Observer
June 2007
Volume 20, Number 6

The Academic Observer

Twelve Tips for Authors

An occasional column by Henry L. Roediger, III

One of the most critical skills for academic psychologists is writing the empirical journal article. Yes, other forms of communication (review articles, theory articles, book chapters, books) are important, but the empirical journal article reporting two or more studies or experiments is the most common form of communication. Early in one's career, publishing a steady series of journal articles is how one builds a reputation.

Many sources exist to help writers craft journal articles, including whole books like Robert Sternberg's The Psychologist's Companion: A Guide to Writing for Students and Psychologists (Cambridge, 2003). In addition, Daryl Bem provides a masterful chapter on "Writing the empirical journal article" in The Compleat Academic (APA Press, 2004). The following tips only skim the surface of this subject.

Most of us work hard at our writing, so it can be depressing to realize that only a small fraction of your target audience will ever read your pithy words. Just focusing on APS publications, a huge number of articles are published every year. For 2006, 270 articles were published in the four APS journals, and they consumed 1,880 pages. How many of these articles did you read? Then there are the many thousands of articles and pages in APA journals, Elsevier journals, Psychology Press/Erlbaum journals, Wiley-Blackwell journals, Psychonomic Society journals, and so on.

Of course, all four APS journals go to the entire membership, nearly 18,000 people (as well as to libraries, of course — the journals are also available online through libraries). So, with APS journals, your paper's existence might be noted by many people, even if the number of careful readers of the paper may not number more than 200 in the year after it is published (that is just a guess, of course). Most people skim, looking at titles and abstracts, glancing at figures and maybe references. The first couple of paragraphs of the general discussion represent another place to get the nub of the paper. If the paper is really (closely) in your area of interest (or if it looks too interesting to pass up), you might read it carefully.

It is difficult to know what readership is for the typical article in even our most prestigious journals, and that is probably a good thing. One lucky aspect about publishing in archival journals is that an article will live for a long time and can be picked up by interested parties, especially in these days of broad Internet searches. Still, the trick is not just to publish an article, but to get people to read it and pay attention and, yes, cite it in their own work. To this end, 12 tips:

1. Tell a good story. Psychologists studying the narrative form tell us that humans are great storytellers. The narrative fits the human mind quite comfortably, and language probably developed in part for us to tell stories to each other. Try to make your journal article a compelling story. You are addressing an interesting problem or phenomenon, using theories developed to explain the issues. You have advanced hypotheses, developed methods to test them, provided results bearing on the issues, and then interpreted the results in light of the theories and hypotheses. You reached an interesting conclusion, advancing knowledge. Experiments often attempt to solve a puzzle, and puzzles make for good stories. In sum, your article should have a strong story line. Provide an easily remembered take-home message. You should provide clear answers to the following two questions the reader will have: What has the paper told me that I did not know before? And why is this news important?

2. Don't have too many subplots. You may wish to tell some subsidiary stories in addition to

your main plot, because your data set may permit you to address other points. However, do not have too many. I learned this lesson in graduate school. One of my fellow students conducted a series of experiments and wrote them up for his mentor (Endel Tulving) to consider for a joint publication. The student wrote a paper that had nine main points based on several experiments. Tulving handed it back saying a paper could never have more than three main points, because readers would throw up their hands and not bother with the whole thing. However, the student said that all nine were equally important and had to be included. They went back and forth for a while, but the upshot was that the paper — which had interesting data — was never published. If you think a series of experiments has many stories to tell, break them into smaller chunks.

3. Create an outline. Before you begin writing, create an outline of your paper, especially for the introduction and general discussion. What points are critical for the introduction? What is the logic you are building for your research? The method is usually straightforward, with the schema provided. An outline is useful for the results if they are at all complicated. You need to consider the order of presentation. Should data be presented in tables, figures, or in the text? The general discussion needs a clear outline so it does not wander. Work especially hard in the first paragraph of the general discussion to summarize the primary findings of the paper. You need to summarize the key findings before discussing them, and many readers look to that paragraph for the news in your paper.

