

CAREER TRENDS

Building Relationships

Mentoring, Collaborating, and Networking



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Introduction

Like Blanche DuBois in *A Streetcar Named Desire*, my career has always depended on the kindness of strangers. Our career pathways are filled with the unexpected kindnesses and opportunities that have come from people outside of our immediate circle of close friends and colleagues.

Successful scientists and engineers rely heavily on their closest friends and colleagues, and a lifelong habit of reaching out and being open to the kindness of strangers. This edition of *Career Trends* helps readers look more closely at those habits—the building and sustaining of networks and mentoring relationships—that remain critical even as all around us changes.

Online social networking may have given us new tools, but these tools only assist us to create and maintain the relationships that are central to our success. Advisers and mentors introduce us to new knowledge, new skills, and to new networks—and remain critical to us throughout our careers. Learning how to make the most of these colleagues is also part of the story you will read here.

You will also read about using informational interviews to introduce yourself and your work to future colleagues and mentors and how to be ready for the unanticipated “elevator talk.” There is no substitute to the value of being prepared for the moment when you face a stranger who carries the potential for kindness and opportunity.

Science Careers is here to help you learn how to be ready, confident, and professional as you reach out for the kindness of strangers.

Richard A. Weibl
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Better Communication with Your Supervisor

By Patricia Gosling, Bart Noordam—*June 27, 2008*

Is poor communication with your supervisor getting in the way of your progress in the lab? Perhaps you've reached an impasse in your research and can't see a way through. Or maybe it seems that—from your supervisor's point of view—nothing you do is good enough. If you and your supervisor have different expectations of your output, and the two of you haven't spoken in months, then a lack of communication is surely holding you back.

Once settled into their projects, many graduate students are left to work things out on their own. That's as it should be, to a certain extent, as much of graduate training is focused on having you develop the ability to meet problems head on and solve them on your own. But your supervisor must ultimately approve your thesis, so keeping the lines of communication open is crucial. Don't wait until you get into serious problems before knocking on your supervisor's door. Even if your supervisor keeps her distance, as a seasoned researcher, she should be able to provide appropriate guidance and, one hopes, a neutral perspective. Even if you feel that your supervisor tends to place his or her interests above your own, initiating communication on a regular basis will give you the opportunity to voice your concerns.

Some people are born communicators; if you aren't, and talking to your supervisor feels like talking to a wall, take heart: Good communication skills can be learned. If you're having trouble connecting with your supervisor in a satisfying way, the key to better communication is understanding your supervisor's personality and communication style, as well as your own. Everyone is different: Some like the free-and-easy approach; others like more structure. Either way, better communication is likely to involve planning and a conscious effort on your part. If communication with your supervisor is poor or non-existent, and has been from the beginning, don't

blame yourself. It's also not a good idea to try to change your supervisor's ways; it won't work. Instead, focus on what you can do to improve the situation.

Understanding communication styles

Does your supervisor always seem to address the lab as a whole rather than each of you as individuals with different needs, skills, and abilities? Perhaps in your weekly group meeting, she scans the room, asks, "Everything going okay? Any problems? No? Great," and then dashes back to her office or to another meeting. This kind of behavior doesn't make your supervisor a bad person; it may mean she is busy and perhaps insensitive to cues from lab members about the need for regular contact.

Possibly, your supervisor talks to you individually, but he's a "hit and run" artist, tossing out a query about your progress as he breezes through the lab and then hides behind a stack of journal articles on his desk.



Informal chats about work or other common interests can help build rapport, and the more comfortable you and your supervisor are with each other, the better.

If your supervisor is an assistant professor just starting out, she may spend most of her time in the lab working beside you. If that's the case, there will be many opportunities for discussions, formal and informal. And unless your supervisor is very bad at communicating, good rapport will develop naturally.

If your supervisor is established at the institution and highly regarded in her field, she may rarely appear in the lab at all. In between international conferences, she sticks her head in the door for a quick hello and may only meet with her most senior postdoc to assess the lab's progress. If this is your situation and you feel like a "worker bee," with a supervisor who is remote or hard to approach, it can be difficult to speak up and make your concerns known.

But no matter what your supervisor's style, you can find ways to make yourself heard. The most valuable thing you can do is to make an appointment to talk face-to-face whenever you have something important to discuss. Even if you have lots of access to your supervisor and engage in many informal chats, a formal talk will allow you to structure your questions and clarify important issues. If you prepare well for the meeting, all you'll need is 15 minutes or so of your supervisor's time.

