3.2 Networking – Becoming an Integral Part of Your Field

Over the years I have been asked "How did you become interconnected with so many other chemists?" or "How did you get involved with this journal, committee, or society?" When I think of my answers to these sorts of questions, I have not replied with what most people might think. These connections of being part of the active scientific community are not a matter of selling one's self. This is the common, but wrong, assumption or perception. They arose because others knew of me through personal interactions. Network has been an inherent part of my career even before I understood its advantages.

Networking is building a sense of connection and community among scientists that one knows. Unlike normal communal feelings, however, in this case one gets to choose and define who and what the community is since it is one's personal scientific network. Membership can be selective and exclusive, but very wide ranging under whatever criteria you chose.

Your network is defined by you and is your own resource. It becomes valuable professionally and personally. As time passes you will find commonalities and redundancies where those in your network have each other in their own networks. The networking becomes both cumulative and cascading. One member will refer you to other new members, who in turn refer you to even more.

When you interact for the first time with a person who you have been referred to by someone in your network, remember to mention that in your introduction. This should be true no matter what the context or format. This sets up the interaction in a beginning positive light. A mutual friend is a linkage, especially if that person recommended that you contact the other person. A corollary to this is to always let another know that they can contact one of the people in your network with you being the connection. The collegial mentality always opens the doors to new interactions easier.

In my case, the opportunities for collaboration and for being involved with journals or societies have most often been brought up by someone else asking me if I would be interested. In the case of collaborations and reviewing for journals I initiated the contact some of the time. The obvious next question that is asked about my getting these opportunities is "What things did you do to make yourself come into others' minds when they were in need of a person?" The first of several answers, of course, had to be good technical capabilities must have been shown since we were dealing in technical fields. How to gain those is the theme of some of the other essays in this series, but in brief it entails keeping up with the literature, doing innovative work, and presenting that work at conferences and in publications.

What non-technical factors lead to these opportunities? There are several answers that are more based on personality, which I can sum up in the phrase "It does not hurt if you are friendly and nice to others". This sounds simplistic and even too sugar-coated. But as with any social interactions, if you make a good human contact while being a technically successful chemist, then you will build a network of colleagues and friends. People will build strong links to those they enjoy interacting and working with.

Within each of us, underneath the veneer of the scientist is a person. Connecting with the person as well as the scientist is the basis of solid networking. The technical competence will create a scientific network, colleagues who have similar technical interests. This is the framework for building a personal network. The strengthening substance is filled in by the personal connections.

The first stumbling block to this is the same as in other social situations, how to break the ice. With scientists, however, there is the natural common interest of the science. Ask about the person's research and discuss it with the real interest you have as a chemist. You can expand your interactions by asking about the person's institution or company, their locale, or a colleague of theirs that you might know. There are many natural connecting topics. Listen to the person's comments and reply positively. Other topics often come up if you listen for them. Later, if you happen to see that person again, smile and say something to link again even if it is only "Nice to see you again. How is the conference going for you?" This recognition of someone only recently met can create a strong positive image.

Another thing to keep in mind during any interaction, whether by correspondence or directly, is that courtesy and politeness do help. Answering a query quickly, thanking and acknowledging someone for help, and many of the things we have learned to do in our daily lives should also be a part of our professional lives, too. It often helps as a reminder to try and imagine myself on the other end. If I send out a question to someone, would I rather receive a reply within a day or two or within a week or within a month, if at all? If I do something for someone, does the "thank you" they give make me feel better or does the one not said make me feel worse?

Corresponding is also a good way to build connections. If someone you are acquainted with sends you a reprint request, add a personal note with thanks and comments about their research or any other linking topic. Those few seconds of extra time spent are much better than just dropping the reprints in an envelope. Always answer another's correspondence, even if it is only with a brief note and an apology for not being able to answer more fully. Courtesy counts.

To aid in corresponding, I keep a notepad handy in which I write down those often fleeting thoughts or questions that I would like to pass on to someone else. I then organize these notes together by who is to be the recipient and refer to them as I write a letter or e-mail. I try to do this when the number of my notes gets to a certain number, which tells me it is time to block off an hour or two to write. I, thus, do not forget or neglect keeping in some contact and the contact often has some scientific

context and value or point of interest for the recipients.

One important tool in corresponding and in building and maintaining your network is to put together an address book. This can be the older styled paper copy or an electronic one. The latter can be added to and edited quickly and neatly and can be copied for safekeeping. I use both, having started a paper copy before electronic ones were convenient. These contain the name, street address, phone and fax numbers, and e-mail addresses of people I correspond with. It also has grown to include a lot of people who are resources that I keep more intermittent contact with. An address book is very handy because you can easily refer to it to call or write to someone with an idea or question. It is not old fashioned or a dated thing since networking is not out of style if you want to succeed.

Giving out and receiving business cards should become habitual. They should always be handy; kept in the briefcase, wallet, or handbag so that they can be given at any opportunity. Offering your business card should be part of any introduction. Do not feel reticent about asking for those of others. These two actions should be part of every meeting, especially including the informal ones during research conferences. The exchange of business cards is very important in certain cultures. Offering yours is seen as a sign of respect and friendliness. In collecting those of others, you should build a card file or other handy way of keeping them in some organized fashion. The information on those of important new contacts should also be transferred to your address book.

This information can and often should be shared among your network, but you must do that with care. Your network is your resource and it can be beneficial to all in extending their own networks. You, however, should not do this haphazardly or cavalierly, as the trust and friendliness that the members of your network show to you may not be mutual among themselves. Tarnishing a relationship can happen if two in your network do not get along or if some other negative interaction occurs. If you have any doubts in passing on contact information, first check with that person to see if he or she is comfortable with that.

