EDITORIAL
FUNDAMENTAL PRINCIPLES FOR PREPARING PSYCHOLOGY JOURNAL ARTICLES
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As retiring Editor of the Journal of Comparative and Physiological Psychology, I feel that I have one remaining responsibility to my psychological colleagues. Having passed judgment on about 2,500 original manuscripts and almost as many revisions in my 12 years as Editor, I believe I should bequeath to posterity some principles of scientific reporting that I have formulated only through countless hours of moonlighting.

COVERING LETTER

In plotting the publication of a manuscript the prospective author should think first about the covering letter. It is an unforgivable error to write, "I am submitting a manuscript for your consideration . . . ." This evasive method gets you nowhere with editors. Even if the nondirective technique works with many patients, there are some sick people who are best approached using positive pressures.

There are a number of general principles underlymg a good covering letter, and they can be illustrated by example. I offer the following:

Dear Harry:
I am submitting the manuscript, "Creative Thinking by Paramecia," for publication in JCPP. My chairman has assured me that upon acceptance of this manuscript he will recommend me for promotion to associate professor. Two recipients of the Distinguished Psychologist Award have reviewed this paper and recommend it highly.

I am pleased to see that you are one of five candidates for President of the American Psychological Association. As you know, I have nominated you for many years and will probably give you my support in the future.

Because of the unusual significance of these researches, I would like early publication, which I will finance from my National Institute of Mental Health grant.

Warm regards,
John Hopeful
Assistant Professor

^The publication costs for this report were borne by the American Psychological Association.
^Still at the University of Wisconsin.

INTRODUCTION

Almost all scientific papers include an introduction even though large parts of it are frequently buried in the sections labeled Method and Results. However, the total omission of an introduction constitutes a glaring error, and, anyway, it is fun to write introductions—one is not constrained by facts.

One way to write an introduction is simply to state what the experiment is all about and make predictions about the outcome. Since the data will already have been collected and processed, you will have no difficulty in making insightful predictions. As all famous historians know, one can predict the past with great precision. However, prediction is one of the great booby traps into which young and inexperienced psychologists often fall. All their predictions are confirmed; older men know that this never happens. The proper technique is to select the prediction of minimum import, or throw in a completely extraneous one, and have this prediction fail. Honesty is the best policy.

Although some psychologists write simple, straightforward introductions, this is commonly considered to be déclassé. In the sophisticated or "striptease" technique you keep the problem a secret from the reader until the very last paragraph. Indeed, some very sophisticated authors keep the problem a secret forever. Since I am interested in readers as well as authors, I advise that readers always approach introduction sections using the Chinese technique—begin at the end and read backward.

The function of the introduction is to impress your colleagues with your scholarship and erudition—academic appointments are seldom made on the basis of a results section. Scholarly one-upmanship is attained with an
unending number of nonspecific references, such as:

"The up-and-down effect was first discovered by ( , 1762) and this study led to many fruitful investigations ( , 1804; __, 1827; __, 1841; __, 1861; __, 1874; __, 1888; __, 1894; __, 1911; __, 1917; __, 1928; __, 1937; __, 1944; and __, 1952). Beyond these researches the broad implications of this discovery led to related studies on the in-and-out phenomenon (__, 1829; __, 1855; __, 1888; __, 1914; __, 1927; and __, 1950), and the around-and-about law (__, 1884; __, 1914; __, 1933; __, 1947; __, 1952; __, 1952, and __, 1960)."

Often, but not often enough, young and lazy authors are frightened away from this technique simply because they are appalled by the amount of work involved in reading the literature, especially if part is written in some foreign language. However, there is no excuse for this attitude; the author should remember that he is not reading the literature—just citing it. Anyway, he can always rely on some scholarly article in Psychological Bulletin as a secondary source to provide an impressive reference list with almost no effort.

