

# THE OZ BEHIND THE CURTAIN EFFECT: ETHICAL PERSPECTIVES ON THE ASSESSMENT OF SCIENTIFIC MERITS

MARIA CERNAT\*

## Abstract

*There is a genuine desire in Romanian research institutions to follow the rules of scientific evaluation tested over the decades in stronger academic and scientific communities such as those in the USA or the Western Europe countries. The main objective of our paper is to show that before enthusiastically embracing such rules of scientific merits evaluation a closer analysis of those norms is in order. Although the peer review system is the best method used so far, we have to analyse it and even criticize it in order to improve it. There are two points to be discussed in view of offering the right perspective on how the rules of scientific merits evaluation function: the peer-review system and the number of citations criterion. In the first part of our paper we shall investigate the shortcomings of the peer-review and the particular situations proving that the double blind review system does not always work to the benefit of scientific progress. In the second part of our study we shall examine the formalism undermining the number of citations criterion and show that we can find better alternatives. Those alternatives are not mere speculations: even prestigious institutions such as “Natural Science and Engineering Research Council of Canada” for example are giving up on the “classical” way of evaluating the scientific merits of researchers by shifting towards the content of the articles and not the number of their citations.*

**Keywords:** *scientific research, the evaluation of scientific research merits, the peer-review system, the number of citations criterion, criticisms of the peer-review system*

## Introduction

Each state in the European Union has institutions that govern the research by establishing research merits criteria and funds distribution rules. The process of evaluating the importance of research is based on several elements. The most important are: publications in prestigious academic journals, winning research grants and established reputation in the field. A century ago, when the scientific community was small there was no need for objective criteria in establishing one’s research merits. The growing number of universities and research institutions as well as the allocation of important amounts of money in the science field called up for objective rules of establishing the importance of scientific research. The three elements mentioned above are to be translated into quantifiable terms in order to obtain objective criteria of evaluation. For instance, what does “prestigious” mean? A century ago, there was no challenge into giving a largely accepted meaning to this term. Nowadays, “prestigious” could mean a lot of things, not all of them being close to scientific research. This is why the above mentioned institutions have to come up with objective and relevant means of establishing the criteria an academic journal has to follow in order to be prestigious, or what it means for a researcher to have a good reputation. The main purpose of this paper is to prove that, although the intentions may be honourable, the result of translating terms like “prestigious” or “good reputation” into quantified parameters has its shortcomings. Thus, the most important weakness of this system is the fact that it relies on quantity instead of the quality of scientific endeavour. Those three elements mentioned above are closely connected to each other. Thus in order to gain a good reputation, a researcher has to publish, (or else *perish*) in prestigious journals. Moreover, the researcher’s articles must have enough citations for his/her research to be considered important. After gaining a good reputation based on the type of journals the articles are

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\* Lecturer Ph.D, Journalism, Communication and Public Relations Faculty, “Spiru Haret” University, Bucharest, (e-mail: macernat@gmail.com)

published in and on the number of citations, the researcher can send applications to receive funds to support his or her scientific projects.

## 2. The Oz-Behind the Curtain Effect and the Peer Review System

The peer-review system is important also for the academic journals as well as for gaining access to research grants. This is why we think that it is crucial to have a debate over this way of evaluating academic journals and scientific applications. Maybe we could say the same thing about the peer-review as Churchill said about democracy. That is, “the worst form of government except all those other forms that have been tried from time to time”. But since it represents such an important element in establishing what is the relevant research, how articles are selected and who is to be considered an important researcher, we consider it is vital to have an ongoing debate on the ways of criticizing and improving it.

First of all we should explain what the term “peer-review” means. This term is used to designate a way of self-regulating used by a certain profession. The term “peer” means „One of the same rank, quality, endowments, character, etc.; an equal; a match; a mate”<sup>1</sup>. The term review means „A critical examination of a publication, with remarks; a criticism; a critique”<sup>2</sup>. The meaning of the two terms leads to the understanding of this collocation: the peer-review system refers to the situation where people having the same academic rank are asked to read and make a fair evaluation of an article recommending its publication or rejection. This works the same for the scientific projects that are evaluated by the same system. It now becomes clear that the judgements of colleagues play a crucial part in the way grants are distributed and articles selected in order to be published, and eventually on the way individual careers might evolve.