No matter how busy your supervisor is, plan to meet at least once a month—more often is even better—to discuss your research and other issues you want to

address. Suggest a time of day when a meeting is likely to be most successful. Is he more focused first thing in the morning? Then make your appointment before he is swamped with other priorities. Immediately after lunch is another good time. Avoid making appointments late in the day, because they are likely to be canceled as other priorities press in and the end of the workday approaches.

Structured communication is key

Informal, spontaneous communication plays an important role in building relationships and establishing trust. Informal chats about work or other common interests can help build rapport, and the more comfortable you and your supervisor are with each other, the better. A good rapport based on trust and mutual respect can be a great asset.

It is not, however, something you can force, and you can still make progress without this kind of rapport. The most crucial form of communication takes place during regular, short, face-to-face meetings between just you and your supervisor.

Once your appointment has been set up, take time to prepare. Go to your meeting with a written list of questions and concerns. Keep them brief—no more than three issues per meeting. Be specific; it won't do any good to ask, "So, how do you think I'm progressing?" A question like that will just encourage your supervisor to respond in general terms or say something encouraging but meaningless, or worse, disparaging but meaningless. If you need guidance on how to move your research forward, for example, come to your meeting with two or three of your own ideas about how to proceed. Give your supervisor enough context to be able to provide you with helpful input. If you haven't spoken for a while, give him a brief summary of your most recent results.



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During the meeting, take notes and jot down your supervisor's suggestions, assuming it's okay with her; some people find it disconcerting to have their remarks written down. As you chat, gauge your supervisor's enthusiasm and interest by paying attention to body language and other nonverbal cues. At the end of the meeting, thank your supervisor for her time and immediately send a followup e-mail that summarizes what you discussed. That way, you'll have a record of your questions or concerns and your supervisor's responses. Print out the correspondence and keep it in a file, along with your original list of "talking points," for future reference.

In addition to your face-to-face meetings, you may want to chat with your supervisor whenever the chance arises, as well as send him informal monthly updates of your progress by e-mail. Even if your supervisor is unwilling to work with you on creating a Monthly Progress Monitor, sending an e-mail at the end of every month, with a brief summary of the experiments you've done and results you've achieved, is another effective way of keeping your supervisor up-to-date on your work. But none of this should substitute for regular, short, structured meetings with an agenda you prepare. Allowing too much time to pass between structured communications may cause your research—and your relationship with your supervisor—to veer off in a direction in which it shouldn't go.

With all the focus on structure, why bother to have a meeting? Can't it all be done by e-mail? Not really. E-mail and other electronic forms of communication are useful, but they aren't adequate. Even if you're reciting lists and focusing on facts during your face-to-face meetings, you're sending and receiving a complex set of verbal and nonverbal cues that are crucial to establishing trust, the foundation of a strong working relationship. E-mail fails to convey this crucial information. Emoticons are no substitute for real emotions. Meeting frequently and regularly with your supervisor, asking relevant questions, and documenting her input will increase the probability that good communication flows in both directions and that your research is in line with what your supervisor wants and expects.

Learning good communication skills in an unstructured environment can be a challenge. But fostering effective communication with a supervisor, particularly if he or she is a poor communicator or difficult to approach, is a skill that will serve you well throughout your career. Even if you become an independent entrepreneur without a boss, you will surely have clients and colleagues who will benefit immensely from your ability to communicate well.

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Top 10 Tips to Maximize Your Mentoring

By Joan M. Lakoski—August 14, 2009

Mentoring has transitioned from being a nice thing to have to being essential for people on the academic career path, especially in a landscape in which team science dominates and multidisciplinary/transdisciplinary approaches have become the norm, as they have in translational science. In a career with basic, clinical, and even entrepreneurial components, a single mentor is rarely sufficient: Building a team of mentors is a good investment in yourself and your career.

So how can you maximize the benefits of your personal and professional relationships with one or more mentors? With thanks—and apologies—to David Letterman, below is my top-10 list of tips for a mentoring “tune-up.”

10. Know your goals

As a mentee, you need to be in the driver’s seat of your mentoring relationships—not in the passenger seat while your mentor makes all the important choices about your career. To have that control, you need to do a personal inventory and know your career goals. You need to be able to articulate where you would like to go over the next period of your career and beyond and to share what passions you have for a particular research field. Once you’ve articulated your goals clearly, your mentor will be better able to advise and guide you on possible steps and opportunities.

By knowing your goals, you will be in control of the path that you choose to take—and are more likely to be satisfied with your career decisions.

