Author's Commentary on "To Review or Not: Reviewing the Competition"

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To Review or Not: Reviewing the Competition

Phase 1

Phase 2

Phase 3

The process of peer review is based on the premise that accomplished scientists, or "experts," in a particular field of study, are the most qualified to evaluate the scientific work or proposed research in that particular field. While most scientists would agree that this premise is valid in establishing an effective system of peer review, it has become clear that the system has some inherent problems. For the peer review system to be effective, reviewers must be able to evaluate the proposed or completed work honestly and objectively, and they must respect the confidentiality of the work being reviewed. Indeed, most ethical problems encountered during peer review are due to the need to avoid conflicts of interest and maintain confidentiality, which may be very difficult in some situations.

Many of the ethical dilemmas faced by reviewers arise from the fact that guidelines for avoiding conflicts of interest and maintaining confidentiality are often lacking or inadequate. There is a clear need for granting agencies and scientific journals to develop more explicit guidelines for reviewers in dealing with these issues, and many are beginning to adopt such policies. One starting point might be for organizations to model guidelines on those developed by the National Institutes of Health (NIH) designed to avoid conflicts of interest and maintain confidentiality during the scientific review of grant proposals. The NIH provides explicit instructions to reviewers to avoid conflicts of interest during initial review group meetings. These instructions state the following:

> A member must leave the room when an application submitted by his/her own organization is being discussed or when the member, his/her immediate family, or close professional associate(s) has a financial or vested interest even if no significant involvement is apparent in the proposal being considered. If the member is available at the principal investigator's institution for discussions; is a provider of services, cell lines, reagents, or other materials, or writer of a letter of reference, the member must be absent from the room during the review. Members are also urged to avoid any actions that might give the appearance that a conflict of interest exists, even though he or she believes there may not be an actual conflict of interest. Thus, for example, a member should not participate in the deliberations and actions on any application from a recent student, a recent teacher, or a close personal friend. Judgment must be applied on the basis of recency, frequency and strength of the working relationship between the member and the principal investigator as reflected, for example, in publications. Another example might be an application from a scientist with whom the member has had long-standing differences which could reasonably be viewed as affecting the member's objectivity. Another example which might be considered is the review of a project which closely duplicates work ongoing in the member's laboratory. (National Institutes of Health 1995)

With respect to maintaining confidentiality, the NIH guidelines state:

> All materials pertinent to the applications being reviewed are privileged communications prepared for use only by consultants and NIH staff, and should not be shown to or discussed with other individuals. Review group members must not independently solicit opinions or reviews on particular applications or parts thereof from experts outside the pertinent initial review group," and "privileged information in grant applications shall not be used to the benefit of the reviewer or shared with anyone. (National Insitutes of Health 1995)

These statements offer reviewers clear guidelines for ensuring that they do not have a conflict of interest, and for maintaining confidentiality during the grant review process. However, many journals do not provide such specific guidelines for the

review of scientific manuscripts. For example, in response to the claim and subsequent lawsuit by Cistron Biotechnology that scientists at the Immunex Corp. "improperly used information from a paper they reviewed for *Nature* in their own research," *Nature* editor John Maddox commented that the journal does not explicitly define confidentiality. The only policy statement regarding confidentiality states that "colleagues may be consulted (and should be identified for us), but please bear in mind that this is a confidential process." (Marshall 1995, p. 1913) Furthermore, *Nature* does not require reviewers to identify potential conflicts of interest. Maddox continues to assert that there are unwritten rules, generally understood by reviewers, which assert, which assert hat the contents of manuscripts are not to be disclosed to the public and are not to be used to further the reviewer's own research.

Like *Nature*, many journals provide their reviewers with vague statements regarding confidentiality. Guidelines for avoiding conflicts of interest and maintaining confidentiality vary considerably from journal to journal. This lack of consistency is problematic: When explicit guidelines are not provided, it is difficult for reviewers to know what actions are appropriate. Furthermore, even when explicit guidelines are provided, there are many situations where the appropriate action is not obvious. One way for research groups to handle these issues would be to establish their own review procedures to help guarantee a fair and unbiased review.

Phase 1

In Phase 1 of this scenario, John Slater receives a manuscript from a competitor's laboratory to review; the title of the manuscript suggests that the work is closely related to ongoing research in Slater's laboratory. Slater should immediately recognize that there is a potential conflict of interest in his reviewing the manuscript. Slater's appropriate course of action would be to inform the editor of the journal of the potential conflict of interest prior to reviewing the manuscript.

However, when such situations arise, the editor will often ask the reviewer to review the manuscript despite the potential conflict of interest, with the understanding that the reviewer will remain honest and objective. This outcome is especially likely to occur in situations where relatively few "experts" in the particular field of study are available to review manuscripts.

Phase 2

In Phase 2, Slater decides that he can be objective in his review of the manuscript. He asks Alice Parker, a graduate student in his lab, for her evaluation of the manuscript. In this scenario, Slater's motives are only to solicit Parker's comments, as she is intimately familiar with this field of research. However, it should be noted that Slater could have shown Parker the manuscript for the sole purpose of providing her with confidential information that could benefit her research. Some journals explicitly state that reviewers may consult with colleagues regarding a manuscript as long as the reviewer discloses to the editor the names of those who were consulted. However, many journals do not explicitly state such guidelines. Furthermore, guidelines for general disclosure of the contents of a manuscript, where colleagues are not consulted for their expert opinion on the research, are often absent or extremely vague.

Many scientists would argue that disclosure within the reviewer's research group, or even within the reviewer's own institution, does not constitute a public disclosure of information. On the other hand, some reviewers adhere to a strict definition of confidentiality and do not discuss the contents of a manuscript even within their research groups, except in the situation where a colleague is consulted for his or her expertise. However, when a manuscript contains information that is relevant to the research interests in reviewers' laboratories, it may be very difficult, if not impossible, to keep the information from their research groups. Furthermore, it could be argued that keeping such information confidential would conflict with the collaborative basis of scientific research.

Phase 3

Phase 3 presents the greatest ethical dilemma for Slater. In the course of reviewing the manuscript, Slater and Parker discover that the manuscript describes a novel technique that could potentially benefit their own research efforts. In this scenario, Parker uses the technique in her research, which proves to be beneficial and results in the publication of a manuscript. Scientists generally agree that the contents of manuscripts submitted for publication are privileged information and should not be used by reviewers to further their own research efforts. However, is it reasonable to

ask reviewers to disregard information that could potentially benefit his/her own research? Which is more important -- individual researchers' right to confidentiality and credit for their own work, or researchers' commitment to the collaborative basis and overall mission of the scientific enterprise?

It is not clear whether Slater attempts to credit the competitor's group for the use of the technique. In this situation, how should the reviewer cite the source of the information? Consider a situation where a reviewer does not recommend the manuscript for publication, but recognizes that both groups may benefit from a collaboration. Would it be unethical for the reviewer to contact the competitor to discuss this possibility?

This case study illustrates some of the common ethical dilemmas encountered during the peer review of manuscripts submitted for publication in scientific journals. The most common ethical dilemmas appear to revolve around attempts to avoid conflicts of interest and to maintain confidentiality during the peer review process. There is clearly a need for scientific journals to develop more explicit guidelines for handling potential conflicts of interest and safeguarding confidentiality, but as this case study illustrates, explicit guidelines may not address every ethical dilemma that may arise. For this reason, it is necessary for all scientists to have a good understanding of the ethical issues inherent in the peer review process, so that they can make sound ethical decisions when these types of situations are encountered.

References

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