Psychological Bulletin
1995, Vol. 118, No. 2, 172-177

0033-2909/95/$3.00

Writing a Review Article for *Psychological Bulletin*

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Guidelines and tips are offered for writing a *Psychological Bulletin* review article that will be accessible to the widest possible audience. Techniques are discussed for organizing a review into a coherent narrative, and the importance of giving readers a clear take-home message is emphasized. In addition, advice is given for rewriting a manuscript that has been reviewed and returned with an invitation to revise and resubmit.

You have surveyed an experimental literature and arrived at conclusions you believe are worth sharing with the wider psychological community. Now it is time to write. To publish. To tell the world what you have learned. The purpose of this article is to enhance the chances that the editors of *Psychological Bulletin* will let you do so.

According to the recent revision of the *Publication Manual of the American Psychological Association,*

> **review articles,** including meta-analyses, are critical evaluations of material that has already been published. By organizing, integrating, and evaluating previously published material, the author of a review article considers the progress of current research toward clarifying a problem. In a sense, a review article is tutorial in that the author
> - defines and clarifies the problem;
> - summarizes previous investigations in order to inform the reader of the state of current research;
> - identifies relations, contradictions, gaps, and inconsistencies in the literature; and
> - suggests the next step or steps in solving the problem. (American Psychological Association [APA], 1994, p. 5)

The inside front cover of *Bulletin* further notes that reviews "may set forth major developments within a particular research area or provide a bridge between related specialized fields within psychology or between psychology and related fields."

As these statements imply, *Bulletin* review articles are directed to a much wider audience than articles appearing in more specialized journals. Indeed, the current editor asserted in his first editorial that "*every* psychologist should read *Psychological Bulletin*. . . . [b]ecause there is no better way to stay up-to-date with the field of psychology as a whole. . . . The *Bulletin* [provides] the best single vehicle for a continuing education in psychology" (Sternberg, 1991, p. 3). Moreover, the journal is frequently consulted by journalists, attorneys, congressional aides, and other nonpsychologists.

This means that your review should be accessible to students in Psychology 101, your colleagues in the Art History department, and your grandmother. No matter how technical or abstruse a review is in its particulars, intelligent nonpsychologists with no expertise in statistics, meta-analysis, or experimental design should be able to comprehend the broad outlines of your topic, to understand what you think the accumulated evidence demonstrates, and, above all, to appreciate why someone—anyone—should give a damn.

Thus, many of the writing techniques described in this article are designed to make your review article comprehensible to the widest possible audience. They are also designed to remain invisible or transparent to readers, thereby infusing your prose with a "subliminal pedagogy." Good writing is good teaching.

Before Writing

Let me begin on a pessimistic note: The chances that your review will be accepted for publication in *Psychological Bulletin* are only about 1 in 5. According to the current editor, "the #1 source of immediate-rejection letters is narrowly conceived topics" (R. J. Sternberg, personal communication, August 2, 1994). Translation: Nobody will give a damn. So the first question to ask about your intended review is whether it is likely to be interesting to a general audience of psychologists. If not, can it at least be made interesting—perhaps by extending its reach or setting it in a broader context? If your answer is that you think so, then you have already improved your chances. Read on.

The second obstacle to publication arises from the nature of the genre itself: Authors of literature reviews are at risk for producing mind-numbing lists of citations and findings that resemble a phone book—impressive cast, lots of numbers, but not much plot. So the second question to ask about your intended review is whether it has a clear take-home message. Again, editor Sternberg (1991):

> Literature reviews are often frustrating because they offer neither a point of view nor a take-home message. One is left with a somewhat undigested scattering of facts but little with which to put them together. I encourage authors to take a point of view based on theory and to offer readers a take-home message that integrates the review. . . . [T]o be lively and maintain reader interest, they need to make a point, not simply to summarize all the points everyone else has made. (p. 3)

As an additional antidote to dullness, Sternberg (1991) also encouraged authors to "*take risks in choosing topics, writing articles, and making submissions*" and not to be deterred be-

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cause "they represent too much of a departure from current conventions, whether in conceptualization or methodology." In return, he pledged to "make every effort to ensure that top-quality work is rewarded rather than punished" (p. 3). So if an offbeat topic genuinely excites you, try submitting a review of it. (As a consumer service to readers, I have pretested the editor's sincerity by submitting an article on extrasensory perception [ESP]. He published it [Bem & Honorton, 1994].)