9. Choose the best mentor(s) to meet your goals

The world of clinical and translational research requires the support of individuals with varying expertise in diverse scientific and professional languages. You will probably need not just one but several mentors to be successful in achieving

your research and career goals. For example, if you are an accomplished physician who specializes in infectious diseases but now want to move into understanding the epidemiology and behavioral aspects of infectious diseases such as swine flu, you will need training, guidance, and support in a wide range of new disciplines. You may even decide you need to learn the language of computational modeling to better understand the spread of an outbreak of the H1N1 virus—and you'll need a mentor who can teach and guide you on that path. It is up to you to find the best individuals to serve as mentors who will best meet your needs.

How do you know whom to ask to serve as your mentor(s)? Start with a clear understanding of your goals for a given mentoring relationship, such as gaining more experience working with patients or learning a particular technique. Once you know your goals, look around for experienced individuals who can help you meet some of those objectives, who are good listeners, and who are generous with their time.

A good mentor will likely welcome the opportunity to assist you in achieving your personal vision and professional goals. The opportunity to mentor you can be a great source of personal and professional satisfaction for your mentor.

8. Begin mentoring relationships by discussing mutual goals and expectations

Perhaps you and your mentor have collaborated together before—or perhaps not. Either way, it's important to understand the framework and assumptions that each of you brings to the “mentoring table.” As you “set the table”—that is, as you identify the tools and resources you will need to move forward—be sure to encourage a discussion of each other's goals for the relationship. You and your mentor(s) should have a frank discussion of expectations: Start with a discussion of how frequently you will meet in person and communicate via phone or e-mail, and set up a means of contact in case of an urgent issue. Be sure to keep this discussion two-way, both mentee and mentor listening attentively and seeking to understand each other's unique perspective.

Addressing these issues at the beginning of a mentoring relationship helps avoid difficulties that can arise later on, when one party thinks that the other party isn't living up to his or her end of the bargain.

7. Practice the highest standards of professionalism

Although this sounds simple, at the core of mentoring is a commitment of trust and mutual respect between the mentee and the mentor. It is essential that the mentee and the mentor mutually agree that their discussions will be kept confidential—and this commitment to a safe environment will enable a mentee to try out preliminary ideas and directions that he or she may want to explore before sharing in a wider venue. Take care to respect the boundaries of this relationship by being a true professional colleague.

6. Learn to accept and give feedback

The good news in a mentoring relationship is that you will receive feedback and insight from a knowledgeable and caring colleague. Many times this feedback will

confirm that you are on the right track and/or will be congratulatory when you have achieved a successful milestone to celebrate together. But sometimes the feedback will be less than flattering. You need to be receptive to both kinds, positive and negative, and learn to accept feedback that's intended to improve your performance, your work, or your path.

The key is to learn to listen carefully to this constructive feedback, make adjustments, then seek more feedback so that you can continue to improve yourself and your lab. Also, pay attention to how your mentors offer constructive criticism and notice how you react to it. Good feedback is an art form that takes practice to deliver and be heard. It won't be long before you need this skill.

5. Recognize that your path is your responsibility

You've set out your goals, found the ideal mentor, launched a relationship, and even learned how to take full advantage of feedback from your mentor. But remember that you—the mentee—own the mentoring relationship. You need to bring your energy, passion, vision, and enthusiasm for the complex and challenging tasks encountered in scientific research, especially the groundbreaking, novel approaches encountered in accelerating the translation from discovery to improved clinical practice. Remember that you direct your research program—and the best mentors are there to challenge you by asking great questions.



A good mentor will likely welcome the opportunity to assist you in achieving your personal vision and professional goals.

4. Practice good communication

Learning to communicate effectively is a lifelong challenge, particularly for those who have chosen as a career path the translation of ideas into tangible experiments and actions that have an impact. Mentoring relationships thrive on good communication—remember that your mentor cannot read your mind!

Take time to keep your mentor up-to-date on how things are going (or not going), provide feedback on how well a strategy or approach you tried worked (or failed), and try not to overinterpret a comment from your mentor—who is probably just as busy as you are. Stick to the facts and make sure you keep in touch!

3. Consider a periodic mentor checkup

Mentoring relationships can benefit from a regular evaluation. As a mentee, you should evaluate whether this relationship is still helping you. If you look forward to meeting with your mentor(s) and can't wait to share your latest results, all is going

well. But even when all is going well, you might need to make a change in your mentoring team to meet your changing needs—particularly if your work crosses discipline boundaries, the hallmark of the clinical and translational science fields. The ability to judge when you need a new mentor is evidence of your growing maturity as an investigator.

2. Avoid burning bridges if it is time to move on

Move on with care if your mentoring checkup reveals that you need a different set of mentors to meet your and your research project's needs. Assigning blame or fault to your mentor(s) is rarely a good professional strategy.

