and *"Publication, cooperation and productivity measures in scientific research"* by Gauffriau *et al.*

Clearly, if you want to be informed about developments in the measurement of publication quality, *Scientometrics* is the journal to read. The *Lab Times* editorial office bookshelf is heaving with six years' worth of *Scientometrics*, totalling about a metre in length. A compilation of the most interesting articles would, therefore, be an advantage and this is exactly what the scientometric guide book series is trying to do. Editor of the guide book series is the Hungarian chemist, Tibor Braun. He lives in Budapest, is a member of the Hungarian Academy of Sciences and chief editor of *Scientometrics*.

Braun, who is also Editor-in-Chief of the *Journal of Radioanalytical and Nuclear Chemistry*, celebrated his 75th birthday on 18 March 2007. This amicable fellow with an interest for unusual literature, is on his way to becoming an icon in the field; on the net you can even find the semantic space of "Tibor Braun" in four dimensions.

The godfather of scientometrics is also present in the book

Three of the articles in Braun's volume 2 are written by the godfather of the field, Eugene Garfield. They are a good read, informative, sometimes even funny. Garfield makes it clear that Lowry is still the king of citations, although his fame is fading, and debunks the myth that the size of a field determines the impact factor of journals. He presents dozens of tables: the most cited papers, citation classics, most cited scientist, most cited molecular biologists, the distribution and frequency of Nobel Prize winners and academy members amongst most cited scientists etc.

The other 44 articles are not always that easy to read. There are a lot of mathematics and statistics, but every now and again the authors alleviate this effectively by raising interesting questions. For instance, *"The influence of publication delays on impact factors"* or *"How should citations to articles in high and low impact journals be evaluated, or what is a citation worth?"*

A weak point of the book is its boring cover and its humble style. The printing of inserts is suboptimal, too.

Nevertheless *The impact factor of scientific and scholarly journals. Its use and Misuse in Research Evaluation* can be recommended to people who like to rank scientists, science policy makers and to anybody who is interested in finding an objective way to judge scientific merit.

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