Writing

The primary criteria for good scientific writing are accuracy and clarity. If your manuscript is written with style and flair, great. But this is a subsidiary virtue. First strive for accuracy and clarity.

Achieving Clarity

The first step toward clarity is to write simply and directly. A review tells a straightforward tale of a circumscribed question in want of an answer. It is not a novel with subplots and flashbacks but a short story with a single, linear narrative line. Let this line stand out in bold relief. Clear any underbrush that entangles your prose by obeying Strunk and White's (1979) famous dictum, "omit needless words," and by extending the dictum to needless concepts, topics, anecdotes, asides, and footnotes. If a point seems tangential to your basic argument, remove it. If you can't bring yourself to do this, put it in a footnote. Then, when you revise your manuscript, remove the footnote. In short, don't make your voice struggle to be heard above the ambient noise of cluttered writing. Let your 90th percentile verbal aptitude nourish your prose, not glut it. Write simply and directly.

A corollary of this directive is not to confuse *Bulletin* reviews with the literature reviews found in doctoral dissertations (even though some *Bulletin* reviews derive therefrom). Typically, these *are* novels with subplots and flashbacks, designed to assure dissertation committees that the candidate has covered any and all literatures conceivably related to the topic. If a dissertation proposes that love relationships in human adults recapitulate infant attachment styles, the biopsychologist on the committee will want to see a review of imprinting and its mating consequences in zebra finches. *Bulletin* readers will not. Omit needless literatures.

Organization. The second step toward clarity is to organize the manuscript so that it tells a coherent story. A review is more difficult to organize than an empirical report (for which there is a standardized APA format). Unfortunately, the guidance given by the *Publication Manual* (APA, 1994) is not very helpful: "The components of review articles, unlike the sections of reports of empirical studies, are arranged by relationship rather than by chronology" (p. 5). The vague generality of this guidance reflects that a coherent review emerges only from a coherent conceptual structuring of the topic itself. For most reviews, this requires a guiding theory, a set of competing models, or a point of view about the phenomenon under discussion.

An example of a review organized around competing models is provided by a *Bulletin* article on the emergence of sex differences in depression during adolescence (Nolen-Hoeksema & Girgus, 1994). The relevant literature consists primarily of studies examining specific variables correlated with depression, a hodgepodge of findings that less creative authors might have been tempted to organize chronologically or alphabetically. These authors, however, organized the studies in terms of whether they supported one of three developmental models: (a) The causes of depression are the same for the two sexes, but these causes become more prevalent in girls than in boys in early adolescence; (b) the causes of depression are different for the two sexes, and the causes of girls' depression become more prevalent in early adolescence; or (c) girls are more likely than boys to carry risk factors for depression before early adolescence, but these lead to depression only in the face of challenges that increase in prevalence in early adolescence. With this guiding structure, the findings fell into a recognizable pattern supporting the last model.

An example of a review organized around a point of view is provided by any of several *Bulletin* articles designed to convince readers to accept—or at least to seriously entertain—a novel or controversial conclusion. In these, tactics of persuasive communication structure the review. First, the commonly accepted conclusion is stated along with the putative reasons for its current acceptance. Next, the supporting and nonsupporting data for the author's view are presented in order of descending probative weight, and counterarguments to that view are acknowledged and rebutted at the point where they would be likely to occur spontaneously to neutral or skeptical readers. Finally, the reasons for favoring the author's conclusion are summarized.

This organizational strategy was the basis for the *Bulletin* article in which Charles Honorton and I sought to persuade readers to take seriously new experimental evidence for ESP (Bem & Honorton, 1994). Similar organization characterizes a *Bulletin* article whose authors argued that left-handers die at earlier ages than do right-handers (Coren & Halpern, 1991), a subsequent rebuttal to that conclusion (Harris, 1993), and an article whose author argued that the cross-cultural evidence does not support the commonly held view that there is universal recognition of emotion from facial expression (Russell, 1994).