If a mentoring relationship has gone sour, perhaps because of a lack of trust, a lack of follow-up or commitment, or poor communication, don't become the victim of a "tor-mentor." Consider focusing your energy and efforts by carefully reviewing your goals, finding the best mentor(s) to meet those goals, and being clear on goals and expectations with your new mentor(s). Avoid the blame game and be the professional who establishes trust, mutual respect, integrity, and confidentiality as the highest standards for your mentoring relationships.

1. Enjoy the ride of mentoring relationship with a trusted colleague

Over time, you will change from being a mentee to being a mentor yourself. The scientists and clinicians who once served as your mentors will become your trusted and valued colleagues—individuals, much like yourself, who have common passions and interests and a dedication to advancing the field of knowledge in basic, clinical, and/or translational research.

Treasure these colleagues. They understand the challenges and surprises that come with research careers. Be sure to find time to laugh together and learn from your mentor's wisdom, strength, and commitment to creating the future—your future!

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Making the Most of Opportunities and Challenges

By Robin Mejia—October 9, 2009

When neuroscientist Samuel Pfaff was a postdoc at Vanderbilt University in Nashville, he and his future wife often visited her family in Pasadena, California. On one of those visits, the couple decided to take a side trip to San Diego. As they drove down Torrey Pines Road, he saw the Salk Institute for Biological Studies perched on a bluff overlooking the Pacific Ocean.

"I still have a really vivid memory," Pfaff says. "I remember thinking, 'Anyone who runs a lab there has to be one of the luckiest people in the world. They must have the perfect career.'"

Today, many would say almost the exact same thing about Pfaff. The scientist doesn't just have a lab at the Salk Institute: He sits in Jonas Salk's former office—or part of it at least; the office has been subdivided—next to Salk's favorite window, which features a removable glass pane that Pfaff takes out some days to let in the sea breeze.

Pfaff's life may look charmed from the outside, but his path to the Salk Institute presented a mix of opportunities and challenges, occurring, often as not, when they were least expected. The first time he saw the building that has since become his scientific home, he was recovering from a difficult graduate experience at the University of California (UC), Berkeley. It was the late 1980s, and his graduate adviser, the renowned virologist Peter Duesberg, had become an outspoken skeptic of the then-new proposition that HIV causes AIDS. Pfaff recalls that he and Duesberg were barely on speaking terms by the time Pfaff finished his Ph.D. Pfaff was uncertain whether he would be able to find the kind of independent research position he sought.

Early promise, early challenges

Raised in Rochester, Minnesota, Pfaff discovered his affinity for science early. When he was in high school, a teacher suggested he talk to a neuroscientist at the Mayo Clinic, which led to Pfaff's first position in a biology lab. "I started as a volunteer. I'd go straight from school," he says. "For somebody my age, it was just an incredible opportunity to be involved in making discoveries."

From Rochester, Pfaff went to Carleton College in Northfield, 40 miles from home. Although research options were limited at Carleton, he confirmed his love of science there and discovered developmental biology. He was thrilled when, in 1983, UC Berkeley accepted him as a graduate student. And after a series of rotations, he settled into Duesberg's lab, where he hoped to learn microbiology.

"He was truly a hotshot at that particular stage of his career," Pfaff recalls. "He was well funded, maybe one of the best-funded labs [at Berkeley]. His students were publishing lots of papers, going to great postdocs." When he first arrived there, Pfaff found Duesberg inspirational, devoted to science, and always at the bench. Pfaff was working in Duesberg's lab when he was elected to the National Academy of Sciences in 1986.

Then, Pfaff says, things started to change. Duesberg became more and more critical of other scientists and, particularly, of research being done on HIV and AIDS. In 1987, Duesberg published a paper arguing that HIV is harmless. He maintains that position today; it's one that's made him a scientific pariah.

Being Duesberg's student at the time the senior scientist was staking that position was a challenge. "He was losing the respect of other scientists. I wondered what that would mean for me," Pfaff recalls. "[At scientific meetings], I remember the feeling of embarrassment telling people this is the lab I work in and fearing they wouldn't come to my poster, thinking I'd talk about HIV and AIDS, when my research had nothing to do with it."

He says lab meetings became difficult to stomach and that, being both young and stubborn, he probably didn't handle his disagreements with Duesberg very gracefully. "There was, I'm sure, a lot of body language on my part that he didn't appreciate. I just sort of stopped talking to him. Even though we might be standing right next to each other [at the bench], we'd be trying not to acknowledge each other. Looking back, I'm not proud of my behavior," he says. "I just wanted to do enough research to finish my dissertation and get out of there."

"I think he was the least happy of my graduate students," Duesberg says. Duesberg does not recall that the two stopped speaking but concurs that it was not a successful match.