4. Provide a good title. Most readers skimming the table of contents online or in a journal will look at the title and the authors' names and (if you are lucky) will read your abstract. There is nothing you can do about the names (no, you can't add a famous psychologist long deceased), but you can control your title and your abstract. Titles come in many flavors, but four primary ones come to mind. A basic type is of the form "Effects of the independent variable on the dependent variable." There is nothing wrong with this sort of title, and most of us have used it from time to time. However, these titles do not exactly leap out at the reader saying "read me now." Another type of title provides a one-sentence abstract of what the paper found. From a 2006 issue of Psychonomic Bulletin & Review comes "People over 40 feel 20 percent younger than their age: Subjective age across the lifespan" by David Rubin and Dorthe Berntsen. Even without the subtitle, the primary part of the title conveys the essence of the story. Academics also love to use colons in their titles, as in this one. The colon helps to get your story across because you get to use more words. You can state the general topic before the colon and add to it afterward. Here is an interesting example from a recent Psychological Science article by Brad Bushman and several colleagues: "When God sanctions killing: Effect of scriptural violence on aggression." With a title like that, it's hard not to at least read the abstract, if not the whole paper.

Many psychologists cannot resist the clever title, but the boundary between clever and cloying is a fine one (and criteria differ among people). Jean Mandler and Nancy Johnson's title, "Remembrance of things parsed: Story structure and recall," was clever, fitted the paper, and invoked Proust's book, which was (somewhat) relevant to the study. Bravo! However, many cute titles fall flat and can lead outsiders to wonder about our field. I urge authors to keep in mind how outrageous titles appear to university promotion and tenure committees composed of people outside our field (and to outsiders in general). Many people already believe that psychology is a joke. No need to reinforce this prejudice with silly titles.

There is no absolutely correct way to title a paper, but the point is that you should put a good deal of thought into the process. Seek opinions, as you would about the content of the paper, if you are uncertain.

5. Write an interesting and self-contained abstract. If your title does not bore readers, you may be lucky enough to get them to read your abstract. This is your big chance to entice them into your article. However, the number of words permitted for abstracts has become increasingly small over the years, at least for those journals that follow the APA Publication Manual. The current guideline is a mere 120 words.Of course, some journals do not follow the APA guidelines for abstracts, but you will probably still have fewer than 200 words to accomplish the abstract's many purposes. You must state the problem or issue of interest, say something about the methods used, provide the independent and dependent variables (when appropriate), specify the results obtained, provide your theoretical conclusions, and then perhaps end with a pithy statement of What It All Means. Because writers need to pack so much into an abstract, careful writing and repeated revisions are required. Most researchers leave writing the abstract until after finishing the paper, which is good, but then often they do not seem to give it the serious attention needed to provide an informative summary of the paper. The abstract often appears to be an afterthought rather than one of the most critical parts of the paper. For example, I often skip from the title to the last sentence of the abstract to see what the punch line is. Many

articles I read start with “The present results are discussed in light of current theories of the XXX phenomenon” or words to that effect. These are 14 wasted words, ones that could have been used to state a powerful conclusion.

6. Short is better (in general). This aphorism is true at every level throughout the paper. Academics are noted for their prolixity, even at the best of times. To attract readers, keep sections of your paper (and hence your whole paper) as brief as possible while at the same time covering the necessary elements. Sentences should not tax working memory. William Faulkner could get away with long, abstruse sentences because he was an artist. Although journal articles are a kind of art form, the prize is given to those who can write clearly, with insight and occasional wit. Similarly, paragraphs should not go on forever. Introductions should motivate the paper, appropriately citing critical prior contributions, but without going back to Aristotle. Keep the introduction for most empirical papers to eight or fewer pages. Similarly, authors often wander far afield in their general discussions, dilating on possible ramifications of their results into far-flung domains. Rein yourself in for journal articles and stick to the point. Keep it short and snappy whenever possible.

7. Don’t paralyze the reader with your results sections. To my mind, writers often lose their focus when reporting their results. The results section can be written using a format based on inferential statistics that makes for deadly dull reading. The inferential statistics used should not dictate the story told but rather should illuminate it. Beware the writer who starts off by saying, “The results were analyzed with a 6 × 4 × 2 analysis of variance with significant effects of this, that, and the other thing and three interactions.” The reader has to take in such statements, look at a table or figure, and then try to interpret the results on his or her own (often without even being told the direction of a significant effect).

