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HOW TO MANAGE WITHOUT BEING A MANAGER*

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ABSTRACT

In my current position at Sandia National Laboratories within the Pulsed Power Sciences Center, much of my time is spent in composing short (one page) technical reports and long (> 20 page) technical contracts and program plans for transmission to the Department of Energy and to upper management and also in reviewing long technical documents for accuracy. A major requirement of these efforts is to complete them on a timely basis, often within a few hours or a few days. In this talk, I will reveal some communication "secrets" that I have learned. The idea behind these twelve "secrets" is to get the answers you, as a nonmanager, need quickly from a manager without creating stress either on your part or the manager's part.

Introduction

I summarize the research of others and compose, in writing, the future goals and objectives for the Pulsed Power Inertial Confinement Fusion (ICF) Program at Sandia National Laboratories, rather than pursuing my own technical research, as I did for the first 19 years of my career. Now, I compose short (one page) technical reports and long (> 20 page) technical contracts for transmission to the Department of Energy (DOE) and to upper management and review long technical documents for accuracy. I have been in this position for 3-1/2 years. A major requirement of these efforts is to complete them on a timely basis, often within a few hours or a few days. In this paper, I will explain why I changed to my current position, what I do in this position, and then share with you some communication "secrets" I have learned. The idea behind these secrets is to get the answers that you, as a nonmanager, need quickly from a manager without creating stress either on your part or on the manager's part.

For 19 years I did plasma physics research at Sandia National Laboratories. The change in what I wanted to do began with a phone call from the secretary of a manager three levels above me in 1991. I was informed that I had been chosen to work on a year-long benchmarking analysis of soft x-ray technology. The analysis would compare how and what Sandia did in the soft x-ray technology area compared to other institutions: national laboratories, universities, industry, and international entities. This request sent two mixed messages:

1) If this was so important that a year would be spent on it, why hadn't the manager asked me if I *wanted* to do it? A manager should make sure that a staff member is enthusiastic about a task before assigning it. Someone who isn't enthusiastic will do the job, but he or she will probably not do as good a job.
2) At the initial planning meeting for benchmarking the eight different research areas that had been selected, why was everyone else, except me, a manager?

When I asked the manager why he hadn't notified me before submitting my name, I was even more confused about the importance of the task. I was told that there was not time to contact me.

I completed the benchmarking study in the fall of 1993. One part of the study involved the analysis of a survey that had been distributed both inside and outside Sandia, to researchers at national laboratories, in industry, and universities, who were familiar with Sandia's efforts in soft x-ray technology. A list of 24 attributes was developed. Those completing the surveys were asked to rank Sandia with respect to these attributes. One area that Sandia needed to improve in, according to the respondents, was communicating with internal and external customers.

What I Do

That fall, my immediate manager asked what I wanted to do the following year and I said, work in communications. The type of communications that I do is now as follows:

> Prepare a one-page report, with a different, colorful, eye-catching graphic each month, that summarizes the significant technical activities and accomplishments in our Program for that month. In preparing each report, it is necessary to give enough background so that someone not familiar with the Program can still get the gist of what has been accomplished. The continuity from

month to month must be apparent. At first, these reports, called *Highlights*, were distributed only to the DOE and upper management at Sandia. Later, the distribution was changed to include staff as well as external contractors.

Prepare an annual technical contract for the Pulsed Power ICF Program that provides a background with respect to past accomplishments, summarizes future research activities, goals, and objectives, and ties these to past accomplishments and past goals. Before I assumed this task, the technical contract was very dense--about 90 pages in length. I cut the length to 30 pages and made it easier to read.

Provide advice to the DOE on the overall Inertial Confinement Fusion Program Plan--e.g., those parts of the plan that describe the research effort at other locations, such as LLNL, LANL, and General Atomics.

Prepare one-page quarterly reports that are distributed to upper management and to the staff involved in ICF at Sandia.

Prepare special, one-paragraph reports to the DOE for the *Defense Weekly News* when a significant accomplishment is achieved in the Program. There are generally three or four of these per year.

Edit annual reports of the Program. These are about 150 pages long and consist of short summaries, about two pages each in length, by individual researchers.

Respond to questions from DOE personnel and from management and staff at Sandia with respect to the technical research, either by phone, electronic mail, or in person.

Some Communication "Secrets"

As a result of the above activities, I have learned a lot about what constitutes good and bad communications between managers and staff, managers and managers, and staff and staff and accumulated a list of "dos" and "don'ts."

1. Managers and nonmanagers are busy. If you want something from one of them, communicate your request clearly, simply, and briefly.

2. Know how a particular manager likes to communicate--in person, via electronic mail, casually in the hall, by phone, by written request.

A manager who still has a highly-raked black Smith-Corona typewriter in his office and is not "computer saavy" cannot be expected to respond to electronic mail messages. My younger sister, an English professor, gave me another example of the appropriateness of different forms of communication. At a professional conference on English literature, a speaker actually *reads* word for word from a prepared text. If a scientist were to do this at a professional meeting or a seminar at her workplace, I suspect that her colleagues would presume that she really did not know the subject.

3. Know when to ask a manager for something.

Often, it is easier to get her response when she is on travel--all that free time on the plane.