Occasionally editors object to overly extended, striptease introductions and to long lists of nonspecific references. At this point the author should take the bull by the horns and write the editor a nasty letter accusing him of rigidity, illiteracy, and lack of scholarly interests. Editors are busy and editors are human. They can be broken—don't pamper them.

**METHOD**

To write a good Method section, one must be an idealist. If this section is to be understood, it must be clear, orderly, and systematic. The best way to achieve this is not to tell what really happened, or if you must tell, wait as long as is physically possible. Your four groups of Ss should always add to 20 or 30 each. If 7 Ss in Group 2 died of pneumonia and 19 Ss in Group 3 were suffocated, don't put it in the Method section. The death of these Ss was not planned but resulted, and the information obviously belongs in the Results. There is also good reason for putting this information in the Discussion because you can then mediate on how different the results might have been had the Ss lived.

A mechanical problem that often creeps up in Method relates to the spelling and meaning of words such as “maize,” “liman,” and “maccaccuss resus.” Fortunately there is a fundamental rule. Writing manuscripts is a tedious process and time means money. You must protect your time in every possible manner. If you cannot spell or do not know the meaning of a word, don’t look it up in Webster’s Third New International Dictionary. If the word isn’t in Thorndike and Barnhart, 95% of your psychological audience won’t know the meaning of the word or how to spell it anyway. Moreover, that’s the Editor’s responsibility. Let well enough alone.

**RESULTS**

The Results section comes in a very convenient place, and one way to start it is to put the procedures which you inadvertently omitted from the Method section—which you are too lazy to rewrite—at the very beginning of the Results.

If the Editor objects, point out that you are doing this for the sake of continuity. The next problem can only be resolved by reference to the Procedure. Reread the Procedure section and find out the order that you said you were going to follow; then, carefully rearrange that order in the Results. If you write succinctly and clearly, there is a real danger that the reader will only read your manuscript once, and every psychologist worth his salt recognizes the importance of overlearning. Then, too, if he has to struggle to understand it, he will naturally attribute the difficulties to the abstruseness of the problem.

The most important items in the Results will probably be the figures. Authors seldom realize the importance of figures and consequently fail to give them sufficient attention. It is absolutely imperative that the figures be of professional quality. This may cost a little money, but even with academic salaries what they are, the cost is cheap compared with the value of the man-hours spent in gathering and processing the data. The ordinate and absciss should be boldly drawn and the curves should stand out like sore thumbs, which they frequently really are.
Now we are at the critical point. It is important to make sure that all legends, all numbers on the ordinate and abscissa, and all titles are completely unreadable. If you fail to do this, there is a real danger that editors and readers will compare the information given in the graph with what is written in the Results and Discussion and call the discrepancies to your attention. Fortunately your figures can be made unreadable at a high academic level by following a few simple rules. Draw the figure on paper 2 ft. sq. and never purchase templates with letters more than \( \frac{1}{2} \) in. high. Then when the figures are reduced in size for Journal publication, the data will remain a personal secret. You can subsequently let out the data you are not trying to hide by personal correspondence.

Even authors who follow this rule—and the general principle is widely understood—frequently make a completely unforgivable error by sending glossy prints of their figures to the Editor. If the Editor has already recognized the fact that he has presbyopia and has purchased glasses, he may insist that the graphs be redrawn, and then the jig is up. However, if you send the original drawings and simply scratch out in pencil the copy for the carbon which some editors require, you have a high chance of success. A better technique is to send the carbon without figures. Most editors will relay this carbon to a consulting editor without checking for figures, and a single favorable review frequently insures publication.

Another good technique is to supplement the figures by presenting the data for individual animals in lengthy tables without means, medians, or standard deviations. No reader, and certainly no editor, will ever take the trouble to make the necessary computations to check your curves or statements of significance. The additional advantage is that long, detailed tables carry the implication that you engaged in an overwhelmingly complicated piece of research.

**DISCUSSION**

Whereas there are firm rules and morals concerning the collection and reporting of data which should be placed in the Results, these rules no longer are in force when one comes to the Discussion. Anything goes—shoot the moon—the sky's the limit!

