Solving the problem of refereeing

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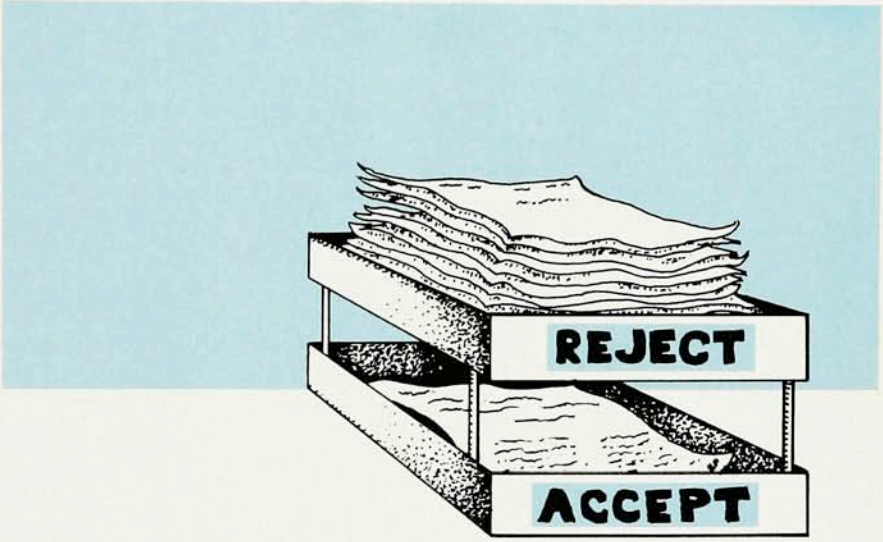
The debate about refereeing seems to continue. Why? Most complaints center on real or imagined infractions against the golden rule: As referees, we do not seem to be as generous and considerate as we (as authors) would like. The problem has expanded. It is now commonplace for at least one government funding agency to request *seven* reviews in evaluating a proposal. Such practices, combined with the larger number of journals that grew up after WWII, create quite a demand for refereeing. I have not counted carefully, but I estimate I get at least two requests per month, and it takes about a day of my time to provide the finished review (I will not be shocked to hear that it takes others much less time).

I have come to realize that, at present, much of the effort devoted to refereeing is wasted or misused. By and large, we have evolved a system wherein technical papers and proposals are evaluated by people who cannot normally be expected to know very much about the subject involved (that is, the editors or the program directors). Viewed objectively, the idea that vitally important decisions can be left to people ignorant of the subject seems as preposterous as, I believe, it really is. Nevertheless, this way of doing business apparently suits everyone just fine, possibly because the accountability for making decisions is dispersed. The decisions are now based on (usually) anonymous reports and are bolstered by shibboleths such as "peer review" and "competent referee." The referees are therefore not accountable, and the editor/program director plays the role of disinterested middleman for whom ignorance of the subject has even become a virtue, a shield against the proposer. Indeed, the accountability is now all directed back at the author; if there is any dispute, it is entirely the authors' fault because they have "failed to convince their peers." Here, the word "peer" has a nice ring of fairness to it owing to its use in jurisprudence. That parallel is false, however; there is little advocacy involved (none in the case of proposals—the author can respond to the anonymous comments only to the program director, who is, however, incapable of evaluating such responses). Moreover, when a group of colleagues is permitted to have comments they make anonymously be taken as some kind of gospel, the colleagues are no longer peers but quite definitely superiors insofar as power and influence go. Indeed, tactics such as using seven referees are *de facto* recognition of the abuses encountered with conferring such power. Unfortunately for proposers, that particular strategy simply increases the probability of obtaining irresponsible reports which the program manager, thanks to his lack of expertise, will have no basis for discounting. Since funding agencies often need to decline more proposals than they fund, negative comments tend to carry a disproportionate weight. (Also, thanks to the increasing burden on them, referees increasingly now seem to confuse refereeing a paper with refereeing a proposal; one frequently reads complaints about proposals to the effect that the *proposed* research hasn't been worked out sufficiently!)



There is a simple solution that already exists but typically languishes in disuse: the use of expert associates to evaluate the reviews. Most journals have long lists of associate editors who only play a decorative role. But if these associates were chosen to cover the fields represented by the journal, they themselves would be the logical people to make balanced responsible assessments of referee reports.

Consider the usual "keen competitor" paradox, namely the case where a potentially expert referee is also quite likely to be hostile. The expertise is useful, but not the hostility. An expert associate editor could simply filter the useful technical points from a review provided by such a colleague and act accordingly. The author would only get the associate's consensus report, not the originals. Additional referees could be consulted if needed to evaluate

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difficult technical points. In contrast, many editors blithely forward the raw reports, replete with *ad hominem* asides, directly to the author. The consequences are rarely pretty, and much unnecessary hostility is created simply because the fun the referee has in writing a snide remark is far outweighed by the rage of the author at being the target of this hidden sniper. The rage is hardly diminished when the editor or program director unwittingly accepts such remarks as serious criticism. The annoyed author in turn may make an equally poor referee, compounding the difficulties in obtaining balanced evaluations.

The role of the editors or program managers would be undiminished by the use of such associates; they would simply have the reports put into a broader perspective that can take into account the various personalities involved without losing sight of the primary goal of advancing knowledge. Associates could, of course, have individual failings, but one who was consistently complained about could be replaced (bad referees can be more difficult to identify, because referees tend to be used somewhat randomly). Moreover, a known devil, as the saying goes, is better than an unknown one.

I suspect that associate editors are not used more than they are because the editors want to expedite publication (it is not every paper that gets embroiled in controversy); furthermore, if the job of associate editor came to take up very much time and secretarial services, they might require compensation. The funding agencies, on the other hand, have the awesome responsibility of dispensing public monies. That responsibility need not prevent them from using technical associates, even possibly some of these very same associate editors, to help ensure that they are not only making responsible decisions, but are making these decisions on a consistent basis.

Often the most important new research is controversial. Funding agencies consistently express their resolve to support such research, but it is not clear how the existing system could reasonably serve to do so. Personal experience, such as is voiced in the many complaints about the review process, flatly contradicts the pleasant fiction that appointing someone referee turns him into a graceful, generous, statesman-like spokesman for the scientific community. I believe that the use of associates, or some similar system to screen raw reviews, is essential. The entire burden cannot simply be dropped in the mailbox and sent to anonymous referees. □