Teaching Psychological Science Through Writing

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The teaching of psychological science occurs face-to-face in classrooms and also through writing via op-ed essays, magazine articles, trade books, Web sites, and textbooks. I discuss the teaching of psychological science through such outlets, offer some practical suggestions for writing, and reflect on what I have found motivating, helpful, and satisfying.

Life offers two basic and rather ingenious methods for teaching. With Method 1, our larynx, tongue, palate, and lips together shoot air waves across a room, which other people’s outer ears collect and funnel into mechanical motion that triggers fluid waves that ignite electrochemical pulses sent to their brains, which decode meaning. Voila! With mere vibrating air we transfer information from our minds to others’ minds, and we call it teaching.

Method 2 translates our awareness into fleeting fingers that create electronic binary numbers that get translated into squiggles of dried carbon pressed onto stretched wood pulp. When transmitted by reflected light rays into the retina, the printed squiggles trigger formless nerve impulses that project to several areas of the brain, which integrate the information, compare it to stored information, and decode meaning. Voila! We have again transferred information from our minds to others’ minds, and we call it writing and reading.

The two methods do differ. In classroom-vibrating-air teaching we aim to have a memorable influence on relatively few students. In published squiggles-and-light-rays teaching we hope to have a modest influence on many more. But the differing methods share an overlapping function: transmitting information from one brain across space into others’ brains. Both methods are ingenious. Among the planet Earth’s 1.25 million animal species, none do this better than us humans. For us, teaching comes naturally.

Writing as Teaching

Writing is indeed a medium for teaching. Writing for many of us extends our classroom teaching to a larger, unseen student audience. Whether teaching in a classroom or by the written word, we have some similar aims: to discern wisdom, to inform, to expand minds, to provoke thought, to increase compassion, to delight with word play, and to engage hearts. When friends started lamenting that I was writing more and teaching less, I suggested that, actually, I was now more focused on teaching. It was the laboratory that I left behind when turning from doing research to reporting on my colleagues’ research.

By writing we serve at least two purposes. We serve the public by disclosing our humanly significant findings, and we serve our field and its place within funding organizations by enhancing appreciation and support for psychological science. We owe the public the results of our work, and we want the public to invest in our work. For both these reasons, the Association for Psychological Science (APS) has launched an initiative to increase public literacy in psychological science. As Cialdini (2004) said, psychological science has research and development, but needs a bigger shipping department.

So let me suggest, first, some venues for teaching psychological science through writing; second, some practical suggestions for writing and for creating a productive writing environment; and, third, some lessons I have gleaned from the ups and downs of my experience.

Writing Venues

Writing begins with an urge—an urge to tell a story; an urge to replace seeming ignorance with information;
and an urge to, in some small way, change our world. Perhaps we have come to understand something that most folks do not realize, and we feel compelled to tell others. In her new book, _Writing to Change the World_, Pipher (2006) invites us to consider these questions: In conversation, what points do you repeatedly make to people? What do you, but not most others, know to be true? What topics keep you awake at night? To these I would add, what do you think really needs to change? What can you write that likely won’t get written unless you write it?

**Op-Ed Essays**

Answers to such questions can, for starters, lead to op-ed essays. These are the 650- to 800-word opinion pieces published by local newspapers, which will usually welcome our submissions, on up to the New York Times, for which, with its 1,200 unsolicited submissions per week, many feel called to write but—as I can vouch—few are chosen.

Nevertheless, I have found it easy to be published locally, and occasionally fruitful to offer submissions to other national newspapers. In one essay for the Los Angeles Times and its syndicated papers (Myers, 2004a), I used cognitive science principles such as Kahneman and Tversky’s (1979) availability heuristic to explain why people so often fear the wrong things, as when fearing things that kill people in dramatic bunches (terrorism, plane crashes) rather than quietly over time (smoking or the future destruction of global warming). Other essays for the same paper (Myers, 2004b, 2006) applied cognitive dissonance principles to explain the shifting justifications for the Iraq war and reflected on President Bush’s self-proclaimed powers of intuition and our own. What op-ed editors, such as David Shipley (2004) of the New York Times, say they want for such essays is “timeliness, ingenuity, strength of argument, freshness of opinion, clear writing, and newsworthiness… Make one argument thoroughly.”

