

The Scientist and the Communicator

Editor's Note: The following is excerpted from the opening presentation made at the Fourth Conference on Natural Sciences at the Hawaii Field Research Center, Hawaii Volcanoes NP in June 1982. Shimoda, now superintendent of Puukohola Heliau NHS and Pu'uhonua O Honaunau NHP, has served as a communications instructor at the NPS Stephen Mather Training Center, Harpers Ferry, WV.

By Jerry Shimoda

Supt. Robert Barbee (of Redwoods NP), in his notice to participants at this conference, asked that we transmit our research into easily understood language so that our papers can be enjoyed by this highly mixed group. I consider myself a layman in the midst of scientists, so let me express some of my own concerns.

Most of you will be using what you *think* is the easiest form of public communication — the lecture. Actually, it is the fastest and easiest form to use but it is the most difficult way of transmitting a message. If the scientist needs public support for his research projects, he must be able to arouse the interest of people beyond the scientific community; he must help *them* understand.

The scientist often uses scientific names of plants and animals without giving their common names. I suggest writing out both — *Caladium colocasia* and Taro, and then using the word "taro" for the rest of the presentation.

One of the dangers any group can fall into is the use of "in-house" language. For example, I work for NPS, DI; our central office is WASO, and it establishes policies that are interpreted and come to PUHO through WRO and PAAR. The uninitiated would never know that NPS is National Park Service, DI is Department of the Interior, WASO is the Washington Office in O.C., PUHO is Pu'uhonua O Honaunau National Historical Park, WRO is Western Regional Office, and PAAR is Pacific Area Office.

Some years ago, I worked at Saratoga National Historic Park, a Revolutionary War Battlefield in upstate New York. We sold a booklet about the battle there. One day I noticed some visitors laughing over the book. I found their merriment stemmed from another example of "in-house" talk. For those of you unfamiliar with the Battle of Saratoga, the American army was commanded by Gen. Horatio Gates; the British army, by Gen. John Burgoyne. One passage in the booklet described the advance of Burgoyne's army toward the American position as follows:

"Burgoyne's right and left flanks lay in the woods, but his front was open."

We quickly revised that passage!

In good communications we must *simplify* without reducing the presentation to a childish one.

The scientist needs to be "bilingual" and have a good understanding of objectives, human relations, and the techniques of presentations, — both verbal and non-verbal.

By "bilingual" I mean that in addition to a mastery of scientific language, the scientist needs the language of the communicator. Use the active voice — "I went to the woods" instead of "I had gone to the woods"; "We decided" instead of "It had been decided by us". Concentrate on *short sentences*. Your listener will find it easier to follow your presentation if s/he doesn't have to follow you through a forest of semi-colons and commas before you get to your point.

Use words that touch *emotions* so your listeners become involved in what you're saying. It may be better to say "stink" than "odoriferous", or "killed" instead of "dispatched". Graphic words are better but stop short of the point of nausea.

One may say, "But there is no simple word for that flower or animal." My reaction to that is, "Use the word, but explain it. Write it on the board!"

A speaker should avoid profanity or delving into the gory as a shock treatment. This tends to turn off a good part of the audience and to arouse negative reactions.

In speaking leave out as many "I's" as possible . . . "I did this" and "I did that." The constant use of "I" is irritating. Remove the static so your listeners can hear the music.

In preparing a speech, decide your objective in giving it, then prepare an outline. For instance, my objective here is to try to help you think of your listeners as people who need a better understanding of what you're saying. They represent an opportunity for you to recruit a wider body of truly interested people — not just a chance for you to recite the great things you've accomplished in language they can't understand.

In a 10-minute paper you must clearly state your objective; you haven't time to ramble. Choice of words and thoughts becomes important. As the presentations are made at this conference you will notice that some of the 10-minute papers will seem short, others of the same length will seem long. The difference will lie in the way they're written and the way they're presented. Remember, there isn't a boring subject in the world, only a boring presentation.

To make a good speech it's also necessary to understand human

relations . . . to be sensitive to the listeners' feelings. Try to relate what you're saying to your listeners' experience. When addressing a luncheon meeting of the local Lions Club, *don't* present the same paper you gave last night at the dinner meeting of the botanical society. Too many times this happens because we're not as interested in having the listeners understand what we're saying as we are in having our names in the newspaper as luncheon speakers.

If you're going to present a paper or give a talk you must be willing to pay the price of preparation. Decide on your objective and use an outline. The beginner should write his talk out, re-write until he's satisfied, then practice out loud on lay persons and re-write again, based on their feedback.

Arrive early at the meeting place, set up your equipment and look at the layout. It's better to provide your own equipment, e.g., movie projector, slide projector or tape recorder, because you're more familiar with it than one the facility might provide. When you come up to the stand, be ready to speak. Don't play with your papers, your glasses, etc. In making your presentation, relax, be natural, and talk to the people in the last row. Eye contact is very important. Movements help, but not distracting movements, like playing with your glasses, shifting your weight from one leg to the other, playing with the coins in your pocket. If you use gestures be sure they look natural.

In communicating with the public, the burden is on you, the speaker. Keep in mind that the hardest parts of a day to give a speech are : bright and early in the morning, right after lunch, and right after a dinner. This, of course, is when most speeches are scheduled. You need to use all the tricks in the book to keep the audience's attention.

Communications is serious business. The price of success is preparation, practice, and keeping the interest of the listeners in mind. We need to ask ourselves, "For whom am I presenting this paper, for listeners or myself?" Give your audience full credit — without the student, there is no need for a teacher.

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