There are many other organizing strategies, and Sternberg's (1991) editorial emphasizes that there is no one right way to write a review. As noted earlier, a coherent review emerges from a coherent conceptual structuring of the domain being reviewed. And if you remember to organize your review "by relationship rather than by chronology," then, by Jove, I think you've got it.

Metacomments. It is often helpful to give readers of a review article an early overview of its structure and content. But beyond that, you should avoid making "metacomments" about the writing. Expository prose fails its mission if it diverts the reader's attention to itself and away from the topic; the process of writing should be invisible to the reader. In particular, the prose itself should direct the flow of the narrative without requiring you to play tour guide. Don't say, "now that the three theories of emotion have been discussed, we can turn to the empirical work on each of them. We begin with the psychoanalytic account of affect . . .." Instead, move directly from your discussion of the theories into the review of the evidence with a simple transition sentence such as, "each of these three theories has been tested empirically. Thus, the psychoanalytic account of affect has received support in studies that . . .." Any other guideposts needed can be supplied by using informative head-

ings and by following the advice on repetition and parallel construction given in the next section.

If you feel the need to make metacomments to keep the reader on the narrative path, then your plot line is probably already too cluttered or pretzel shaped, the writing insufficiently linear. Metacomments only oppress the prose further. Instead, copy edit. Omit needless words—don't add them.

Repetition and parallel construction. Inexperienced writers often substitute synonyms for recurring words and vary their sentence structure in the mistaken belief that this is more creative and interesting. Instead of using repetition and parallel construction, as in "women may be more expressive than men in the domain of positive emotion, but they are not more expressive in the domain of negative emotion," they attempt to be more creative: "Women may be more expressive than men in the domain of positive emotion, but it is not the case that they are more prone than the opposite sex to display the less cheerful affects."

Such creativity is hardly more interesting, but it is certainly more confusing. In scientific communication, it can be deadly. When an author uses different words to refer to the same concept in a technical article—where accuracy is paramount—readers justifiably wonder if different meanings are implied. The example in the preceding paragraph is not disastrous, and most readers will be unaware that their understanding flickered momentarily when the prose hit a bump. But consider the cognitive burden carried by readers who must hack through this "creative" jungle:

> The low-dissonance participants were paid a large sum of money while not being given a free choice of whether or not to participate, whereas the individuals we randomly assigned to the small-incentive treatment (the high-dissonance condition) were offered the opportunity to refuse.

This (fictitious) writer should have written,

> low-dissonance individuals were paid a large sum of money and were required to participate; high-dissonance individuals were paid a small sum of money and were not required to participate.

The wording and grammatical structure of the two clauses are held rigidly parallel; only the variables vary. Repetition and parallel construction are among the most effective servants of clarity. Don't be creative; be clear.

Repetition and parallel construction also serve clarity at a larger level of organization. By providing the reader with distinctive guideposts to the structure of the prose, they can diminish or eliminate the need for metacomments on the writing. For example, here are some guidepost sentences from earlier in this section:

> The first step toward clarity is to write simply and directly. . . .
> The second step toward clarity is to organize the manuscript so that. . ..
>
> An example of a review organized around competing models is provided by. . ..
>
> An example of a review organized around a point of view is provided by. . ..

If I had substituted synonyms for the recurring words or varied the grammatical structure of these sentences, their guiding function would have been lost, the reader's sense of the section's organization blurred. (I try so hard to be helpful, and I bet you didn't even notice. That, of course, is the point.)

Terminology. The specialized terminology of a discipline is called jargon, and it serves a number of legitimate functions in scientific communication. A specialized term may be more general, more precise, or freer of surplus meaning than any natural language equivalent (e.g., the term *disposition* encompasses, and hence is more general than, beliefs, attitudes, moods, and personality attributes; *reinforcement* is more precise and freer of surplus meaning than *reward*). Also, the technical vocabulary often makes an important conceptual distinction not apprehended in the layperson's lexicon (e.g., genotype vs. phenotype).

