

# What Science Writers and Communicators Need to Know

Scott E. Fahlman

Professor Emeritus  
Language Technologies Institute  
School of Computer Science  
Carnegie Mellon University  
March 16, 2017

# The Current Situation Is Not Good

- It's more important than ever for the public to understand science.
- Ideally, you have real scientists with some talent for writing and education, and who want to focus on this.
- Such people exist, and are wonderful, but rare.
- If you take a non-scientist writer and “teach them some science”, it won't work.
  - Science is a way of thinking, not a pile of facts.
- If a scientist has no talent for communication, that won't work either. **Empathy for the audience is crucial!**

# Hints for Writers Who Are Not Scientists

- Good science writing is **ABC: Accurate, Brief, and Clear**.
- If you don't know about certain subjects, learn what you can, but cultivate some friends who are experts.
- Beware empty hype from your subjects!
  - If a press release talks about what a “breakthrough” some result is, it probably isn't. Check with people who know.
  - “Significant” is a technical term. It doesn't mean “important”.
  - Those hedging phrases may be bad style, but often they are essential for accuracy. Be careful about dropping them.
- **Always let the subject of the interview see and comment on the final wording.**

# Hints for Scientists Who are Not Writers

- It's important to educate the public on what we are doing. Help if you can!
- But don't over-claim. It will bite all of us!
- Good science writing is **ABC: Accurate, Brief, and Clear.**
- Eschew Bloviation! Simplify!
  - Nobody will be impressed by big words and tangled sentences.
- Write like an actual human talking to other actual humans.
  - Paint a thin veneer of new knowledge over what they already know.
  - If you don't know any actual humans, capture one to practice on.

# Hints for Scientists Who are Not Writers

## Always Remember:

- **Examples** are better than **abstractions**.
- **Metaphors** are better than **explanations**.
- **Parables** (stories) are better than **rules**.
- **Demonstrations** are better than arguments.

# Hints for Scientists Who are Not Writers

## **Even a scientific presentation can be an adventure story – and should be!**

- Here's an interesting problem.
- Here's why anyone should care about solving it.
- Others tried and failed – what did we learn?
- Here's what I tried.
  - It didn't work the first time, but we learned...
  - It didn't work the second time...
  - And then it worked! Here's the key idea.
- So here are the big results, and again why anyone should care.
- Ta-Da! Any big lessons learned?
- Exit stage left, pursued by a bear.

# The End