THE SCIENTIFIC JOURNAL
Editorial policies and practices

Guidelines for editors, reviewers, and authors

Lois DeBakey

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Preface

Although scholarly journals have been in existence since January 5, 1665, when *Le journal des sçavans* first appeared in France, editors have had little guidance in establishing their policies and practices or in resolving difficult problems that arise in the course of their work. Each has had to struggle with these problems individually, sometimes without being fully aware of the advantages and disadvantages of a specific decision. Recognizing the need for editorial guidelines, Dr. F. Peter Woodford invited a group of his colleagues to join him in surveying activities related to the editing of a scholarly scientific journal. The original group, formed in 1968 as the Committee on Editorial Policy of the Council of Biology Editors, consisted of Dr. Woodford as Chairman, the late Dr. Ilse Bry, Dr. Paul F. Cranefield, Dr. Lois DeBakey, Dr. Karl F. Heumann, Dr. Franz J. Ingelfinger, and Dr. William H. Stein. When Dr. Woodford moved to England in 1971, I succeeded him as Chairman. Later Dr. Ayodhya P. Gupta, Dr. Robert J. Levine, Dr. Robert H. Moser, and Dr. J. Roger Porter joined the group, which continued its activities, ultimately, on an independent basis.

The group met several times a year to discuss and debate editorial problems, and had voluminous correspondence between meetings. It was not, however, the charge, or original intent, of the group to publish a book; that decision came later in response to an expressed need. When I became Chairman, I wrote a large number of journal editors to solicit their views about additional topics they would like to have us explore. Their responses, along with numerous requests I received from throughout this country and abroad, convinced me that we should make the results of our deliberations available in the form of a book. I made the proposal to those actively participating in the discussions at the time, and they concurred. We subsequently re-examined statements we had previously prepared, and recast, or completely rewrote, them for incorporation with the material expressly prepared for this book.

Although most of the collaborators edit biological or medical journals, many of the policies and practices discussed apply to scholarly journals of any kind. Because we are aware that there is no "right" policy on most editorial matters, we have tried not to prescribe rules, but have, instead,

explored various facets of the problems that confront the editor in his daily work. For convenience, we have divided the book into two general sections: editorial policies, which usually require major decisions; and editorial practices, which involve minor decisions, often about format or mechanical style. In some instances, we have made recommendations, whereas in others, when recommendations were considered beyond our combined experience and knowledge or when issues are in a state of extreme flux, we have presented the results of our deliberations in the form of discussions. In any group of independent thinkers it is sometimes difficult to arrive at a consensus; when full agreement could not be reached, we have abided by majority opinion.

Having probed the issues seriously for several years, we are acutely aware of the difficulties that guidelines inevitably raise. We have found it necessary, for example, in the course of our discussions and deliberations, to revise various chapters several times as the current status of, or attitude toward, those issues has changed. We therefore claim no permanence for our current views and no pretense at completeness. We hope, however, that the present treatment will be of some benefit to other editors and will stimulate further exploration of the subject. With this purpose in mind, we have chosen to publish our essays in their present form rather than continue to postpone their publication pending further analysis and refinement.

That certain statements seem self-evident is unavoidable if a book of this kind is to be of practical value to both novice and experienced editors and reviewers. Some of the information may be of interest to authors and readers of journal articles, both of whom may wish to know what happens to manuscripts after they are submitted for publication and how decisions are made regarding acceptance or rejection.

We are indebted, first, to Dr. Woodford, who conceived the idea of examining the editorial policies of professional scientific journals and guided us through some confused and even stormy early meetings when we were defining our purpose. It saddens us that Dr. Bry, whose penetrating comments helped keep us alert to opposing arguments and views, did not live to see the culmination of our deliberations in this book. We are grateful to many editors of scientific journals who responded to requests for information about their editorial policies and problems and to others who attended our meetings as guests. Their contributions have been useful in broadening our view of the issues. Appreciation is also due Dr. L. Leon Campbell and Dr. George N. Eaves, who attended some of our meetings and participated usefully in the discussions. I owe personal thanks to each of my collaborators, who took time from other pressing duties to participate in this endeavor; a more stimulating, dedicated, and concerned group would be hard to find. Working with them was not only rewarding, but enjoyable. Special gratitude is extended to Selma DeBakey for her patient, critical reading of the successive drafts of this manuscript throughout its preparation.