In short, some authors choose to bring the inferential statistics to the foreground and relegate the descriptive statistics, the actual results of the research, to the background. A better strategy is for the author to make a story out of the descriptive statistics, telling what independent variables affected what dependent variables, and then provide F ratios (or other statistics) as supporting evidence that the effect cited in the prose is indeed significant. This strategy of telling the story based on descriptive statistics and keeping inferential statistics in a supporting role may not work in every paper — some papers really must be dictated by statistical treatment of the data — but it will work in most empirical papers.

8. Beware the curse of knowledge. The curse of knowledge afflicts most writers (and lecturers). Because you know so well what you want to say, you assume that your writing (which makes so much sense to you) will be readily understood by your readers. Often you will be wrong, because your writing does not spell out assumptions that may be obvious to you but not the reader. Usually, readers will not be steeped in your past work, the literature you know, and certainly not your innermost thoughts. I occasionally find this out when a reviewer, especially a good one who has clearly tried hard to comprehend my paper, fails to understand some point. Yet it was so clear to me when I was writing it! The best cure for the curse of knowledge is to get several people to read your paper before you submit it, with instructions to flag any places they find to be obscure or difficult.

Try to get the kinks out of your article before it is submitted. Don’t leave the job to reviewers, because if they find the paper difficult to understand, they probably won’t recommend publication. Related advice is that when you think your paper is completely finished and ready to submit, put it aside for a week or two and then read it again. Often you can be your own best critic when looking at the paper with fresh eyes. These points lead naturally to the next tip.

9. Revision is the key to effective writing. Writing an initial draft of an article is just the first step. Then comes the hard part: repeated revision. Work hard to make your writing clear. You will see that you have overwritten some sections, belaboring the obvious, whereas in other places you may have assumed too much knowledge and have to unpack your assumptions. One temptation after finishing a first draft is to think, “Well, this paper is not really there yet, but it is close enough. I’ll submit it and then really work hard on it after I get reviews.” This is a bad idea, and your reviews might be so crushing that you will not have a second chance at that journal. Work hard to make the paper as good as you possibly can before submission. Reviewers and editors do not want to read your first draft and garbled thoughts.

10. Find appropriate models. Often you will read a journal article that you think is terrific — beautifully crafted, interesting research, splendid treatment of methods and results, and a novel and important point. When you find those articles, make a note of them. Read other papers by the same person. What is it you like about the writing? What tips can you find that can improve

your own writing? Early in my career, I noted several authors in my field who took great care in their writing and often produced impeccable articles. I tried to learn lessons by reading them and analyzing their writing styles.

11. Avoid excessive abbreviations and acronyms. Write in words, not in code. People in my field can interpret the following sentence, but most of you cannot. “The experiment examined RI in PAL using MFR and MMFR techniques with Hi-F and Lo-F word pairs.” For some papers, the reader is essentially asked to learn a code at the beginning of the paper and then use it to decode the rest of the paper, which is an annoying burden. Some very common abbreviations may be all right, but little space is saved by using them, and your prose is much more easily comprehended when you write in words.

12. Constantly work to improve your writing. Writing is a skill. Like squash or baseball or ice skating, you are never “there.” You can always be better. Tip 8 is one way to improve. Another way is to practice, practice, practice — especially if you can get feedback from colleagues and trusted critics. Paying close attention to (good) copyeditors can help too. A fourth way to improve your writing is to read books on writing well and glean what tips you can. One favorite is Strunk and White’s Elements of Style (either the 3rd or 4th edition), with its straightforward guidelines such as “Omit needless words.” Another great book is William Zinsser’s On Writing Well. For writing in psychology articles, there is the aforementioned book, The Psychologist’s Companion, by Sternberg. Of course, many similar books exist; I simply cite some of my favorites.

And yes, I’m still working on my writing, but you need not send me editorial suggestions on this column. It’s too late now.

Author’s note: Dave Balota, Jim Nairne, Jane McConnell, Kathleen McDermott, and Endel Tulving provided helpful comments.

Henry L. Roediger, III is James S. McDonnell Professor at Washington University in St. Louis.
This column benefited from the advice of David A. Balota, Kathleen B. McDermott, Robert J. Sternberg, Endel Tulving, and John Wixted.

Search the *Observer* for more articles.