

# Steven Reiner Urges Scientists to Tell Their Stories

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It is Steven Reiner's business to help other people tell their stories.



A lifelong journalist, Reiner started his career writing and editing for newspapers and magazines. Later he moved into broadcasting, becoming an Emmy award-winning producer for the CBS TV show, “60 Minutes,” and executive producer of National Public Radio’s “All Things Considered.”

Reiner is still helping others with storytelling — most recently a group of scientists, engineers and computation experts in Chicago at XSEDE12, the annual conference of the Extreme Science and Engineering Discovery Environment (XSEDE). At the closing luncheon on July 19, he talked about the value of scientists telling stories in a way that people can easily understand.

It is essential that scientists explain what they do, how they do it, and why it is important. And the ideal way to do that is through the telling of stories that have a beginning, middle, and end, protagonists, antagonists, and heroes. Our brains are wired to look for stories, especially those with an emotional connection, Reiner said, and “we tell stories to make sense of everything.”

“Journalists and scientists may seem like strange bedfellows,” he said, but he noted a similarity — they share a need to enhance understanding among the public, sift through vast amounts of information, and seek the truth.

“The good journalists — and there are many good journalists out there,” he said, “share with scientists a commitment to search for and evaluate evidence, a system of peer review, and an acknowledgement that all truth is provisional, subject to change when convincing verifiable evidence presents itself. Like scientists, journalists try to make sense of information and wade through and distill an ever more daunting amount of data. What journalists also do, and what scientists need to do more of, is tell stories.”

Five years ago, Reiner traded his storytelling job for the opportunity to teach journalism as an associate professor at Stony Brook University on Long Island, NY. Now he teaches students to tell convincing stories and conducts seminars and workshops in the university’s Center for Communicating Science. A joint venture of Stony Brook, the Brookhaven National Laboratory and Cold Spring Harbor Laboratory, the center was created in 2009 to help “train the next generation of scientists and health professionals to communicate more effectively with

the public,” he said. “We believe that scientists have a responsibility to share the meaning and implications of their work and that an engaged public encourages sound public decision-making.”

Reiner acknowledged that scientists invented jargon to talk with each other. “I’m here to report that many of you probably suffer from the quite curable disease of ‘jargonitis,’ he said. “But it’s not only your choice of language and the care with which you choose words ...the more we are inundated with data, the more the story — the narrative — becomes a powerful way to impart information and meaning.”

To illustrate his point, Reiner cited a recent example of the power of storytelling.

Three years ago, the actor and writer Alan Alda helped found the Center for Communicating Science at Stony Brook as a result of his passion for science and a desire to help others better understand it. And when Alda was writing an opinion piece for *Science Magazine* in March 2012, he recalled the experience of being stymied by his grade-school teacher when he asked her to explain the concept of a flame. According to Alda, she dismissed him with a single word, “oxidation.” So, in the guest editorial for *Science*, Alda introduced “The Flame Challenge,” asking scientists around the world to explain a flame in language an 11-year-old can comprehend.

The competition generated a global response with entries ranging from written descriptions to charts and illustrations to video. The winning entry, as selected by 800 11-year-olds from around the world, is a seven-and-a-half-minute video. It includes animation, humor and music — all of which captured the attention of the 11-year-old judges — and was conceived of and produced by Ben Ames, a Ph.D. student from the United States who is studying quantum optics in Austria (see the video and more at <http://flamechallenge.org/>).

The point is not about “gimmicks or dumbing things down,” Reiner said, but to tell a narrative in a clear, compelling way that generates understanding. He drew a connection between the “incomprehensible” words that scientists often use to explain science and the lack of undergraduates who are attracted to, enter and stay in science, technology, mathematics and engineering (STEM) disciplines, a diminishing number that is causing concern, especially in the United States.

When he was working on “60 Minutes,” Reiner said his boss, the late Don Hewitt, had one demand: “ ‘Tell me a story. No matter what you do, tell me a story about it.’ It’s all he ever wanted us to do... whether or not we were taking down a crook or celebrating a great artist.”

He told the scientists in the audience that the importance of storytelling is not new, but that “it needs to be revived by those like you in this room who really are today’s greatest explorers.” Everyone knows how to tell a story, he said, and scientists need to recognize that they do have compelling stories to tell.

“What you do...for the lay person like myself, is nothing short of phantasmagoric.”

“How did our brains evolve? How did oil move through the water after the Deepwater Horizon blowout? What are the mysteries of the tectonic plates? What is the behavior of the HIV virus? How do cyclones travel through the atmosphere? Just what happens to a star at the end of its life? You’re searching for the answers. You’re the explorers. You have stories to tell that are richer than any tales of the Arabian Nights,” he said.

“If you can captivate an 11-year-old with those stories, you will captivate the rest of us, as well.”