There were numerous scandals undermining the ethics of the peer review system. Several examples proved the system to be failing when it was put to the test. A famous cardiologist cooked his data but the study was published in the most prestigious medical journal. A famous researcher intentionally published a study based on data that proved to be bogus and the peers reviewing it failed to see that. It was only after his self-denouncement that the scientific community realised the failures of the work. Are those isolated situations or is the system responsible for those failures? In order to answer this question we have to take a closer look to the way this system works.

The Oz-behind the curtain effect refers to the fact that the peers reviewing the scientific articles are working anonymously. The main reason academic journals use this particular procedure is due to the fact that by hiding the identity of the peers those academics will be protected against any kind of influence by their colleagues. But this is a blade cutting both sides: while protecting the referees it offers them the possibility, while hiding their identity, to act arbitrarily. This is the reason why in the United States even the Congress investigated the peer review system, which had been seriously questioned after a series of frauds and unethical scientific behaviours.

As Tom Abate points out, “whether grading grants or screening articles, a peer reviewer must preserve scholarly integrity by rising above the three deadly sins of intellectual life: envy, favouritism, and the temptation to plagiarize”<sup>3</sup>. This is an example where the pure proceduralism encounters its main obstacle: no matter how well designed the procedure may be, the persons implementing it have to possess important moral traits in the absence of which the procedure has no chance to be successful. There are two ways of establishing scientific merits: by relying on authority, thus turning to important personalities in the field, or by relying on colleagues to fairly review the scientific articles. The peer review system finds itself closer to the second way of establishing scientific merits. But this procedure is not by itself enough to ensure an objective way of screening scientific articles and projects. Moreover, “the persons most qualified to judge the worth of a scientist's grant proposal or the merit of a submitted research paper are precisely those who are the scientist's closest competitors”<sup>4</sup>. The hidden philosophical assumption of the peer-review system is that relying on a procedure is better than relying on authority. The ethical problem resulting from this assumption parallels the one encountered by one of the most important philosophers of the twentieth

century, John Rawls. When trying to sketch an *outline of a procedure decision in ethics*<sup>5</sup>, Rawls wanted to rely only on the fairness of his procedure but soon found himself in the difficult position of assigning a long list of intellectual and moral traits to those appointed to implement it – the moral judges.

It was precisely the unethical behaviour of the reviewers that called for the Congress investigation. Thus in 1994 the General Accounting Office, an investigating department of the US Congress, issued a 133 page report regarding the peer-review system. The report was the result of the examination of 246 winning and rejected grants and of interviewing 1.400 reviewers. The auditors found most of the criticism as being well founded, but that the system was functioning reasonably well. A first measure to be taken in order to improve this system was to add more women and representatives of the minorities in the review process. A second measure taken at the end of the Second International Congress on Peer Review in Biomedical Publication in 1993 was the blind review procedure that will grant the researchers the opportunity of a fair trial as a result of the fact that the identity of those applying for grants or sending articles to be published was to be hidden from the reviewers.

### 3. The Peer-Review System and the Case of Analytical versus Continental Philosophy

There is a case where even this improved peer-review system does not work. It is the case of philosophy, where most of the academic journals favour the analytical way of philosophical investigation. This is a situation that calls for a closer look since it is the perfect example that proves the fact that the peer review system is completely failing. If the other cases are notorious scandals that can be considered as exceptions to the rule, the case of analytical philosophy is a field where this procedure proves to fail systematically.