But if a jargon term does not satisfy any of these criteria, opt for English. Much of our jargon has become second nature and serves only to muddy our prose. (As an editor, I once had to interrogate an author at length to learn that a prison program for "strengthening the executive functions of the ego" actually taught prisoners how to fill out job applications.) And unless the jargon term is extremely well known (e.g., reinforcement), it should be defined—explicitly, implicitly, or by context and example—the first time it is introduced.

For example, in our article on ESP, Honorton and I decided that we could not proceed beyond the opening paragraph until we had first explicitly defined and clarified the unfamiliar but central theoretical term:

> The term *psi* denotes anomalous processes of information or energy transfer, processes such as telepathy or other forms of extrasensory perception that are currently unexplained in terms of known physical or biological mechanisms. The term is purely descriptive: It neither implies that such anomalous phenomena are paranormal nor connotes anything about their underlying mechanisms. (Bem & Honorton, 1994, p. 4)

Here is how one might define a technical term (ego control) and identify its conceptual status (a personality variable) more implicitly:

> The need to delay gratification, control impulses, and modulate emotional expression is the earliest and most ubiquitous demand that society places on the developing child. Because success at so many of life's tasks depends critically on the individual's mastery of such ego control, evidence for life-course continuities in this central personality domain should be readily obtained.

And finally, here is a (made-up) example in which the technical terms are defined only by the context. Note, however, that the technical abbreviation, MAO, is still identified explicitly when it is first introduced.

> In the continuing search for the biological correlates of psychiatric disorder, blood platelets are now a prime target of investigation. In particular, reduced monoamine oxidase (MAO) activity in the platelets is sometimes correlated with paranoid symptomatology, auditory hallucinations or delusions in chronic schizophrenia, and a tendency toward psychopathology in normal men. Unfortunately, these observations have not always replicated, casting doubt on the hypothesis that MAO activity is, in fact, a biological marker in psychiatric disorder. Even the general utility of the platelet model as a key to central nervous system abnormalities in schizophrenia remains controversial. The present review attempts to clar-

ify the relation of MAO activity to symptomatology in chronic schizophrenia.

This kind of writing would not appear in *Newsweek*, and yet it is still accessible to a nonspecialist who may know nothing about blood platelets, MAO activity, or biological markers. The structure of the writing itself adequately defines the relationships among these things and provides enough context to make the basic rationale behind the review comprehensible. At the same time, this introduction is neither condescending nor boring to the technically sophisticated reader. The pedagogy that makes it accessible to the nonspecialist is not only invisible to the specialist but also enhances the clarity of the review for both readers.

Ending. Most *Bulletin* reviews end with a consideration of questions that remain unanswered along with suggestions for the kinds of research that would help to answer them. In fact, suggesting further research is probably the most common way of ending a review.

Common, but dull. Why not strive to end your review with broad general conclusions—or a final grand restatement of your take-home message—rather than precious details of interest only to specialists? Thus, the statement, "further research is needed before it is clear whether the androgyny scale should be scored as a single, continuous dimension or partitioned into a four-way typology," might be appropriate earlier in the review but please, not your final farewell. Only the French essayist, Michel de Montaigne (1580/1943), was clever enough to end a review with a refreshing statement about further research: "Because [the study of motivation] is a high and hazardous undertaking, I wish fewer people would meddle with it" (p. 126).

You may wish to settle for less imperious pronouncements. But in any case, end with a bang, not a whimper.