Finding his way

Given that he was trying not to speak to his adviser, Pfaff moved forward on his own. Eventually, he managed to finish his Ph.D. research and publish two papers on different oncogenes, but he was not particularly proud of the work. (He says his committee members commented that the dissertation seemed average, and

he didn't disagree.) The experience left him drained. He wasn't ready to give up on a career in science, but he felt certain he wasn't qualified to apply for postdocs at major research institutions.

"I didn't feel I would even be considered by some of the better laboratories in the country. Maybe I had low self-esteem. I wasn't getting any career advice," he says. At that point, he and his girlfriend (now his wife) had been maintaining a long-distance relationship for three years while she pursued a Ph.D. at Vanderbilt. Unsure what to do next, Pfaff decided to see if he could find a position in a lab at the school. William Taylor, a scientist there, was starting to do molecular biology in frog embryos, a system that had fascinated Pfaff as an undergrad.

Taylor recalls that he asked about Pfaff's graduate experience, but he was more interested in the young scientist's abilities than his mentor's views. "I asked and he implied that those were Peter's ideas, not his," says Taylor, now director of the Molecular Resource Center at the University of Tennessee Health Science Center in Memphis. He offered Pfaff a postdoc position. "Sam was by far the brightest person in the lab," Taylor says. "It was like having another PI in the lab; it was amazing."



“When I went to Jessell’s lab, I knew it was just an incredible opportunity, and I also knew it was my last chance if I was going to stay in research science,” Pfaff recalls.

For Pfaff, the time in Taylor's lab was a chance to work with a mentor who took an interest in his research and his career. "It gave me a chance to reestablish myself in science," he explains. By the time his wife finished her Ph.D., Pfaff's project was wrapping up, but he still felt unable to compete for the kind of position he dreamed of. "I thought I could probably be considered for positions where my primary position would be teaching and I could maybe dabble in science," he recalls.

At about that time, a mutual friend introduced Pfaff to Thomas Jessell, a neuroscientist at Columbia University. Jessell says he felt Pfaff had picked up useful virology skills in Duesberg's lab regardless of Duesberg's position on AIDS. Pfaff's work in Taylor's lab showed that the young scientist "could work on problems in a rigorous way," says Jessell, now Claire Tow Professor of neuroscience, biochemistry and molecular biophysics and co-director of Columbia's Kavli Institute for Brain Science. "I think I just got the idea that Sam was very competent." It didn't hurt that Pfaff brought microbiology skills that Jessell needed at the time. He offered Pfaff a postdoc.

"When I went to Jessell's lab, I knew it was just an incredible opportunity, and I also knew it was my last chance if I was going to stay in research science," Pfaff recalls. Pfaff again switched systems, helping Jessell's lab start doing mouse genetics. His work on how the selective expression of LIM homeobox genes regulates the development of neurons in the embryonic spinal cord helped set the stage for future research in Jessell's lab and, later, Pfaff's own. "It was our first real foray into gene targeting," Jessell says. "I think it made it clear that [the problem] was approachable."

Independence

As that project came to an end, Pfaff finally felt ready to apply for the kind of research positions he'd been thinking about since high school. He received offers from "about a half dozen institutions," he says.

The Salk Institute didn't offer the biggest financial package, but it did offer the La Jolla bluffs. Even more important, it offered a collegial environment and colleagues Pfaff could envision as future collaborators. He accepted the offer, and in 2005 he cleared the last hurdle, becoming full professor there. In 2008, he was named a Howard Hughes Medical Institute Investigator. He continues to study the fetal development of the spinal cord.

Pfaff says he hasn't spoken with Duesberg since he left Berkeley, and Duesberg says he hasn't had any new graduate students in his lab since he began arguing against the link between HIV and AIDS. Pfaff says his experience in the lab at Berkeley has shaped how he runs his own lab today: He considers mentoring a key component of his job.

"I tell students, 'There will be some point in your career where things will not be optimal. You'll have to deal with some aspect of disappointment,'" he says, noting that it's easy to do good work when everything's going well. "You're defined by what you do when you encounter challenges."

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Career Advantages of Collaboration

By Peter Fiske—*January 9, 2009*

No doubt you have heard many times, from advisers, mentors, peers, and science-career pundits, that collaboration is valuable for research. But most of the advice I have encountered over the years has been general in nature, not oriented to the early careers of scientists. It's true that scientific collaborations are some of the best and lowest cost opportunities for scientists to broaden their experiences, establish new professional connections, and cultivate job opportunities. But *which* collaborations offer the most value for the participants' careers? And *how much* collaboration should a graduate student or postdoc engage in? These are good questions. Read on for some answers.