**Magazine Articles**

When 750 words just will not do, magazines may welcome 2,000 to 3,000 words. Psychologist Carol Tavris (2001), a skilled communicator of psychological science for audiences that include magazine readers, exhorted her “fellow psychologists to take a stab at presenting their work in the sweet clarity of plain English” (p. 3). For me, taking that stab has meant writing science magazine articles that explain research on topics such as group influence, happiness, and intu-

My early 1990s venture into trade book writing, also a happiness book, was an effort to replace myths with the reality of what really does and does not predict happiness. When I initially proposed The Pursuit of Happiness (Myers, 1993) to a literary agent, she liked the idea. However, as I developed some sample chapters, she did not like my reporting research; she wanted simple storytelling. So I turned to science-friendly literary agent John Brockman. He did like the idea of a psychological science-rooted book and immediately sent my proposal off to 18 editors he knew at publishing houses, inviting them to participate in a telephone auction. Virtually all replied to him over the next 2 weeks, and three participated in the bidding during that exciting day, at the end of which—just 3 weeks after mailing off my proposal—I had a New York publisher. Psychological science-friendly agents such as Brockman or Susan Arellano will take 15% of the advance and royalties, but for that sum, I learned, they can place our idea in the right hands and get a prompt, definitive response.

Although the book never approached being a bestseller, it has provided many teaching moments through nearly 200 invited lectures and more than 400 media interviews. Some interviews, I have learned, produce no mention of one’s work. Some produce a flash sound bite, such as after Ed Diener and I flew to California for a long interview taping with Maria Shriver for an NBC happiness documentary, but for which the duration of our exposure could have served as a priming manipulation. And some lead to substantive and satisfying results, as I experienced when consulting and interviewing for a 1-hr, thrice-broadcast ABC special (The Mystery of Happiness) that did focus on psychological science.

Near the turn of the century, the urge to write motivated three more trade titles: The American Paradox: Spiritual Hunger in an Age of Plenty (Myers, 2000a), A Quiet World: Living with Hearing Loss (Myers, 2000b), and Intuition: Its Powers and Perils (Myers, 2002). Two years ago the urge struck once again as I witnessed the faith community’s culture war over gay marriage and ordination and wished for a bridge across the divide between marriage-supporting and gay-supporting folks. The evidence, it seemed to me, suggested that both sides are right: Marriage contributes to flourishing lives, but sexual orientation is also a natural, enduring disposition, and this would, on balance, be a happier and healthier world if, for all people, love, sex, and marriage routinely went together. Thus was born What God Has Joined Together: The Christian Case for Gay Marriage (Myers & Scanzoni, 2006), and with it the stresses of engaging controversy.

This book arose from that sense that if I did not write it—as a psychological scientist, a writer, and someone capable of writing from within and to the faith community—who would? That is what also has led to my authoring some other books that present psychological science to the faith community. And that is the sort of question anyone might want to ask when pondering a possible essay, article, or trade book: What do you know that others would benefit from? What can you write that will not get said unless you write it?

Web Sites

The Web is obviously another huge teaching venue, but how does one get noticed and read? In at least four ways. One is to build it and just hope that they will come. Some years ago, when the Web was relatively new, my colleague Tom Ludwig posted the “extrasensory perception” (ESP) material from my introductory psychology text on our department Web site, merely to show us how we could post course material. Although we never told anyone about this, I started getting e-mails from people telling me about their supposed ESP and thenchanced to notice that the site had somehow become Google’s top response to “extrasensory perception” searches. There it remains today (davidmyers.org/esp), generating some 35,000 visitors a year.

The second way to generate readers is to proactively aim for a high search engine rank by welcoming well-placed links to the site. Thus I created a Web site related to Intuition: Its Powers and Perils, including essays and links to the researchers whose work I publicize. I then seized a few opportunities, such as APS’s Internet posting of an Observer article (Myers, 2006), to create links to the page. The links have enabled the site to be consistently a top 10 site for Internet searches of “intuition,” which again means teaching a small corner of psychology to many people.

The third method is to seize opportunities to publicize one’s site. Recently I helped a journalist create a news item on hearing aid compatible assistive listening.
for the AARP Bulletin. As I had encouraged her to do, she mentioned my informational Web site, hearingloop.org. (Note that I just seized this opportunity to publicize the site.) The result was 16,000 visitors to the site during the month of publication and a couple hundred resulting e-mails.