Discussing Previous Work

Summarizing studies. One of the tasks most frequently encountered in writing a *Bulletin* review is summarizing the methods and results of previous studies. The *Publication Manual* (APA, 1994) warns writers not to let the goal of brevity mislead them into writing a statement intelligible only to the specialist. One technique for describing an entire study succinctly without sacrificing clarity is to describe one variation of the procedure in chronological sequence, letting it convey an overview of the study at the same time. For example, here is one way of describing a complicated but classic experiment on cognitive dissonance theory (Festinger & Carlsmith, 1959):

> Sixty male undergraduates were randomly assigned to one of three conditions. In the $1 condition, the participant was first required to perform long repetitive laboratory tasks in an individual experimental session. He was then hired by the experimenter as an "assistant" and paid $1 to tell a waiting fellow student (a confederate) that the tasks were fun and interesting. In the $20 condition, each participant was hired for $20 to do the same thing. In the control condition, participants simply engaged in the tasks. After the experiment, each participant indicated on a questionnaire how much he had enjoyed the tasks. The results showed that $1 participants rated the tasks as significantly more enjoyable than did the $20 participants, who, in turn, did not differ from the control participants.

This kind of condensed writing looks easy. It is not, and you will have to rewrite such summaries repeatedly before they are both clear and succinct. The preceding paragraph was my eighth draft.

Citations. Reviews typically contain many more citations than other kinds of articles. The standard journal format permits you to cite authors in the text either by enclosing their last names and the year of publication in parentheses, as in (a) below, or by using their names in the sentence itself, as in (b).

> (a) "MAO activity in some patients with schizophrenia is actually higher than normal" (Tse & Tung, 1949).
> (b) "Tse and Tung (1949) reported that MAO activity in some patients with schizophrenia is actually higher than normal."

In general, you should use the form of (a), consigning your colleagues to parentheses. Your narrative should be about MAO activity in patients with schizophrenia, not about Tse and Tung. Occasionally, however, you might want to focus specifically on the authors or researchers: "Theophrastus (280 B.C.) implies that persons are consistent across situations, but Montaigne (1580) insists that they are not. Only Mischel (1968), Peterson (1968), and Vernon (1964), however, have actually surveyed the evidence in detail." The point is that you have a deliberate choice to make. Don't just intermix the two formats randomly, paying no attention to your narrative structure.

Ad verbum not ad hominem. If you take a dim view of previous research or earlier articles in the domain you reviewed, feel free to criticize and complain as strongly as you feel is commensurate with the incompetence you have uncovered. But criticize the work, not the investigators or authors. Ad hominem attacks offend editors and reviewers; moreover, the person you attack is likely to be asked to serve as one of the reviewers. Consequently, your opportunity to address—let alone, offend—readers will be nipped in the bud. I could launch into a sermonette on communitarian values in science, but I shall assume that this pragmatic warning is sufficient.

Formatting and Further Guidance

Your manuscript should conform to the prescribed format for articles published in APA journals. If it diverges markedly from that format, it may be returned for rewriting before being sent out for review. If you are unfamiliar with this format, you should consult recent issues of *Bulletin* and the new edition of the *Publication Manual* (APA, 1994). Even experienced writers should probably check this revision for recent changes in formatting style, new information on formatting with word processors, and instructions for submitting final versions of manuscripts on computer disk for electronic typesetting.

In addition to describing the mechanics of preparing a manuscript for APA journals, the *Publication Manual* (APA, 1994) also has a chapter on the expression of ideas, including writing style, grammar, and avoiding language bias. Sternberg (1993) has also written an article on how to write for psychological journals. Finally, this article has borrowed heavily from my earlier chapter on how to write an empirical journal article (Bem, 1987).

Rewriting

For many writers revising a manuscript is unmitigated agony. Even proofreading is painful. And so they don't. So relieved to

get a draft done, they run it through the spell checker—some don't even do that—and then send it off to the journal, thinking that they can clean up the writing after the article has been accepted. Alas, that day rarely comes. Some may find solace in the belief that the manuscript probably would have been rejected even if it had been extensively revised and polished; after all, most APA journals, including *Bulletin,* accept only 15–20% of all manuscripts submitted. But from my own experience as an editor of an APA journal, I believe that the difference between the articles accepted and the top 15–20% of those rejected is frequently the difference between good and less good writing. Moral: Don't expect journal reviewers to discern your brilliance through the smog of polluted writing. Revise your manuscript. Polish it. Proofread it. Then submit it.