For decades analytic philosophy has been the main way of doing philosophy in English speaking countries. Recent history of philosophy places us in front of a distinction between two types of wisdom loving, separated not only by a theoretical boundary but also by a spatial delimitation: analytic philosophy (specific to North American and British space) and continental philosophy. Throughout the century numerous conflicts emerged between the representatives of the two philosophical trends, which have considerably undermined the possibility of a constructive dialogue. Based on solid knowledge of mathematical logic, most analytic philosophers consider that the sole task of philosophy is to investigate the language for the therapeutic purpose of preventing us from attempting to solve problems or, more exactly, pseudo-problems such as the existence of good, of divinity or the existence of beauty. The war declared to all types of metaphysics regards the exclusion from the field of serious philosophical concerns of all problems this venerable discipline has tried to find an answer to for centuries. To ask ourselves what reality is or what reality looks like is a pseudo-problem which, at most, has the chance to *charm our intellect by means of our language*. The correct way of approaching this matter is to investigate the latent ontological presuppositions of a statement about reality. What differentiates, however the analytic philosophers from the representatives of phenomenology (especially from the works of Martin Heidegger) is not only a net detachment from metaphysical problems. The direct consequence of reducing metaphysical attempts to find answers to pseudo-problems is completely ignoring the history of philosophy. For centuries philosophy has been associated with the assimilation of important works of predecessors but the 20th century meant for the North American and British philosophers an almost total exclusion of endeavours connected with the study of ancient or modern philosophers. Phrases of the type „he who doesn't know his history is forced to repeat its errors” do not seem to represent a serious threat. Since all metaphysicians' problems are pseudo-problems, the investigation of ancient, modern or even analytic thinkers is, at most, a historical effort, labelled as philosophical history and not as authentic philosophy.

However strange it may seem for a person educated within an academic environment such as the Romanian one, where a special importance is placed on the study of the significant works in the

field, in the United States it is possible, at least theoretically, to reach the highest academic distinction (PhD) without reading a single page of Aristotle or Kant. The programmatic and complete isolation from the philosophical past represents a completely exceptional fact in the history of philosophy. It is unlikely that one might identify such a programmatic detachment from the significant works of the past in any of the other sciences, be that exact or humanistic. Lost in sterile disputes, most of the times dominated by personal egos, phenomenologist and analytic philosophers seem to ignore this very extraordinary fact. Since this way of doing philosophy has managed to keep the most important American and British philosophers *captive* for a century, one should initially look not only for the social but for the theoretical resources that made this thing possible.

Another unprecedented element is the fact that debates represent an essential feature of analytical philosophy. However, attempts to make an analysis of the analysis, a criticism of analytical philosophy, emerged only recently, accidentally or not, their appearance coinciding with the *pluralist revolt* in 1978. The history of analytic philosophy made by analytic philosophers is, in general, an enumeration of important philosophers, of the works and their significant contributions in the field. There are, of course, notable exceptions: M. Dummett (trying to determine the origins of analytic philosophy), P.F. Strawson, (interested in identifying the Kantian roots of analytic philosophy)<sup>6</sup>, J Floyd (who focuses on early analytic philosophy)<sup>7</sup>, D. Follesdal, (trying to offer a historical explanation for the analytic philosophy domination in USA)<sup>8</sup>. Still, critical approaches to this type of doing philosophy, a self-criticism, from the perspective of philosophical or metaphilosophical history, are, as previously mentioned, recent attempts. Criticisms coming from those who chose another way of looking at this issue are extremely vulnerable. As previously mentioned, in 1978 a conflict emerged in the United States, which has been imprinted in the history of philosophy as the *pluralist revolt*. We can not offer here a detailed account of this outstanding event of the recent history of philosophy. Nevertheless, we shall use this situation to attract attention on the incommensurability of the philosophical paradigms, which make even reciprocal criticism impossible. During this revolt of the phenomenological philosophers against the analytical philosophers, Bruce Wilshire, a professor at Rutgers University since 1970 and a promoter of the revolt, launches himself in a dispute with Quine: "I myself get a frigid letter from Quine. Its reasoning was so elaborate, condensed, and mathematical that I had great difficulty following it, though I read it several times. I am unable to judge the validity of his argument. Perhaps he intended to teach me –existentially, so to speak, or as a Zen master might – that I was incompetent"<sup>7</sup>. This dialogue between philosophers coming from different schools shows that the best way to investigate what we actually mean by the concept of *analytic philosophy* and the potential problems arising in the approach to doing philosophy is represented by the efforts of somebody with a background in this philosophical tradition.

If we were to follow the Rawlsian idea stipulating that an essential condition for the possibility of solving a conflict is each adversaries' capacity to formulate criticisms in terms acceptable to the other, we could notice that it cannot be respected by the representatives of the two traditions. A close analysis of the "inner criticisms" is much more fertile because it can reveal elements pertaining to the theoretical resources that enabled analytical philosophy to settle comfortably in the North American and British space for almost a century.