The fourth and best method is to invest oneself in creating a best-of-its-class site and trust that good work will become recognized. That is what Martin Seligman did in creating the rich and deep Web site, authentichappiness.com, which has become, as of this writing, Google’s number 5 response to “happiness” searches.

Textbooks

Let me offer, if I may, a supportive word on behalf of your unseen teaching assistants, your psychology textbook authors (who are, in my experience, a very cordial community of colleagues). It is surely true that eyeball-to-eyeball classroom interaction can accomplish some things better than a mere printed page. It offers personalized engagement, real-time give-and-take, live demonstrations, and now active clicker responding. Yet, as content delivery systems, textbook packages have complementary strengths. Compared to what anyone is capable of at home brewing, they typically offer more comprehensive, tightly organized, carefully reviewed, painstakingly edited, and attractively presented information. Textbooks, by making the same information available to all, whether at rich schools or poor schools, also support democracy. By diffusing knowledge, textbooks are an educational equalizer. As James Madison noted in 1825, “the advancement and diffusion of knowledge is the only guardian of true liberty” (O’Connor, 2003, ¶18).

How do these books get created? For textbook authors, writing is not mostly making words march across a screen; it is mostly gathering and selecting information. Given a whole field, where do authors find this information? In addition to PsycINFO and Google—how did James (1890) write his The Principles of Psychology without them?—the information sources available to us all include the following:

1. First-tier psychology journals that merit subscriptions, including Psychological Science, Current Directions in Psychological Science, and the new Perspectives on Psychological Science, as well as several American Psychological Association journals. For those covering the world of psychology, that is just the United States.

2. Science news sources, such as Science, the American Scientist, Scientific American, Science News, the New York Times, and comparable periodicals in the United Kingdom and elsewhere.

3. Psychology and psychiatry research synopses, such as the Harvard Mental Health Letter, the Clinician’s Research Digest, Wray Herbert’s psychologicalsciences.org/onlyhuman, and the online British Psychological Society Research Digest created by Christian Jarrett.

4. Current Contents, which provides the table of contents pages to essentially all English-language psychology and psychiatry periodicals. In my department, faculty can initial any article they would like. An assistant then sends reprint cards, using the Current Contents-provided addresses.

5. Colleagues’ reviews, suggestions, and volunteered papers.

6. E-mail with investigators, who are only too glad to provide their work and fact check our synopses of it.

So, from among the tens of thousands of each year’s published research studies identified from all these sources, which ones make it into a text? For me, and I suspect other text authors, inclusion of someone’s work requires its clearing three hurdles:

1. Is this important? Is it significant for psychological science? Does it advance human understanding? Is this something an educated person should know about?

2. Can I make this accessible? Do I understand this? Could my audience understand this? Might they find it of interest? Would they remember it? Other things being equal, life-relevant studies with easily pictured methods and main effects or important simple interaction effects win out over complex methods and triple interactions.

3. Third, do I have a place for it? Does our tree of knowledge offer a branch on which I can hang this? Sometimes the answer is no, but eventually we decide that work in an area merits a new branch. Thus I already had a place for the new work on mirror neurons—no problem—but had to create a new branch for autism research.

People occasionally ask how long it takes to write a textbook. Having logged my time while I wrote my first text, Social Psychology (Myers, 1983), I can offer a precise sample answer: 3,550 hrs. From the initial call from the publisher to its publication 4 years later, this
Elements of Style, and Zinsser's (2001) On Writing Well. I subjected my writing to a computer grammar checker, asking it, for example, to flag all instances of passive voice. I engaged a writing coach, my award-winning teacher-poet colleague, Jack Ridl. Over several years, Jack edited some 5,000 manuscript pages, while patiently teaching me how to order words to maximize impact, how to vary sentence length to create rhythm, and how to find and have confidence in my voice. For those who want to improve their writing, I would commend a writing coach.

A quarter-century's feedback by dozens of skilled editors has also been both humbling and instructive. After so many thousands of marked-up pages, one eventually begins to discern when to use which and that, because and since, while and whereas. Through all of this reading and feedback, I have learned some simple writing guidelines, which you perhaps learned in college, although I did not:

- Put a sentence's key word at either its beginning or end; ditto for a paragraph's take-home point.
- Vary sentence length.
- Do not self-censor too quickly. If we find delight in occasional word plays, apt metaphors, and wry remarks, our readers may take delight as well.
- Later, trim any pointless silliness or needless adjectives, phrases, and sentences. The secret of having good ideas, said Linus Pauling (quoted by McCabe, 1986), “is simple. First, have a lot of ideas. Then throw away the bad ones” (p. 29).
- For every abstract point, give a concrete example. Even when writing journal articles, a concrete example at the outset helps catch the attention of textbook authors and science writers.
- Define the audience and keep it in mind. When writing, imagine that audience looking over one's shoulder.