Collaboration's *raison d'être*

One big advantage of a collaboration is that, compared with your relationship with your adviser, it puts you on a more even footing. In most collaborations, specific team members take responsibility for specific aspects of a scientific project. Instead of a single "boss" with her hands on the controls, handing out assignments to underlings, a scientific collaboration is much more like a network of peers—even if some of those "peers" are graduate students and others are faculty members. The relationships a young scientist develops in a collaboration tend to be more egalitarian, less conflicted, and generally more positive than the more hierarchical relationships that exist within a laboratory. Ironically, by being accountable to more than one person you become more independent. Instead of being a laborer at the whim of a single individual (who isn't you), you now have a seat at the table.

Scientific collaborations are a principal method by which young scientists can cultivate their professional networks and develop job opportunities. A successful scientific collaboration almost invariably results in the opportunity to do more work together later. Traveling (either literally or intellectually) from one lab to another

exposes you to the members of your collaborators' labs and other people in their host institutions.

Even remote collaborations can be valuable. But physically traveling to your collaborator's lab is a very good idea. There's no better way to become known to others and have your talents appreciated than being physically present for a while and sharing what you know. No matter how good you become, you never completely outgrow your beginner's status at your home institution. But scientists at that other institution can see you as you are now, at once fresh and mature. You might come up first in their minds when an employment opportunity opens up.

Identifying opportunities for collaboration

You develop opportunities for scientific collaboration the same way you develop job opportunities: by networking and keeping your eyes and ears open. Still, once they arise, such opportunities do not develop by themselves: You have to develop them.

I find that the most fruitful opportunities come during technical meetings, at which it is possible to hear dozens of talks and examine hundreds of posters as the authors stand by, ready to answer questions. In just a few minutes, you can discover whether the scientific grounds, interest, and resources for a collaboration exist. You can also get a feeling for whether the presenter is someone you would like to work with. By approaching a potential collaborator in person in a friendly, direct, enthusiastic, professional manner, you can make a good first impression: This is a peer.

Once you have established that the collaboration opportunity is genuine and valuable, then it's time to contact your principal investigator and ask permission. Act first, apologize later. Just don't give away any trade secrets that might get you in hot water.

The best collaborator

Any colleague or laboratory can collaborate, but I have found that the best choices for early-career scientists have the following characteristics:

1. They're established. By collaborating with seasoned scientific professionals, you can benefit from their reputation, wisdom, and experience. You might end up spending most of your time with grad students and postdocs in the lab, but you probably will get to know the head of the lab. And even if you rarely work directly with the PI, you'll still reap many of the advantages of her experience and reputation.

2. They're in a different type of institution from your own. Research universities, national labs, medical centers, and industrial settings are very different research environments with different (and often complementary) resources and opportunities. If you are a postdoc at a national lab (like I was), your environment is rich in infrastructure and equipment but often thin in person power. In contrast, academia tends to be rich in labor (graduate students and postdocs) but limited in infrastructure. During my postdoc, I cultivated several scientific collaborations for which I provided access to or results from the "big tools" around me at the national lab while my academic colleagues provided human expertise and labor to crunch data and

analyze results. Other types of asymmetric collaborations can also be fruitful. One great example is when basic scientists collaborate with clinical scientists, perhaps at medical schools, giving the basic scientists (indirect) access to human-subject and clinical-trial expertise and leading to more efficient "translation" of research results into real-world therapies.

3. Pairing methodologies with problems. A particularly fruitful type of interdisciplinary collaboration can occur between an expert in a methodology or scientific technique and an expert on a scientific problem. Statistics, applied mathematics, spectroscopy, numerical modeling, and other computational expertise can be applied to a wide variety of scientific problems. Applied fields such as climatology, neurology, geophysics, and cellular biology all address specific problems that can be attacked with a variety of tools. If you are problem focused, consider how the tools of your colleagues can be brought to bear on the important problems in your discipline. If you are an expert in a specific technique or body of knowledge, seek opportunities to apply those skills to problems in other disciplines. My postdoc opportunity arose out of a collaboration between me (with a methodology: solid-state nuclear magnetic resonance spectroscopy) and colleagues at Lawrence Livermore National Laboratory, who had a problem (understanding the physics of hypervelocity impacts).

How much of a good thing?

How much of your time in a year should be spent on collaborative activities? There's no single answer; it really depends on your circumstances. My advice is 30 percent.

Fiske's Rule: *30 percent of a young scientist's yearly research activity should be with people outside of his or her adviser's research group.*

Many grad students I have spoken to are surprised and a bit concerned about how high this number is. How can a young scientist afford that much time indulging in scientific collaborations with others?

