

8 Judging Research: How Should Research and Researchers Be Evaluated and Rewarded?

Ajna Bihorac

“Scientists, like all men and women, are opinionated, dogmatic, ideological” [1,2]. This can be considered as the main reason why procedural objectivity has to be followed [2]. Unfortunately, in reality, the objectivity is not considered as a precise representation of the reality and subjectivity is not about misrepresenting the reality. “The former always has been nothing more than a compliment paid to someone who happens to agree with you and the latter has never been more than a term reserved for those who say things you consider beside the point” [3].

It was always considered that doing the right things and performing them correctly were not adequate conditions for decent research, but were the necessary conditions etc.... In recent years, things have changed. Before 2000, there was the Science Citation Index on CD-ROM from the Institute for Scientific Information (ISI), used by scientists for an evaluation. Recently, to be more accurate, in 2005, Jorge Hirsch, proposed the h-index, promoting citation counting for individual researchers. Additionally, the preoccupation with the journal impact factor grew gradually after 1995 [4]. All this leading to belief that the quality of the scientific research is slowly declining, thus making it difficult to evaluate [5].

Efforts are made by some senior scientists to change the system that is slowly deteriorating. At the University Medical Centre Utrecht in the Netherlands, a new approach is implemented such as writing an essay about candidates' achievements without too much focus on the publications. Additionally, some scientists decided to nurture the philosophy of openness and risk taking, such as, taking the risk for research that has not been done previously even if it leads to huge failure [6]. Unfortunately, most of the research is unpublished or unavailable to scientists interested in it. Sharing the data in the open access repositories would be the way to fix that problem [7]. On the other hand, the data sharing can be shortened in the expression “the paradox of nefarious battles.” This means that, although it is good for the scientists to share the unpublished data, the journals have a problem in publishing pre-released data, thus the environment of the competition is more present than the environment of the collaboration [6]. Finding a way to reward the

team accomplishments can help scientists from the team to be more appreciated, even if they are not stated as the first author [7].

Achievement goal theory (AGT) is known as one of the most popular motivation theories in sport and physical activity [8,9]. In this theory, two fundamental goal orientations are recognised: task-involving and ego-involving. Task goals highlight learning and personal improvement, leading to expertise in the task. On the other hand, ego goals focus on the achievement of social recognition while outperforming others. Task goals are connected with intrinsic motivation, pleasure in activities, and belief that effort causes success, while ego goals describe higher cognitive anxiety, belief that ability causes success and low effort when a task is difficult. It has been shown that a task-involving climate has to be present for a longer period, thus having positive long-term effects. In contrast, a performance-oriented climate has instant effects on students' motivation, but can be observed as controlling and unsupportive, thus students do not achieve the goals and negative self-talk is triggered [9].

A lot of the things have to be changed for scientists to feel comfortable at their workplace and to be recognized for their success. Additionally, the positive approach should lead to a more honest attitude and better results. Besides recognizing the problem inside the scientific community, it should be discussed openly. The introduction of scientific research to the public can influence positive reactions from societies, thus leading to an increase in self-worth and attracting possible collaborators. "Although the collective efforts of funders, journals, and regulators will be critical, individual institutions will ultimately have to be the crucibles of innovation, serving as models for others. Institutions that monitor what they do and the changes that result would be powerful influencers of the shape of the collective scientific future" [10].

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