Another aspect of communication in building networks relies on the fact that the interesting scientific talk at a conference is not limited only to the presentations. The in-the-

hallway or coffee-break discussions also contain much science. Often it is what is going on in labs at the moment, not months earlier when presentations were submitted to meeting organizers. In these casual discussions, it is easy to meet and get to know other chemists. At the same time, they learn more about you. Talk of hobbies, shared interests, and personal information in the scientific context is no different than in other aspects of life. These human connections naturally predispose others to look upon you more or less favorably, depending on what others think of you. Generally, the reactions are much more favorable.

I once had a conversation with someone at a conference because he was sitting and doing the large, difficult crossword puzzle that the New York Times prints daily. I sometimes did those puzzles myself, so I commented on my enjoyment in also doing them. This puzzle worker turned out to be a Nobel laureate. Even though we never collaborated, I think that this is a good example of how an individual can increase his or her chances of networking. Every interaction with another chemist (or scientist of any discipline) is part of building your network.

One attitude in interacting with others in this way is the give-and-take, the reciprocity of it. An individual best builds a network in which the others perceive the interactions to be two-way. Each person receives and gives information, ideas, and opinions. Selfish people who only look to gain from others will soon find that their networks are limited and not dynamic.

Networking often involves exchanges of more than ideas and communication or samples and standard compounds or reprints and copies of articles. The use of resources and the time to utilize them are also exchanged. If you can do things for people because you have resources that they do not, then you can offer them and strengthen your network.

Examples I have done of this sort include running molecular modeling programs, collecting fluorescence spectra, determining molecular weights by size-exclusion chromatography, performing literature searches and others. I have received a variety of things in return and not necessarily from the same people. Your network can be an open exchange of things given and received. Things do not need to be given gratis, but the bartering must be positive and not niggling over equity in the trading. In the long run you will gain as much from others

overall as you give to a point where the balance does not matter. You and those in your network all gain.

The converse results can be as happen and have an effect on your research if you receive greatly more than you are willing to give. Your reputation can be a calling card that tells others that you are not a good potential member of a network. You are not helpful or collaborative. Your interests are only towards your own gain. This is not only a situation that you do not want to be in if you desire the best chance for success, it is also more difficult to avoid than its opposite. People remember much more intensely what they perceive as a slight or a wrong done to them than they do the positive alternatives. One mistake that you do to someone else can negate several good things you have done. There are no real tallies kept, but people do have a sense of the balance if it is too skewed away from them.

I am reminded of what was my first exposure to a gathering of eminent scientists. While in graduate school, I and several of my research group attended a large international meeting. One day as another student and I wandered at the exhibition that was part of the conference, we ran into our research advisor. Being near noontime, he asked if we had plans for lunch. We said no, expecting the usual foray to an eatery. He led us through the conference center to a banquet room. It was the annual awards recipient luncheon. As a past winner, our research advisor was invited and could bring a guest (or two). We were seated among many eminent scientists, those names on books and seminal papers that we had read. Before our advisor introduced us, he mentioned one name and said "Do not talk of your research with him. He is known to steal ideas and go back to his laboratory and scoop you." The name was that of a very well-known researcher, the discoverer of many important things in our field. We followed his admonition and also became aware of how unethical behaviors can lessen research opportunities. In a later conversation with our advisor, we learned that this particular scientist was a brilliant lone wolf who could thrive on his own. This is a rare type of success and the alternatives in collaboration are much more likely.

Building a network takes time and the timing must also affect one's attitudes in interacting with others. No one when first met is ineligible for future membership in one's

network. You must remember that the graduate and postdoctoral students of today will in a few years be professors and scientists scattered throughout academia, industry, and government laboratories. Neither should one focus only on trying to network with eminent names, the easily recognized leaders in the field. These brilliant scientists should not be ignored, but times do change. A little-known professor today may build a strong reputation. Also distinguished scientists eventually retire from research and may rapidly lose some of their value in a network. So networking must be both dynamic in that it is always being done and is unlimited in who is involved. It never hurts to have a strong link to someone before they become a Nobel laureate or other award winner!

Another thing that helps to build a network is to rarely turn down any request to be involved in the workings of a journal or conference. I use a rule of reciprocity as guidance. The workings of science involve both giving and receiving. If I take advantage of a journal to publish a paper or of a conference to present one, then I should also be willing to serve as a reviewer or chair a session if I am asked to do so. My papers are reviewed by others and I benefit from having published papers. If someone else wishes to also benefit by having a published paper, then I should be able to review theirs. These sorts of tasks also have the added advantage of sometimes letting me see new developments before others since reviewers get the first peek at research results.

When you must turn down a request, take the time to let the person who offered it know politely why. Everyone can accept reasons such as other obligations that coincide with a conference or too tight of a schedule or other already-promised review articles being written. Courtesy matters in building better contacts. Although you might have to turn down one opportunity, this leaves the door open for other later ones.

Many of these ideas are variations on what people do to build friendships in their non-technical lives. These are only modified and adapted slightly to fit within the context of the scientific world. This is no coincidence! Once again it must be emphasized that scientists are people and feel the same emotions as others. Getting people to like (or dislike) you is much the same in science as in other areas.

In building and maintaining your network, remember to do the human touches that you use in your daily contact with family, neighbors, and friends. Your professional network is made up of people, many of whom will become friends. Listen to them in conversations about personal interests. Remember that these facts are as important as the analogous learning about professional aspects of the friends in your personal life. They are the flip sides of similar coins.

Just as you know that your neighbors are an accountant, a school teacher, and a carpenter, you can learn that this environmental chemist teaches scuba diving as well as the martial art of aikido or that chromatographer likes to read science fiction or that the theoretical chemist likes to cook gourmet dishes. In both parts of your life you learn of family and other things of importance to each individual.