The explanations offered for this unusual turn generally give a privileged position to the social, historical and institutional conditions which lead to the sometimes arbitrary acknowledgement of a single trend in the philosophical investigation. This is about analytical philosophy representatives holding leadership positions for decades within the most important professional association (American Philosophical Association), which is very influential in controlling the distribution of funds for research or the labour market for philosophers. In this context one could also consider the above mentioned *pluralist revolt* which included, among others, the possibility to do another type of philosophy in the US and to offer students other approaches to philosophical reflection.

This heated debate between the two types of wisdom lovers shows us how the peer-review system is failing to do them justice. That is, it was not the persons the main analytical journals turn their criticism to, but a way of doing philosophy. This way, if a philosopher wanted to write something on Plato's dialogues or Aquinas's theological arguments, it was the very nature and content of their study that made them not eligible for publication in mainstream journals. Even if famous analytical philosophers gave up their previous convictions and joined the phenomenologist in their way of doing philosophy their articles could not be published in prestigious journals since the academic world in United States was dominated by analytically oriented philosophers.

This arguments show that this peer review system represents a proceduralistic perspective in assessing the scientific merits that is not at all unerring so one might take a closer look to its criticisms before embracing it.

#### 4. The Number of Citations Criterion

Another important tool in the research evaluation process is represented by the number of citations. This is an instrument that tries to complete the peer review system. That is, even if a study is published in a mainstream academic journal, if it does not leave a trace, if it is not acknowledged as such by the large academic community it is not considered a relevant research. That is, in order to ensure a more "democratic" way of evaluating important research results we should "let the community decide, depending on citation, what would become permanent electronically or be published."<sup>10</sup>This is the most formal and arbitrary criterion leading to unacceptable situations in the scientific community. This criterion resembles the high audience criteria in evaluating the quality of a TV Show. As the recent media history showed us the quest for higher audiences only lead to dramatic decrease of the quality of media shows. The same way, the rating of an article is a criterion that cannot function by itself. Someone could intentionally write unsubstantiated claims in order to attract criticism, and therefore, a large number of citations. Could such an article be considered more important or relevant from the point of view of scientific research? If, of the other hand, someone writes about using nanotechnology in finding treatments for rare diseases and the article is not cited enough does this make the article less valuable and less notorious? This situation made important institutions such as Natural Science and Engineering Research Council of Canada to abandon such formal and arbitrary criteria. Let us take into a closer consideration the following rules issued by NSERC:

"To focus the assessment of excellence of the researcher on the quality and impact of recent contributions to research, applicants are asked to identify up to five of their most significant research contributions in the last six years and to explain how these contributions have influenced their field and/or she activities of users.

Selection committees and panels are advised by NSERC to neither rely on numbers of publications in their assessment of productivity nor create or use lists of "prestigious" or "unacceptable" journals in their assessment of quality. The quality of the publication's content is the determining factor, not that of the journal in which it appears, and the onus is on the applicant to provide convincing evidence of quality".<sup>11</sup>

These regulations are the expression of the justifiable discontent with the previous standards used to evaluate the quality of research, such as the prestigious peer-reviewed journals and the long list of citations. A common sense observation could justify such a stance: the quality of the journal cannot and should never replace or stand for the quality of the article. The *form* – that is the prestigious journal – as well as the *content* should be of importance in assessing the merits of scientific research.

## 5. Conclusions

The peer-review system is subject to numerous criticisms since it leads to the Oz-behind the curtain effect and to a form of systematic discrimination, the same as in the case of analytical *versus* continental philosophy. As for the number of citations criterion, the way of establishing the quality of an article based solely on its higher rating is a case where even common sense intuition can prove to be right in rejecting it. Although it can offer an important instrument for assessing the impact and visibility of a scientific article it can be completely independent of the article's quality. Scientific research is the field where it is not important how many people read you, but essentially who are those people reading your article. Pure academic proceduralism and the complete disregard for authority is a mere abstraction leading to unacceptable situations in the scientific community.

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