4. Let a manager or staff member know when you need a response and what the consequences are if you do not get one.

I had problems getting managerial response, in particular, with respect to the *Highlights*. At first, I tried getting each manager to prepare a short paragraph of the latest results on his or her project. When this was not very successful, I tried talking to each manager, asking for the important highlights in his area each month. I did not get a consistent response. The manager who oversees the overall Program then suggested a different approach: compose the text myself and distribute it to the managers for their approval. I decided to give them a specific time period to reply, about a day and a half, since the *Highlights* are sent to the DOE in Washington about two weeks after the end of the month. After several "mistakes" were made in the text because a specific manager did not review the one pager, they started catching on. Now they know that when a deadline is set, it is meaningful.

5. Ask questions, but make sure you ask the correct party. Limit the requests made to each manager.

6. The time of day you make a request to a manager can be important.

A nonverbal form of communication that I have found to be effective is to make it so that it is seen the first thing in the morning. Particularly if the request is short and can be easily dealt with, it is more likely to be addressed at once. I learned this from a former manager, who had seen it used in a negative way. In this case, a request would be made to a manager or staff member at the end of the day, just before the individual left work. In this way, the person would "worry" about the request in the evening.

7. Get opinions/answers from both staff and managers and from a manager who is not working on a particular project.

A staff member often knows more about the details and impact of the research than the manager. Also, someone not involved in a particular research area can have a unique

perspective.

8. A manager does not like to have a "monkey on his back."

About a year ago, I took a course entitled *Orientation to Management* to try to understand managers better. I learned something I had never heard of before--about "monkeys on your back." Managers do not like to have monkeys on their backs. If you ask a manager for something, it is considered a "monkey on the back." You must therefore make it easy for the manager to get the monkey off his or her back. Make your request simple, so that the manager does not have to go to much effort to solve the problem he or she has been given. Then, once the manager responds, take the monkey back and "retrain" it. Managers appreciate positive reinforcement, too. Before the manager has had time to forget the "problem" he gave back to you, thank him for responding, and reassure him subtlely that he no longer has the "monkey" and that, with his response, you are now able to solve it.

9. Bad nonverbal communication: What you do is not important. What you asked is not important.

This can be best explained by an example. A person who chairs a meeting but consistently arrives late sends a message that the meeting is not really important and the time of the people who are waiting for him to arrive is not important. Someone who runs a meeting and does not effectively control its length can send a similar nonverbal message.

Not providing an answer to a question that the inquirer believes is known or ought to be known can also send a negative message. My twelve-year-old daughter had learned in science class that some yeast cells have a nucleus and others do not. During a review for a test, she asked her teacher what a nucleus was. The teacher's reply was that she didn't need to know that for the test.

10. Be consistent with your requests and your responses to others.

This rule applies not only to managers and co-workers, but also to one's young children and to everyone else. I learned this from my brother-in-law when I was pregnant with my first child. I attended a class he was teaching on child psychology. The essence of his lecture was that the most important thing with respect to dealing with a child is to always be consistent. If you have told him that he will be punished for an infraction--no TV, etc.--do not go back on your word. I have found that this works wonderfully, yet my husband does not seem to understand this. When I call them on the phone to come home from their grandmother's, they come immediately. If my husband calls them, he is given a litany of reasons why they cannot come until later.

11. Give a manager an incentive to change his or her way.

The best way that I can explain this is to, again, give a real life example involving my daughters. I call this the "dimes in a silver baby cup" example. When my kids were in preschool but able to go the bathroom themselves, they would still wake me in the middle of the night when they needed to go to the bathroom. A co-worker was appalled and said his kid, who was about a year younger than my oldest, did not do that. I decided to "bribe" each of my kids with a silver baby cup filled to the brim with shiny dimes. It worked. For everytime I was awakened in the middle of the night by one of them, that one would lose a dime from her cup; the rest could be kept. I only got one dime back! You can do something similar with a boss or co-worker. Say thank you. Volunteer to help if he or she is in a bind. Compliment on something well done.

12. Lastly, the golden rule applies: "Do unto others as you would have them do unto you."

Communicate with managers, with children, with everyone as you would like them to communicate with you. Be honest and fair.

Summary

Communication is important. As scientists and engineers, we know that the popularized perception of a researcher tinkering for days in a laboratory or working through a complicated set of equations at a blackboard, without interactions with colleagues, is not "reality." It is the communication between researchers at meetings and at the workplace that leads to breakthroughs and a new understanding of the impact of a result. But, sometimes, an incorrect form of communication can be just as bad as no communication. A lot of what I talked about can be summarized by paraphrasing from the title of a popular little book: "Everything I know about how to manage managers I learned in kindergarten." I have found that these communication secrets work equally well in interacting with others, such as my children, away from the workplace.

Biography

Mary Ann Sweeney is a Senior Member of the Technical Staff in the Pulsed Power Sciences Center at Sandia National Laboratories. She has a B.A. in Physics with a minor in Mathermatics from Mount Holyoke College, and a Ph.D. (1974) in Astronomy from Columbia University. She has worked on a wide range of research problems: target and reactor design for inertial fusion, radiation shielding in pulsed power accelerators, response of materials to beams and radiation, vulnerability-lethality of weapons hardware, design of electron-beam-pumped laser facilities and plasma opening switches, and the evolution of anode plasmas in ion diodes.

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