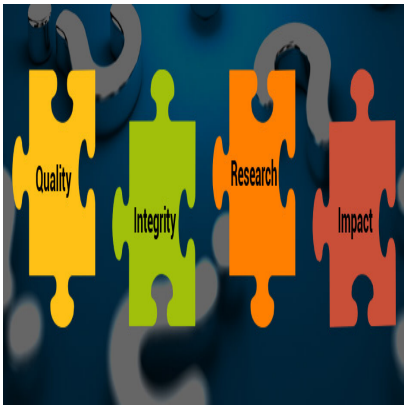


Description

The pressure to publish in high-impact journals is becoming a serious problem in scholarly communication. Scientific success is often measured by the number of high-impact articles a researcher has co-authored, and this can even affect his/her academic career and influence job or grant applications. Publishing in prestigious journals can be crucial to getting a new position or receiving funds for a project, particularly for early-career scientists trying to stand out in their research field. Since “exciting”, innovative results are usually more celebrated than everyday science or “boring” replication studies, such results are more likely to be published in high-impact journals.

Thus, some researchers tend to “forget” ethical guidelines when preparing their work for publication. Some of them may try to submit their “new” results as quickly as possible, without carefully verifying their reproducibility, others may ignore information that does not fit their conclusions, and some may even be willing to fabricate data to enhance their chances of acceptance at a high-impact journal. The “publish or perish” culture in science seems to be compromising the *quality and integrity* of research and opening the door to scientific fraud. This has led to many retractions of scientific papers during the recent past.

Quality, Truth, and Integrity

Although the problems with the impact factor are well-known, it still seems to be more important *where* a study appeared than *what* was actually published. While top-ranking journals, such as *Nature*, *Science*, or *Cell*, do publish many excellent papers, they do not publish *only* excellent papers. Similarly, lower impact journals also contain high-quality research.

Thus, the impact factor alone cannot be used to assess the quality of single manuscripts or their authors. It is time to go beyond this metric and start valuing research quality, scientific truth, and integrity. Isn’t that what academic publishing is about? Isn’t academic publishing supposed to facilitate research by ensuring quality control and dissemination? Unfortunately, the current selection for high-impact results over high-quality science is affecting these goals.

A Shift in Values

To solve this problem, academics, funders, and editors will have to change their values and practices.

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They should stop thinking that only innovative, high-impact results are worth being published. More recognition should be given to well-done studies with negative, null, or inconclusive results, as they also play an important role in expanding human knowledge —or to replication studies, which are key in validating scientific findings. It is time to start looking at what has been published instead of where, to start rewarding sound, reproducible results instead of the novel, but not reproducible research, and to start giving merit to a paper based on its methodology and scientific rigor instead of its impact. Alternative metrics, open-access publishing, and post-publication peer review will surely play an important role in achieving these goals.

Category

1. Publishing Research
2. Understanding Ethics

Date Created
2017/04/26
Author
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