A Writing-Supportive Environment

I cannot claim that the writing-supportive ecology that works for me will work for you. What I find a workable consistent rhythm, my family considers my rigid ways, and you might, too. Moreover, you no doubt would have good ideas to offer from what works for you. Without presuming that these suggestions are pertinent to everyone, here is a grab bag of practical ideas for increasing productivity. For me, it has helped to do the following:

On Writing Well

Not being a naturally gifted writer and lacking self-confidence, I set out to develop my voice with some strategies that helped me and perhaps might help others. I started reading nonfiction works by accomplished writers such as Carl Sagan, Lewis Thomas, and C. S. Lewis. I studied classic style manuals such as Barzun's (1975) Simple and Direct, Strunk and White's (1999)
• Structure time to create space for writing. When teaching 12 credit hours, I arranged to do it all on Tuesdays and Thursdays. To my Dad, this schedule meant that I could begin my “4-day weekend” each Thursday afternoon. To me, it meant hours free from class-related distractions. As Loftus (2006) said, “I need ‘blocks’ of time to get work done on an article” (p. 44).

• Get an angled or U-shaped desk that enables spreading materials out within view.

• Have files (I have a cubbyhole organizer) readily accessible without leaving one’s chair.

• Delegate. Doing so gives others work and enables us to focus on reading and writing. My skilled project manager/assistant gathers information, reads and edits material, manages our paper flow, and screens the e-mail spam and list mail.

• Speaking of which, I find it helpful to have a public e-mail address through which anyone can reach me, but also a spam-free private address that receives e-mail from family, friends, and colleagues, and forwarded mail from the public address. I also have found it very useful to retain an archive of all the messages I have received at and sent from this private address since 2001 and to be able to retrieve anything in an instant using software available at X1.com. I use X1 several times a day to retrieve information or addresses from old e-mails.

• Although I waste a lot of time, I find it helps to manage time by
  ○ Always having paper and pen at hand, for jotting notes and ideas as they come to mind.
  ○ Spending at least an hour each morning and afternoon in concentrated reading or editing in a local coffee shop, away from Internet temptations.
  ○ Focusing on one project at a time.
  ○ Reading an article only once, by scanning just enough to know whether it warrants copying and filing, and then reading it more closely when it is immediately pertinent.
  ○ Responding to some invitations by referring people to others with greater expertise, mindful that every time we say “yes” to some use of our time we implicitly say “no” to alternative uses of our time.
  ○ In collaboration with editors, setting chapter-by-chapter deadline goals up to a year in advance. Then I try to focus only on the manageable task for the week at hand. The thought of preparing a 1,200-page book manuscript is overwhelming. It is enough to drive one to check the TiVo program list or to see how the Cubs are doing today. Better to think in a short time frame. Three doubled-spaced pages for the day ahead seems doable. Focus on the day at hand, repeat the process 400 times over, and the book will finish itself right on schedule. As a Serbian proverb says, “Grain by grain, a loaf; stone by stone, a castle.”

Lessons Learned

Finally, experience teaches us some lessons. Perhaps you, too, have noticed some of these things.

Three-fourths of the time invested in writing an article or a chapter is spent on the first half. As momentum grows and the light at the tunnel’s end shines brighter, we often complete the other half in the remaining one fourth of the time.

Today’s delight in one’s words becomes tomorrow’s embarrassment. Savoring what I have just written, I typically beam with pride when inviting my gifted assistant to read it right away. The next morning, filled with embarrassment after rereading what now seems riddled with rubbish, I can only hope she has not yet critiqued it. Nearly always, I am relieved to know she has not. She has learned, no matter what I say, to wait for the inevitable new draft, on which she then offers many improvements, as will others after her.

Any big writing project has five phases.

