

AWARENESS MENTALITY AND STRATEGIC BEHAVIOUR IN SCIENTIFIC PUBLISHING AND DISSEMINATION

Rafael Ball¹

¹ETH Zürich, ETH-Library, Switzerland

Keywords

Scholarly communication, scientometrics, awareness mentality, academic publishing, strategic behaviour

Abstract

Acknowledgement of scientific achievements was and is essentially achieved through the citation of a publication. The more often a publication is cited by other authors, the more weighty the content seems to be. For scientists, this citation rate can thus be seen as an indicator of the quality of his work and therefore is crucial.

Increasingly, however, it is no longer just the publication itself that plays an important role, but also the degree of attention that scientists achieve with their very publication. Thus, the importance of strategic behaviour in science is progressing and an awareness mentality is spreading. In this presentation, the causes and backgrounds of this development are discussed:

- The use of quantitative systems in science management and research funding – mostly applied through bibliometric indicators as for example citation rates.
- The loss of critical judgment and technocratic dominance.
- Quantitative assessments used for decision making in scientists' career development.
- Altmetrics and the like as alternative views, where for example click rates, likes or tweets as a reaction to a publication are measured.

- The use of perception scores in reference databases and universities as indicators for the “quality” of scientists.
- Ambitions of journals to be highly cited.

Besides, different forms of strategic behaviour in science and the resulting consequences and impacts are being highlighted.

The increase of scientific publications leads to a situation, in which no single person is able to percept all scientific content which is being published. Between 2015 and 2020 the growth rate of publications has increased by 5%-6.5% per year on average. Dimensions counts over 4.5 million new publications in 2020 (International Association of Scientific, Technical and Medical Publishers, 2021). The amount exceeds what can be read, or even be processed by man. The need for attracting attention for one's own publication and scientific results becomes inevitable. On the other hand, it is crucial - especially for young scientists - to gain attention if a career still needs to be shaped and funding is to be acquired.

A shift towards strategic behaviour can be observed, where scientists increasingly are guided by internal or external goals and - since we are talking about scientific behaviour - subordinates content, questions, research design, methods, and communication of results to these goals. This does not correspond to the idea and principles of academic science. Scientists, in the self-referential system of

science, which defines goals and questions from within itself, should not be guided by external goals that are not meant to be self-referential in the sense of science (Rheinberger, 2018). The reason for this shift is the aim of scientists to achieve high rankings in altmetric scores, on academic research platforms and thereby to attain attention for their scientific content. These scores have been pushed during the past few years and are used in vocation processes as well as indicators in scientific funding and various other areas (Krull, 2017).

Furthermore, this increasing pressure to attract attention may also encourage scientific misconduct and plagiarism in the worst case as it is caused by publication pressure (Paruzel-Czachura et al., 2021). The boundary between strategic behaviour and for example plagiarism are blurred here. Is the translation of an already published article to be seen as self-plagiarism or is it simply a strategic move to broaden attention? Is the re-publishing of a paper with

just a slight shift in focus already an unnecessary second publication? How much new knowledge justifies a publication? These questions alone show that a broad-based discourse on ethical behaviour in the publication and dissemination of scientific findings is increasingly necessary - or at least desirable.

Thus, there is a tension between, on the one hand, meaningful indicators that can help researchers measure the impact of their research output. On the other hand, these same indicators put even more pressure on researchers to design their work in such a way that they achieve satisfactory values. It even may lead to misbehaviour in the worst case.

Besides these observations, the presentation casts an eye on the history of science communication, the original basic functions of a publication, and how these are no longer fully sufficient for the development of a scientific career due to changing strategic behaviour and the development of an awareness mentality.

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