Meanings of "Peer" and "Peer Review"

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Weller (2002) asserts that "Since editorial peer review is a process, its definition can and does vary according to how the process in envisioned." There is a general obvious definition: "evaluation by one's peers", but the meaning of "one's peers" differs according different editorial policies and according different universities' regulations.

Pettigrew and Nichols (1994) explicitly stated the ambiguity of the term: "'Refereed journal' is not a precise term, but rather covers a continuum of peer/controlled quality assessment that reaches its most strict definition with double-blind peer review by several scholars working in the research area, and a minimal ability of the editor to override clear decisions by the peer reviewers" So, depending on the meaning of "minimal ability", the same journal's editorial policy may be considered as "peer reviewed" or "not-peer reviewed". Since conference proceedings reviewing is less formal than journals reviewing process, or informal, then the imprecision of the term is significantly higher.

DeBakey (1990) affirms that " 'Peer reviewing' has become a stock term, but – he asks – is a reviewer of a manuscript…always a peer: a person who has equal standing with another, as in rank, class or age?" (p. 347, cited by Weller, 2002, p. 16) So, if we define "peer" as a person who has equal standing with another, as in rank (equal standing of academic rank, for example) few conference organizers or editors can rightfully and with certainty say that they are journals or proceedings are "***peer***" reviewed. We think that there is no feasible way of knowing if the reviewers have the same academic ranks as those of the authors of the paper being reviewed. Furthermore, are the same academic ranks in differently ranked universities to be considered as adequate peers?

Chubin and Haackett (1990) state that "Chief among [the inherent difficulties of peer reviewing] is the changing definition of 'peer'." (p.193) Chubin (1980), referring to a study on peer review at the National Science Foundation, wrote: "Gender and current location are dominant factors in the selection of panel members [peers]. The implication is that panel members who are female or, say, reside in the southern U.S., conceptualize the world in a particular way, and thereby endow the panel or mail review with a balanced perspective otherwise missing." Chubin (1990) asserts that nothing has changed since he wrote the indicated statement, but only intensified. The he continue saying: "add these proxy social (status) characteristics to the epistemological variation that distinguish disciplinary or technical 'peers' and altogether new dimension emerges, that of 'cognitive style.'" (p, 193), that is being pointed by several authors as it is the case of Mitroff and Chubin (1979) and Noble (1974), for example.

With regards to the meaning of "peer", Chubin (1990) goes further and asserts that "Even if we restrict our focus to social characteristics and treat cognitive styles as random element in the review process, **we find the notion of 'peer' a misnomer**…grants peer

reviewers are older, more accomplished, and more likely to work at prestigious institutions than are the rank and file of a field. These reviewers are certainly not every scientist's peers, just as the members of a jury are exceedingly unlikely to be the defendant's 'peers' except in the very loosest sense in which we are all one another's peers. In both cases **the idea of peer decision making is a rhetorical device that lends legitimacy to the proceedings**"…While reviewers may, on average, be more accomplished than those whose work they review, they are sometimes less accomplished." (p. 194; emphasis added)

Stumph (1980) asserts that "For most advanced scientists only a few or no peers exist. In their research new areas are explored, often with special techniques and approaches. There is thus a high probability that one or several aspects of a proposal will no be appreciated by the judging 'quasi-peers'…for advanced scientists, a competent review cannot be achieved unless a reviewer who is working in the same field with similar amount of experience is consulted." Consequently, "the closest scientific peer is a competitor. Even Though reviewers try to be fair, nobody likes his or her programs for original ideas to be screened and judged by a real or potential competitor." (p. 822).

Combining his arguments with those of Stumph (1980), Chubin (1990) concludes that "For the 'best' scientists *peer* review is unlikely…**Scientists are at the mercy of peer review systems that may offer neither 'peers' nor 'review'**." (p. 194; emphasis added)

It seems that there is no consensual definition of "peer" and we could find no consensual definition of "peer reviewing" or "peer refereeing", or some kind of standard related to processes of peer reviewing. A minimum standard cannot even be found in among federal agencies. In a recent release from the USA Executive Office of The President (Office of Management and Budget: OMB) it was stated that "**there is no minimum, government-wide standards for peer review**." (Office of Management and Budget, 2003; emphasis added)

After examining several definitions of the phrase "peer-reviewed journal", Weller (2002) states that "These definitions contain a common element in that they each require some type of review of a manuscript other than the editor. Some definitions are more prescriptive than others, incorporating the number of processes and requirements. **These definitions do not address such issue as the percentage of material in a journal that should be peer reviewed**, or many other details of the process." (p. 16) Weller consequently makes a definition which is "intended to be as inclusive as possible." Accordingly, she states that "A peer-reviewed journal is one that has a portion of submitted manuscripts evaluated by someone other that the editor of the journal." Again, this is a very elastic definition because it depends on the magnitude of the "portion" of submitted manuscripts evaluated by someone other that the editor of the journal. An acceptable "portion" for a given journal, or a given university, might be completely unacceptable for another. And, if we take into account that papers reviewing for conferences proceedings are less formal that those of journals (or informal); and that some (or all, depending on the conference) of the paper acceptances are based on

abstracts, and not on full papers; then the level of imprecision of the definition, for this cases, increases meaningfully.

Many other authors expressed similar concerns about the meaning of "peer reviewing" and the differences found in different peer reviewing processes. Manske (1997) asserted that **the "process of peer review has never taken a standardized form and continues to vary from journal to journal",** let alone from conference to conference, and from proceedings to proceedings.

Consequently, being prudent and cautious with regards to what the term may mean to different scholars and practitioners, it is probably preferable not to use the phrase "peer reviewed proceedings" or "refereed proceedings" when organizing a conference, but to describe the reviewing process so each one would judge if it is applicable to his, or hers, definition, or to definition of her, or his organization.

Note: This article was included as a section of a more extended article that can be found at http://www.iiis.org/nagib-callaos/peer-review/. The extended article provides context to this short one.

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