Rewriting is difficult for several reasons. First, it is difficult to edit your own writing. You will not notice ambiguities and explanatory gaps because *you* know what you meant to say; *you* understand the omitted steps. One strategy for overcoming this difficulty is to lay your manuscript aside for awhile and then return to it later when it has become less familiar. Sometimes it helps to read it aloud. But there is no substitute for practicing the art of taking the role of the nonspecialist reader, for learning to role-play grandma. As you read, ask yourself, "Have I been told yet what this concept means? Has the logic of this step been demonstrated? Would I know at this point what the dependent variables of this study were?" This is precisely the skill of the good lecturer in Psychology 101, the ability to anticipate the audience's level of understanding at each point in the presentation. Good writing is good teaching.

But because this is not easy, you should probably give a copy of a fairly polished manuscript to a friend or colleague for a critical reading. If you get critiques from several colleagues, you will have simulated the journal's review process. The best readers are those who have themselves had articles published in psychological journals but who are unfamiliar with the subject of your manuscript.

If your colleagues find something unclear, do not argue with them. They are right: By definition, the writing is unclear. Their suggestions for correcting the unclarities may be wrongheaded; but as unclarity detectors, readers are never wrong. Also resist the temptation simply to clarify their confusion verbally. Your colleagues don't want to offend you or appear stupid, so they simply mumble "oh yes, of course, of course" and apologize for not having read carefully enough. As a consequence, you are pacified, and your next readers, *Bulletin's* reviewers, will stumble over the same problem. They will not apologize; they will reject.

Rewriting is difficult for a second reason: It requires a high degree of compulsiveness and attention to detail. The probability of writing a sentence perfectly the first time is vanishingly small, and good writers rewrite nearly every sentence of a manuscript in the course of polishing successive drafts. But even good writers differ from one another in their approach to the first draft. Some spend a long time carefully choosing each word and reshaping each sentence and paragraph as they go. Others pound out a rough draft quickly and then go back for extensive revision. Although I personally prefer the former method, I think it wastes time. Most writers should probably get the first draft done as quickly as possible without agonizing over stylistic niceties. Once it is done, however, compulsiveness and attention to detail become the required virtues.

Finally, rewriting is difficult because it usually means restructuring. Sometimes it is necessary to discard whole sections of a manuscript, add new ones, and then totally reorganize the manuscript just to iron out a bump in the logic of the argument. Don't get so attached to your first draft that you are unwilling to tear it apart and rebuild it. (This is why the strategy of crafting each sentence of a first draft wastes time. A beautiful turn of phrase that took me 20 minutes to shape gets trashed when I have to restructure the manuscript. Worse, I get so attached to the phrase that I resist restructuring until I can find a new home for it.) A badly constructed building cannot be salvaged by brightening up the wallpaper. A badly constructed manuscript cannot be salvaged by changing words, inverting sentences, and shuffling paragraphs.

Which brings me to the word processor. Its very virtuosity at making these cosmetic changes will tempt you to tinker endlessly, encouraging you in the illusion that you are restructuring right there in front of the monitor. Do not be fooled. You are not. A word processor—even one with a fancy outline mode—is not an adequate restructuring tool for most writers. Moreover, it can produce flawless, physically beautiful drafts of wretched writing, encouraging you in the illusion that they are finished manuscripts ready to be submitted. Do not be fooled. They are not. If you are blessed with an excellent memory (or a very large monitor) and are confident that you can get away with a purely electronic process of restructuring, do it. But don't be ashamed to print out a complete draft of your manuscript; spread it out on table or floor; take pencil, scissors, and scotch tape in hand; and then, all by your low-tech self, have at it.

If, after all this, your manuscript still seems interesting and you still believe your conclusions, submit it.

Rewriting Again

Long ago and far away, a journal editor allegedly accepted a manuscript that required no revisions. I believe the author was William James. In other words, if your review is provisionally accepted for publication "pending revisions in accord with the reviewers' comments," you should be deliriously happy. Publication is now virtually under your control. If your review is rejected, but you are invited to resubmit a revised version, you should still be happy—if not deliriously so—because you still have a reasonable shot at getting it published.