As you may know from my previous articles, I believe in taking charge of your professional destiny. Even the most enlightened and supportive PI cannot care as much about your career as you do. The graduate school and the postdoc are intended to take a young scientist on a journey from apprentice to peer, but the laboratory has other, often contradictory, priorities. Scientific collaborations are an important means through which you can seize the initiative. As I noted in a previous *Science Careers* column, early-career scientists must seek opportunities to step out of the subordinate roles they play to their advisers and initiate and create on their own. There is no other way to become a scientist.

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Dealing with Difficult Colleagues

By Patricia Gosling—*January 25, 2008*

In an ideal world, your lab would contain only bright, capable people working harmoniously together in the pursuit of scientific knowledge. If this describes your lab, count yourself lucky, because most scientists work in close quarters with at least one person who tries your patience or is difficult to get along with.

By difficult people, we mean those whose attitude and behaviour can sabotage your work and career. Take a look around your lab or department (and in a mirror, too!) to see if you recognise any of these "types" who have the potential to sink your career or your self-esteem.

Star Researcher (a.k.a. The Hotshot): The Star Researcher is on the fast track to success—or so he thinks—and has an ego to match his ambition. He or she dominates group meetings and touts his own success while belittling the contributions of others. Your supervisor gives him the best projects and showers him with attention and praise.

The Energizer Bunny: This dynamo seems to live in the lab. He's there when you arrive in the morning and when you leave at night and seems to run twice as many experiments as anyone else. All this would be fine if it weren't for his tendency to treat with derision anyone who doesn't show the same fierce dedication that he does.

The Stealth Bomber: The Stealth Bomber attacks without warning. Right in the middle of a group meeting or department gathering, she'll say something about your latest failed experiment or cock-up in the lab. The Stealth Bomber operates best in front of an audience and loves nothing more than to ambush others.

The Know-It-All: Without any prompting, this person will launch into a lecture on the right way to do a procedure or protocol or look over your shoulder and announce that what you're doing is "all wrong." "Here, let me show you" is the Know-It-All's mantra as he plucks a pipette from your hand.

Woe Is Me: Ah, the chronic complainer. Everything in this person's life is grist for the mill. Experiments aren't going well, she isn't getting along with her supervisor, there are problems in her personal life, and the equipment is not up to par. If it exists, this individual will complain about it.

The Hornet: A prime candidate for anger-management coaching, the hornet will explode with wrath for no reason at all or if confronted, challenged, or rubbed the wrong way. You along with everyone else in the lab walk on eggshells in fear that The Hornet will deliver a nasty sting.

Sneak Thief: The Sneak Thief borrows your equipment and expertise, picks your brain for ideas, then refuses to give credit when credit is due. When the Sneak Thief has a success, he'll say he did it all on his own.

Who, Me?: This person has a hard time keeping commitments. Say that you've decided to work on a project together and have divided up the work. Then it comes time to deliver: "Who, me? Was I supposed to do that experiment? Order those supplies? Calibrate the machine?"

Strategies for coping

Perhaps you're the type of person who usually turns the other cheek in difficult situations and prefers to avoid conflict at all cost. If that's the case, your strategy so far has been to ignore the difficult person. But in a lab situation, avoiding the difficult person will only make matters worse: He or she will go on being difficult, and you will feel increasing discomfort, not to mention resentment. Bringing the problem to your supervisor's attention may seem like another option, but not all supervisors are good managers.

So how do you deal with a difficult co-worker? Each type of person requires a different approach, but there are some simple things you can do to diffuse the tension. For some types of difficult behaviour, the best approach may be to talk to the individual about how his behaviour affects you. For other types, more subtle and oblique ways of dealing with the problem behaviour may be required.



...most scientists work in close quarters with at least one person who tries your patience or is difficult to get along with.

When dealing with the Star Researcher, it's easy to get defensive: "Why does she get all the attention?" In this case, though, the best response is no response. Confrontation may cause things to escalate, and you'll end up with a powerful foe. When alone with your supervisor, resist the temptation to mention your irritation with the Star Researcher's ego; criticism from you will seem like sour grapes. Second, concentrate on producing great work. When you submit your own (dazzling) work for publication, the peer-reviewers won't know or care about the Star Researcher's outsized ego. It's the work that counts in the end, so make sure yours is top notch.

To the Stealth Bomber you might say: "During group meetings, I've noticed you habitually bring up problems I'm having with my research. I understand that this makes for dynamic discussions, but I'd feel better if I could bring up those issues myself." The advantage of this approach is that by explaining why a certain behaviour upsets you, you focus on the behaviour rather than the individual. By being direct but subtle, you also allow the Stealth Bomber to save face by, it is hoped, getting him to see your point of view. This approach also lets the Stealth Bomber know you're aware of what he's doing. Every time it happens, bring it up again until he stops.