Lois DeBakey

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Editorial policies and practices

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CHAPTER 1

The purpose of scientific journals

In much of the discussion in this book, we take for granted certain attitudes toward science and scientific publication. We assume that the purpose of a scientific journal is to facilitate communication among scientists and that the goal of scientists is the discovery of scientific knowledge and the verification of such discovery. We thus assume that the purpose of a primary research journal is to publish results of scientific investigation that have already been proved to be valid and of enough importance and interest to warrant the expense of publication. This leads to the simple rule that a journal should publish what is *new, true,* and *important.* But how does one decide if something is new, true, or important? And what conflicts arise in the attempt to apply these criteria?

The conflict between discovery and verification, that is, the conflict between *new* and *true,* is by far the most difficult to resolve. The scientist who believes that he has made an important new discovery or has an important new insight is anxious to share his discovery or insight quickly with the world, so that he may receive credit for his originality. He may, therefore, be impatient when reviewers or editors are not convinced that his new knowledge is true, that is, that he has verified his discovery. It is easy to assert that the editors and reviewers of the journal have the right and responsibility to demand the highest possible standard of verification as a condition for publishing an article. But one cannot say whether any statement is true; he can only say that he is or is not convinced by the arguments offered in its favor. In a certain sense, therefore, a balance is always struck: if a theory or discovery seems reasonably well proved, if it is new and seems likely to be important or provocative and suggestive, the balance will tip in favor of publication.

Can any harm result from holding to an absolute standard of truth? Yes, considerable harm can result. If an idea that is new, important, provocative and suggestive, and *true* is denied publication on the grounds that it is not well enough established, or proved, or verified, the result may be a serious loss to the progress of scientific knowledge. On the other hand, the fact that a would-be author is convinced of the originality and validity

of what he wishes to publish is not enough to satisfy most editors. No editor would knowingly publish assertions that are false; no editor would willingly decline to publish something new and important solely because it had not yet been fully proved. But is the line easy to draw?

Are there articles that are true, but neither *new* nor *important,* that should be published? Perhaps not, yet some articles containing information that is neither wholly new nor very important may well be published because they are so completely true. A comprehensive survey of previous publications on the subject, coupled with a careful reinvestigation of the problem, followed by a set of factual statements so thoughtfully considered and documented that they seem to settle a question once and for all, may well be worth publishing even if the conclusion is much the same as was always suspected and even if the problem thus settled is not of prime importance. It is, after all, rare in science that anything is finally settled.

What about material that is true and important, but *not* wholly *new*? Although few editors would care to publish the results of research that only duplicate results obtained years before, it is not uncommon for them to publish confirmatory data obtained with new or more precise methods. In addition, facts previously established but almost forgotten may be republished because they have suddenly become much more important. The novelty of the findings is thus not absolute, but is judged in relation to a newly perceived importance. Finally, an article may appear that contains observations previously reported, but forgotten by all concerned—author, reviewer, and editor—so that facts that are not at all new may inadvertently be published. Such unintentional "rediscovery" may, however, be very important and open new avenues of highly productive research, while the previous finding may continue to lie unnoticed until someone familiar with the new work happens to come upon the old. The demand that material in an article be new is not, therefore, one that can be enforced in a rigid and automatic way.

What about the article containing data that are clearly new and clearly valid but seemingly *not* very *important*? Again, questions of judgment arise. The full importance of a given fact or theory is not always evident at the time of the discovery or of the advancement of the theory, and the mere novelty and solidity of an assertion may therefore lead to publication even though the importance is not particularly obvious.

So although the purpose of a primary research journal may well be the publishing of scientific information that is new, true, and important, it is not easy to establish these criteria. Few published articles, in fact, meet absolute standards of novelty, proof, and significance. Furthermore, harm may be done both to the investigator and to the progress of science by the failure to publish an article merely because it falls short when judged rigidly by those three criteria. A more reasonable decision will rest on a balance among the three criteria.

If a journal has as its purpose the publication of what is new, true, and important, the motive for such publication must be the availability of the material to potential readers. Vexatious problems thus arise about organization and style, about jargon and abbreviations, about citations and documentation, about the quality of tables and illustrations, about statistics, and about reproducibility. All these matters have some bearing on the presentation of the evidence, which enables the editors and reviewers to decide that the material is new, true, and important, but once that decision has been reached, the question arises of whether the material has been presented in a way to reach a wider audience than the dozen or so people currently working on a closely related problem. Because editors hope that the articles published in their journals will be read in many countries and that at least some of the articles will be read in later years, they discourage local idiom and laboratory jargon. Editors also hope that at least some of the articles in their journals will be comprehensible to persons in related fields, and so they try to persuade authors to place the work in some sort of context by means of an introduction and discussion.