But this is the point at which many writers give up. As an anonymous reviewer of this article noted,

> in my experience as an associate editor, I thought a good deal of variance in predicting eventual publication came from this phase of the process. Authors are often discouraged by negative feedback and miss the essential positive fact that they have been asked to revise! They may never resubmit at all or may let an inordinate amount of time pass before they do (during which editors and reviewers become unavailable, lose the thread of the project, and so forth). An opposite problem is that some authors become defensive and combative, and refuse to make needed changes for no reason.

So don't give up yet. Feel free to complain to your colleagues or rail at your poodle because the stupid reviewers failed to read your manuscript correctly. But then turn to the task of revising

your manuscript with a dispassionate, problem-solving approach. First, pay special attention to criticisms or suggestions made by more than one reviewer or highlighted by the editor in the cover letter. These *must* be addressed in your revision—even if not in exactly the way the editor or reviewers suggest.

Next, look carefully at each of the reviewers' misreadings. I argued earlier that whenever readers of a manuscript find something unclear, they are right; by definition, the writing is unclear. The problem is that readers themselves do not always recognize or identify the unclarities explicitly. Instead, they misunderstand what you have written and then make a criticism or offer a suggestion that makes no sense. In other words, you should also interpret reviewers' misreadings as signals that your writing is unclear.

Think of your manuscript as a pilot experiment in which the participants (reviewers) didn't understand the instructions you gave them. Analyze the reasons for their misunderstanding and then rewrite the problematic sections so that subsequent readers will not be similarly misled. Reviewers are almost always more knowledgeable about your topic, more experienced in writing manuscripts themselves, and more conscientious about reading your review than the average journal reader. If they didn't understand, neither will that average reader.

When you send in your revised manuscript, tell the editor in a cover letter how you have responded to each of the criticisms or suggestions made by the reviewers. If you have decided not to adopt a particular suggestion, state your reasons, perhaps pointing out how you remedied the problem in some alternative way.

Here are three fictitious examples of cover-letter responses that also illustrate ways of responding to certain kinds of criticisms and suggestions within the revision itself.

1. *Wrong:* "I have left the section on the animal studies unchanged. If Reviewers A and C can't even agree on whether the animal studies are relevant, I must be doing something right."

Right: "You will recall that Reviewer A thought that the animal studies should be described more fully, whereas Reviewer C thought they should be omitted. A biopsychologist in my department agreed with Reviewer C that the animal studies are not really valid analogs of the human studies. So I have dropped them from the text but cited Snarkle's review of them in an explanatory footnote on page 26."

2. *Wrong:* "Reviewer A is obviously Melanie Grimes, who has never liked me or my work. If she really thinks that behaviorist principles solve all the problems of obsessive–compulsive disorders, then let her write her own review. Mine is about the cognitive processes involved."

Right: "As the critical remarks by Reviewer A indicate, this is a contentious area, with different theorists staking out strong positions. Apparently I did not make it clear that my review was intended only to cover the cognitive processes involved in obsessive–compulsive disorders and not to engage the debate between cognitive and behavioral approaches. To clarify this, I have now included the word 'cognitive' in both the title and abstract, taken note of the debate in my introduction, and stated explicitly that the review does not undertake a comparative review of the two approaches. I hope this is satisfactory."

3. *Right:* "You will recall that two of the reviewers questioned the validity of the analysis of variance, with Reviewer B suggesting that I use multiple regression instead. I agree with their reservations regarding the ANOVA but believe that a multiple regression analysis is equally problematic because it makes the same assumptions about the underlying distributions. So I have retained the ANOVA, but summarized the results of a nonparametric analysis, which yields the same conclusions. If you think it preferable, I could simply substitute this nonparametric analysis for the original ANOVA, although it will be less familiar to *Bulletin* readers."

Above all, remember that the editor is your ally in trying to shape a manuscript that will be a credit to both you and the journal. So cooperate in the effort to turn your sow's ear into a vinyl purse. Be civil and make nice. You may not live longer, but you will publish more.

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Received June 22, 1994
Revision received September 30, 1994
Accepted October 4, 1994 ■