Even though one is going far afield, the endeavor should not be random, but the deception should be achieved with skill and grace. The most important fundamental guiding principle is to repeat the predictions made in the introduction—elaborating them if possible—and then to describe the importance of your work in broad generic terms and never get down to mundane fact. In Discussion sections one does not discover things about maze performance, minutes to run down a straight alley, 48 hr. of food deprivation, or the number of mechanical puzzle devices opened—one makes breath-taking discoveries about learning, drive reduction, motivation, and curiosity. After all, this is the way psychologists are going to talk when they present and discuss their work at scientific meetings, and no man attains fluency in the jargon without practice.

Very occasionally some psychologist makes the mistake of saying what is worth saying in the Discussion and then stopping. This is interpreted by other psychologists as indicating that the person lacks verbal skill and creativity. Anyone can talk effectively about data which actually exist.

If your experiment has any merit whatsoever, and little is required, there is the likelihood that someone else will do it later and do it better. To save face it is important to engage in the alibi-in-advance technique. Endless Discussion pages can be consumed by describing how you would do the experiment if you were to do it over, and the joy of this device is that no data need be collected. You have the fellow who is going to be so cold and calculating as to check your results, on the run, and if you are smart enough, no matter what he obtains, it will be a dry run.

Even if you have only completed a single experiment you can greatly augment your data by several pages of description of the results which you would have obtained had you done a long series of related experiments. Furthermore, a clarity is achieved by describing the experiments that were not done instead of those that were because the results in the imaginary experiments come out in an integrated, orderly manner that is seldom achieved in the laboratory. Remember that data collec-
tion is a routine process and the brilliant scientist will rise above it when he comes to the Discussion.

Nothing is now left except to find a way to end the Discussion section, which has become so long and so confused that most readers will have forgotten what the original problem was about anyway. Discussions should be concluded in a friendly, charitable, and slightly condescending manner. First, say a few little things about the difficulties of doing research, particularly research in your chosen area. Then point out that there are a few little technical problems and research odds and ends that need to be picked up before your area of choice is completely neat and tidy. Finally, explain that once the research trail has been broken, less strong bodies can follow along.

**Footnotes**

Finally, one comes to the footnotes. Footnotes are always on a separate page (or pages) and there is a chance that the Editor will miss them, particularly if the typewritten material is single-spaced and turned upside down. Thus, here is an opportunity to introduce a couple of additional pages of complete trivia. If the Editor should discover them, nothing will be lost, for paper is cheap. Remember that this is your last chance to get in some padding, and never forget the fact that promotion is the prerogative of deans and final decisions are frequently weighed on other scales than those of justice.

Special attention should be given to one footnote—the acknowledgment. It is this one that separates the men from the boys. Since most experiments are not worth doing and the data obtained are not worth publishing, great care should be taken to protect one's reputation when one's name is associated with the conventional potboiler. This can be achieved by a simple and honest footnote.

"The author (or authors) had very little to do with this research. The idea was stolen from Dr. ____., the experimental design was proposed by my (our) statistical consultant, Dr. ____., the Ss were run by Mr. ____ and Miss ____., the data were processed by the mathematical computing center, and the paper was completely rewritten by Editor ____., on the basis of extensive notes and suggestions made by Consulting Editor ____., whose name was inadvertently left off the masthead of the *Journal of ____.*"

**Editorial Policy**

Faced with a mounting flood of uninspired researches and watching publication lag continuously mount despite multiple allotments of additional Journal pages, I came to realize that my editorial policies, even though rigid and unreasonable, were incomplete or else in error. For a long time I thought there was no solution, and then I realized I was wrong. I established a new *JCPP* policy and formalized it with a rubber stamp, only to realize that my term as Editor had already expired. But at least I have the rubber stamp which I planned to use on a large number of manuscripts: "Not read but rejected."