

11 Moving Beyond Metrics

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*“In the arena of human life the honours
and rewards fall to those who show
their good qualities.” - Aristotle*

Nowadays, it is vital for the quality of science to quantify and compare the scientific output of researchers. Because of the high-tech era we are living in, comparison by reputation and direct assessment of contributions to the research is no longer possible.

The pressure of delivering a high standard of research articles is best summarized in the archetype “publish or perish”.

Authors are assessed throughout different quantitative methods, like h-index, journal impact factor (JIF) and number of publications [1], but these methods are overestimated and it places societal importance in second place. If you regard the problem from a larger point of view, using all these indicators to assess a person’s scientific importance is not completely wrong because the papers published in journals with higher impact factors tend to be superior and more relevant than the journals with lower ones.

I personally think that it is time to move forward with modern assessment criteria for current research. The research, no matter what field it serves, should have an impact in that specific domain, inspiring others to continue to develop and to make a substantial contribution to the scientific community.

There should always be multiple measures, including both qualitative and quantitative so that the evaluation is valid.

The evaluation system should not contain info only about h-index or Journal Impact Factor, but it should be a vector composed of the number of publications, number or reads, number of citations, among journal’s index [3], author’s contribution and the weight for articles with many coauthors should be discounted by their number. Maybe a PageRank index should be considered, too. It uses an algorithm that considers not only the number of citations but also the actual impact of each citation.

Even with so many criteria, the valuation of researcher can be biased [2].

Going back to the fundamental question about how can research be evaluated and a researcher awarded, it all seems to crystallize while embracing a simple

concept: being part of the academic world comes with the major obligation of acting fair and being honest about your work. Thereby, incorrect practices should not exist due to the moral spine in each of us. I truly believe that research should be evaluated not only quantitatively, but qualitatively. Easy to say, hard to do, but maybe using anonymous research-assessment tools, other researchers in the field can offer guidance in the difficult task of evaluating and rewarding the ones that deserve it the most. The counter-argument that one could have subjective feelings that could bias the assessment fails when we take into consideration the principle of being fair that I have discussed earlier.

Lately, some are rushing to conclusions and are preaching about the death of the impact factor, but these assertions can surely be considered to be greatly exaggerated. Nevertheless, even the existence of these assumptions should trigger an alarm and multidisciplinary committees should join forces and come up with a more valid list of criteria for assessing the scientific papers. It will require enormous amounts of work, but a better evaluation and—in consequence—a better reward system for researchers, is for sure possible.

References

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