



**Public Understanding of Chemistry:** Chemistry and its social-political-economic contexts continue to change.

Chemistry and chemistry-based technology that impact our lives make for the complexity and controversy of life and set the stage for thinking about public understanding of chemistry. The Public Understanding of Chemistry section will try to address chemistry in real life context with original contributions (articles/position papers/policy briefs) and/or published articles and columns in reputable sources (used with permission).

**Founding Section Editor:** David Devraj Kumar, **Section Co-Editor:** David M. Manuta

## COMMUNICATING SCIENCE

**W. Jeffrey Hurst**

PO Box 672 | Mt. Gretna, PA 17064

(Email: [whurst@hersheys.com](mailto:whurst@hersheys.com))

Uncle Tungsten [1] recounts the experiences and development of a young man who loved chemistry. The author, Oliver Sacks, decided against becoming a chemist in order to become a world-famous neurologist and author who, in addition to Uncle Tungsten [1], wrote a number of books such as *The Man Who Mistook his Wife for a Hat* [2] and *Awakenings* [2]. Depending on your level of interest in science topics, you also may have read one of the many volumes written by Carl Sagan or the book about the biotech industry titled *NO* by Carl Djerassi [4]. (This is obviously not a complete list, but it is used for illustrative purposes.)

The purpose of the title, *Communicating Science*, and the resulting introduction proceeded from a conversation with some colleagues who were not from the science arena. While discussing some of the developments, I felt obligated, since I am an analytical chemist, to rattle off a list of the newest instrumental techniques and developments. When their eyes started to glaze over, I knew that I was done and, no matter how glitzy or impressive the techniques, they were underwhelmed. Whether you are a student of the writings of Carl Sagan, Oliver Sacks, or Carl Djerassi is immaterial; what they and many others have excelled at is the ability to communicate not only science, but also the excitement of science to the general public. Unfortunately, many in the science community feel that these efforts tend to “dumb down” science and make it less pertinent. Fortunately, those who think so are incorrect. One must also be aware that there are a number of individuals on all sorts of communication sources, ranging from TV to the ever-expanding Internet, who dispense scientific information of varying quality. Furthermore, there are still educators who use some of the basic science courses as a method to eliminate those who they feel are unworthy.

One of the most evident trends is the increasing use of acronyms in all areas of life, science becoming one of the biggest users. An obvious and important use of acronyms is providing colleagues with a shorthand way of communicating. However, things sometimes go too far, resulting in confusing acronyms which perform the exact opposite function as initially planned. To add confusion to the mix, some cannot even guess the real meaning for the various words which now populate the environment, such as names for utilities (e.g., Verizon), drugs, and new cars.

As a practicing scientist, I feel that one of my responsibilities is to not only perform excellent science, but also ensure that we work to communicate developments in science to those who are not in the field. Many times when asked, “How are you?” I respond with, “Science is wonderful.” Although this is true, we must not get too

engrossed in our own efforts that we fail to communicate. It is important that we all cultivate the ability to communicate since this is critical for funding, participating in governmental programs and organizations, and developing public support for a position. For example, ACS has a program which alerts you when items of legislation pertaining to funding for various programs are under consideration. Since we all like to think of ourselves as interested in government, this alert is very timely, for we cannot know the total legislative agenda. You can use this information to provide your personal opinion to your Congressman or Senator, which may affect their vote as well as the outcome of the bill in question. The same kind of approach can be used for legislation in other states, but would require more vigilance as there is no general alerting service available. The ability to communicate to these individuals is critical since they are interested in your concise viewpoint, not a copy of your dissertation.

When talking with friends and colleagues outside the science arena, a discussion may easily turn to a topic where you could provide some assistance. For example, the term *genomics* is used in everyday conversation, but some are unaware of what it is or means. It is simply another buzzword. I can almost envision a late-night host asking, "What is genomics?" with the answer, "It was in *The Lord of the Rings*." The ability to communicate scientific concepts clearly is critical and helps us as various fields develop at a breathtaking pace.

In summary, I hope that this will give you cause to think on the topic of communicating science – its impact on our lives and what you can do to contribute.

## References

1. Sacks O in *Uncle Tungsten: Memories of a Chemical Boyhood*, Alfred Knopf, 2002.
  2. Sack O in *The Man who mistook his wife for a hat*, Totchstone, 1998.
  3. Sacks O in *Awakenings*, Pention Group, 1973.
  4. Djerassi C in *NO*, Penguin Books, 2000.
-