• In Phase 1, the agreed-on project is a joy to contemplate.
• In Phase 2, one struggles to begin. Much of the task of getting it done is getting it started.
• In Phase 3, with reviewer and editorial criticisms piling on and deadlines looming, the project becomes an iron weight on one’s back. As James (1926) was finishing his Principles of Psychology, he wrote to Henry Holt of his “disgust” with the manuscript—“a loathsome, distended, tunefied, bloated, dropsical mass” (pp. 293–294).
• In Phase 4, the completed work—seemingly the best thing one has ever produced—again becomes a joy to contemplate. “I am very foolish over my own book,” John Butler Yeats reportedly wrote to his son, William Butler Yeats. “I have a copy which I constantly read and find very illuminating” (quoted by Charlton, 1986, p. 24).
• In Phase 5, one moves either to disinterest or regret. One-time projects fade from awareness, rather like bear cubs that once were so passionately loved and protected but now hardly seem to belong to
the mother bear. One's attention has now moved on to the next project. Ongoing projects, like textbooks, morph from objects of great pride—finally the perfect book!—to embarrassments that desperately need revision. Madeleine L'Engle (1980), a mother and a writer, has likened her pain and joy in birthing books to her pain and joy in birthing a child. Surely she could extend the analogy. As the baby grows up, the parent begins to realize its imperfections.

Writing can be lonely work. Unlike building a house, writing requires relative quiet and isolation, a fact recognized in many proposed sabbaticals. "All my major works have been written in prison," observed Jawaharlal Nehru. "I would recommend prison not only to aspiring writers but to aspiring politicians, too" (quoted by Charlton, 1986, p. 60).

Teaching psychological science through writing does not require brilliance. It helps to be smart enough to understand what our really brilliant colleagues are discovering and theorizing. It helps to have enough creative intelligence to see connections and to step back and perceive the bigger picture. However, it also helps not to have so much intelligence that one is out of touch with how ordinary people talk and think. Moreover, aided by committed colleague-reviewers and editors who save us from ourselves, any of us can produce work that surpasses what we alone are capable of.

We don't get pellets unless we bat press. One of my essays (Myers & Ridl, 1981), critiquing the labeling of gifted and nongifted children, was initially rejected by Today's Education and then rejected by a series of other education periodicals before I noticed that Today's Education had a new editorial team. When I dared resubmit it to the new group, the oft-rejected paper was published and widely reprinted in newspapers and magazines. My second trade book set an agent's house record for rejections—36—before finding a publisher. Many famous writers and artists, from Michelangelo and Mozart to J. K. Rowling, experienced a string of strikeouts before hitting their home runs. If you want to write, expect to find yourself on a partial reinforcement schedule.

Although most people are kind, not everyone will love what we do. Whether getting student evaluations of our classroom teaching or reader reactions to our writing, we can depend on some people's contempt. Surely, I'm not the only one here to have received an end-of-course student evaluation such as this one:

What did you find beneficial about this course?
Nothing.

If you think that the course could be improved, what would you suggest?
End the course.
What advice would you give to a friend who is planning to take this course?
Don't.

An anonymous reviewer of the ninth edition of my Social Psychology said this of the first chapter:

Terrible...I have to tell you that this appears to be a rough first draft of the chapter. I wish he had put more work into it and had a better document for me to evaluate. The imprecision in Myers' writing is galling....I thought he was supposed to be a good text writer. I no longer think so!

One of our most challenging tasks is absorbing and benefiting from criticism without letting it defeat us. As columnist Ellen Goodman said regarding her hate mail, "I give very few people the right to make me feel badly" (quoted by Pipher, 2006, p. 73).

As praise and criticism accumulates, its power to elate or depress lessens. The ability to benefit from criticism while holding to one's vision and voice grows with experience. With the growing mountain of feedback, a critical review that would have felt devastating early in our career is now balanced by the accumulated supportive affirmation. Thus, rather than feeling demolished by my anonymous critical reviewer, I felt genuinely grateful for his or her many pages of constructively specific and helpful criticisms and the time commitment that they represented. Likewise, adulation that once swelled my head still feels good, but now represents a small addition to a growing pile of praise and reproach.

Finally, I offer this lesson: Teaching psychology, whether by vibrating air or squiggles and light rays, is a wonderful vocation. We teach, as Pipher (2006) said, to change the world. We teach to expand people's frames of reference. We teach to excite curiosity. We teach to restrain intuition with critical thinking. We teach to replace judgmentalism with a deeper understanding. And in the moments when we succeed, we have done something well worth doing. "Writings," said Wiesel (1982), can "sometimes, in moments of grace, attain the quality of deeds" (p. viii).

References