Some authors contend that if their work is new, true, and important, it is hardly fair to ask for *comprehensibility* as well, maintaining that questions of organization and style are often subjective. Nonetheless, most editors will hope that articles in their journals have all four qualities: new, true, important, and comprehensible. Since articles often fail to meet all these criteria, the editor may wish to provide mechanisms by which articles can be challenged; by which claims to novelty or to truth can be attacked; by which errors can be corrected in later articles; by which obscurely presented concepts can be made clear. Not all these functions necessarily belong to a primary research journal; some may belong, for example, to the review journal.

If we grant, then, that the purpose of science is discovery coupled with verification, that is, discovery critically examined to ensure that what appears to be discovery really is discovery, then the purpose of a primary research journal is to communicate such verified discovery, and its criteria will probably be that the contents of an article shall be *new, true, important,* and *comprehensible.* And almost everything that is discussed in this book deals in some way with those criteria and their application.

CHAPTER 2

The editor: role, functions, responsibilities, and administrative arrangements

The administrative responsibility for a journal is generally divided among three persons—the *owner,* the *publisher,* and the *editor.* The same person may occupy more than one of these positions. The owner defines the authority of the editor as well as of others with whom the editor may be expected to consult. Since readers usually hold the editor accountable for all aspects of a journal and since every part of a journal reflects on the reputation of the editor, he will find it advisable to participate as actively as possible in policy decisions regarding not only the intellectual content of the journal, but its production as well, including such matters as advertisements, make-up, sequence, typeface, and cover. Even though the editor may delegate most of the responsibility for the mechanics of production to others, unless he monitors these activities, his editorial reputation may be placed at risk by decisions over which he has no jurisdiction or control.

OWNERSHIP OF THE JOURNAL

The owner of the journal ordinarily governs the general policies of the journal in such matters as content, format, and finances. Some journals are owned by professional societies, and others are owned by independent commercial enterprises. A common variant is the *commercially-owned,* but *society-edited* journal. When a professional society owns the journal, it may either contract with a publisher, or, in the case of some large organizations, it may publish the journal itself.

Long-range policy decisions for society-owned journals are ordinarily made by a committee appointed by the society, commonly called the publications committee. Commercially-owned journals have their policies established through any of a large variety of administrative arrangements. Commercially-owned, but society-edited journals may also have policy decisions made by publications committees or committees on editorial policy.

The editor should have a clear understanding with the owners about the type of material that may be included in the journal without the editor's review or approval. In the case of commercially-owned journals, for example, the editor may not have the prerogative of reviewing advertisements or statements written by the publisher. In the case of society-owned journals, the editor may be obliged to publish proceedings of scientific and business meetings, abstracts, committee reports, and the like. Since the editor will be held accountable by readers for all contents of the journal, he should consider, in advance, the potential for his being embarrassed by the publication of material that he has not had an opportunity to review.

EDITORIAL BOARD

The editorial board is a panel of advisers whom the editor may consult for various purposes. In some instances, the editorial board may evaluate manuscripts submitted for publication. In other cases, the editorial board may simply suggest the names of competent reviewers for specific manuscripts, without themselves acting as reviewers. In still other cases, the members of the editorial board function as *section editors,* with responsibility for journal coverage of a particular specialty, such as cardiology, geriatrics, immunology, microbiology. They may solicit material for the journal, write editorials themselves, or otherwise see that the journal properly reflects activities, and the state of knowledge, in their particular disciplines. Some editorial boards also serve the function previously specified for the publications committee, that is, the establishment of policy. It may be preferable to keep these functions separate.

The editor should have the authority to initiate nominations for membership on the editorial board, which can then be approved or disapproved by the policy-making group. Selection of the editorial board requires consideration of several factors. The temptation is strong to recruit distinguished "names" in the field to enhance the prestige of the journal, but such distinguished "names" are not always competent reviewers and are not necessarily cooperative. The editor would do better to select those whom he knows to be willing and able to provide sound advice and constructive criticism. The editorial board should contain sufficient breadth of expertise to accommodate the various subspecialties within the general field covered by the journal.

The persons named to the editorial board should be those whom the editor consults most frequently for review of submitted manuscripts. For one thing, when an editor asks for someone to review a manuscript, he is, in effect, asking for several hours of that person's time. Although some journals provide token reimbursement, virtually no journal has the budget to compensate the reviewer fully. The service rendered to the journal and to the discipline by a frequently consulted reviewer should be recognized by the