



Address

About Science Writing

Joseph J. Marks

It takes guts to tell your peers how they should write—especially when they're good at their jobs and I'm not always good at mine.

So I got some help. I went to Joye Patterson, who teaches science writing at the University of Missouri School of Journalism and is generally considered one of the best in her field. That way, my advice is really *her* advice or, at worst, *our* advice.

Joye and I sat down and went over news releases that were turned out by people like you and me. The batch we looked at were those sent to me last summer when Missouri hosted the American Society of Animal Sciences meeting. Here's what's wrong with our science writing:

1. It's science writing. It's writing about science for lay people. Too many science writers write for scientists or other science writers.

2. It's too ponderous. Too much detail.

3. It's not complete enough. Leaves obvious questions unanswered.

4. It doesn't follow newspaper (or magazine) style.

5. The reporter let the scientist (or administrator or whomever) bully him/her into writing a piece that had no business going out to the media.

Joe Marks, professor and news director, University of Missouri, presented this report at the North Central regional meeting, Lincoln, Nebraska, April 25, 1985.

6. The reporter was lazy and tried to write the story solely from the abstract or research paper.

7. It's too technical. Could have used analogies or examples to make it clear.

8. It contains too much jargon.

9. Writer got bogged down by bureaucratic titles, etc. (Stories should get to the point fast and keep moving without being interrupted by long attribution and/or detailed information on where and why talk was given.)

10. Story has no point. So what?

11. Story audience is unclear. (You might have to write more than one version to appeal to different audiences; e.g., farmers and consumers.)

12. Writing style is dull. Story lacks active verbs and human interest.

13. Writer (and/or source) is too cautious. Story contains one hedge after another, so nothing definite can be concluded. (Often found in stories from social scientists. My favorite is a quote from an agricultural economist who called something "a probable possibility.")

14. Lead lacks zing. (I'd also make a plug here for putting a good headline on the story. Your headline may not be used, but it can help editor spot the story and get the gist of it. By the way, some people suggest you write the headline first . . . before the story. Others say that if your headline and lead have nothing in common, one of them must not be any good.)

Well, anyone can be critical. So Joye Patterson and I set out to give some constructive suggestions for improving our science writing. Joye cited a study of medical reporters and editors and some of the things she found.

Rule #1: Just send good stuff. Too often we "shotgun" our stories so that some of these poor editors get so much volume and so much trivia, they don't even look at our stuff when it gets there. On the other hand, if you only send cream, the editor will get in the habit of looking for your stories in the mail.

Rule #2: Respond fast when one of these editors calls you for more information. Let's say someone calls you for the phone number of one of the sources in your story or just wants a little bit more information from one of them. You could just give the editor the source's phone number and wish him or her luck. A better response would be, "Let me make some phone calls and save you some time. One of us will get back to you as soon as possible."

Rule #3: If you're doing a good job, expect to get calls about things you know nothing about. Patterson's studies showed that once editors build rapport with people like us, they call us almost any time they have even a vaguely related question. Then, the best response is to try to be as helpful as you can.

Rule #4: (which ties into all the above) Build trust and credibility by being as accurate as possible and quickly admitting mistakes as you make them.

A footnote to this rule is that we should at least put our phone numbers and names on news releases. We should probably have the scientist's name and phone number on the news releases, too.

Now, some tips on writing.

- Avoid the ho-hum lead. Avoid the "John Jones has done research" beginning.
- Avoid saying the obvious. Here's a lead from one of the animal science stories: "Computers that replace pencils and scratch pads reduce teaching time and increase student interest in meat industry studies."

Here's another: "Scientists at _____ University are experimenting with pig growth hormone to see if this substance could help save the lives of newborn piglets. Baby pig mortality is a major predicament for the nation's swine farmers." No kidding.

- Ask, "Should I write it?" This is the tough one. It appears that we get stuck writing stuff that should never be written. Sometimes it's too technical: "Scientific study of growth stimulating hormones will be aided by a new rapid, high yield technique for obtaining somatomedins from sheep serum, the University of _____ researcher who developed the technique today told the annual meeting of the American Society of Animal Science." Whew!

- Run your stuff through the fog index. Patterson found the average sentence length of 10 news releases she studied was 33 words. That's about a dozen more than it should be. She then counted the words over two syllables in a 100-word sample and found that the stories had a 16-year educational reading level. She said most publications aim for a twelfth grade education or less. I'd vote for a sixth to tenth grade reading level.
- Avoid jargon. Even worse than the fog index, Patterson said, was our tendency to use extensionese or experiment station jargon. Try to use simple words and analogies.
- Leave out much of the source's identification in the first few paragraphs so the reader has a chance to get into the story before he or she gets bogged down. That means avoiding such things as "Herbert Schwartz, land grant university assistant professor

of animal science.” Let’s just make Herb an animal scientist and forget his academic rank.

- Dig. I found a lot of stories written from abstracts or research papers. Quite often what is presented at a scientific meeting is only a small portion of the research issue. You usually have to go beyond the research paper to get at the project’s significance. You probably make a mistake when you interview only one person.

- Don’t slip into a rut. Joye Patterson said, “Your writing probably becomes a formula when you have so many news releases to do. Beginnings all sound the same.” She urges us to break away from tradition, using feature leads and occasionally going to a narrative or semi-narrative style to tell a story.

- Don’t overwhelm your readers with your intelligence. There is strong research evidence to show that scientists, especially, write *up* (for colleagues, etc.) but they like to read *down*. Easy writing makes for quick and easy reading and understanding. All of us appreciate that—even scientists.

- Critique your own stuff . . . or get someone else to do it. Read it aloud. Let someone else read it aloud. Try your writing on people other than your colleagues. Spouses and kids have a way of making some pretty revealing comments. And after all, aren’t they more typical of your readers than your colleagues or another scientist?

- Practice being an observer. Joye Patterson feels strongly about this. What is it that you saw or heard that was interesting? Why? What would others like to know about this?

- That’s it. Tell a story. Keep it short and simple. Write for readers.