A big part of dealing with difficult people is having confidence in your own work. So keep working on your own goals and don't allow others to undermine you.

With the chronic complainer, you might try adopting a stance of neutral listening rather than co-complaining and feeding the complaint cycle. For example, acknowledge what the complainer is saying by nodding and making neutral statements such as, "Hmm, I'm sorry to hear that." Let the complainer moan about how bad everything is for two minutes and then move into problem-solving mode. You might say: "It must not be easy to get work done when your equipment keeps breaking down. So what are you going to do about it?" In short, reward positive action, not endless complaining.

When dealing with aggressive individuals such as The Hornet, the best way to cope with an angry outburst is to do nothing. In some cases, it is best to let such an individual rant. Remain cool and detached, and when he's finished, walk away. Or, depending on how volatile the situation is, you might suggest that you'll discuss the issue when he's ready to talk calmly about it. By adopting a Zen approach and not allowing an outburst to escalate, you probably will eventually stop being a target of his anger.

The Know-It-All can be particularly irritating in the competitive atmosphere of a lab, where everyone is working hard to become an expert. One way to defuse the Know-It-All is by agreeing with everything he says. Nod thoughtfully and then introduce your own thoughts and opinions in a questioning manner: "Your way of doing that procedure sounds terrific, but have you ever considered?"

As for the Energizer Bunny, so what if she puts in 16-hour days in the lab and runs marathons on the weekends? If that's not your style, so be it. Embrace your positive attributes and don't beat yourself up because you work at a pace different from someone else's. It might help to find subtle ways to let the Energizer Bunny know that your work is just as important to you as hers is to her. If you make it clear that you won't be intimidated by her input or output, you may even earn her respect.

Monitor your response

Finally, take a look at how you react when dealing with a difficult person. Do you get defensive, angry, intimidated, irritated? Or are you able to brush it off? A big part of dealing with difficult people is having confidence in your own work. Building confidence takes time, but as you start to amass a steady stream of successful experiments and publications, other people's attitudes and behaviours will matter less. In the short term, it might help to remember that difficult people often act as they do out of fear. And ultimately, because you can't really change another person's behaviour, all you can do is change how you handle it. So keep working on your own goals and don't allow others to undermine you.

Working with difficult people is never easy. But if you learn how to cope with contrary colleagues early in your career, particularly in the competitive atmosphere of a lab, you will develop valuable coping and people-management skills that will serve you time and again, wherever your career path takes you.

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The Informational Interview

By David G. Jensen—*March 20, 2009*

A week ago, I visited my son at his California college. There, students use skateboards to zip from class to class. Let me tell you right now not to get on one of those things until you've had someone show you how to use it. I had no such lesson, and I found it to be much, much harder than it looks. I'll kindly not include a photo of the resulting road rash.

Informational interviews are a lot like skateboarding: Both look easy, but when you step on, watch out! An informational interview is usually a short meeting, half an hour or less, between you and someone who works at a company you're interested in, or someone on your desired career path. This is *not* a job interview. The goals, and the rules, are different. If you go in with the wrong mindset, you're bound for disappointment.

The informational interview—especially if it's with an employee at a company you want to work at—is the endgame of professional networking, so landing one starts with good networking. I'm not going to cover networking basics here—there are primers on networking in the Tooling Up columns and elsewhere on *Science Careers*. If you haven't read them yet, or if you need a refresher, see the links at the end of the article. In this article, I'll focus on how to win that endgame by succeeding at the informational interview.

The real goal of networking

By definition, networking is about information exchange—providing information about yourself and collecting information about other professionals, professional

opportunities, and so on. In this sense, the informational interview is very much a networking tool, perhaps the ultimate networking tool.

Although it's true that putting yourself out there will improve your chances of landing a job offer, during an informational interview the focus isn't on employment but on information gathering. Your real goal is to illuminate the path ahead of you, *not* to focus on job openings. The illumination you seek will come from those who have already treaded the same path.

As I wrote this month's column, I spoke with Brooke Allen, head of the Quantitative Trading Group for Maple Securities, to swap networking stories. Brooke, a self-described "advocate of promiscuous networking," gave a presentation at the AAAS annual meeting in February in which he roused the audience for a networking exercise in which everyone stepped outside their comfort zones and practiced networking promiscuously.

My approach to networking has always been to cultivate a list of professional contacts, people I know and whom I can call upon (and who can call on me), whereas Brooke's aggressive networking strategy places far more emphasis on the kindness of strangers. It seems to have paid off for him. "I may not know a person at all, but if they ask me to forward a request to a half-dozen of my LinkedIn contacts to help them arrange informational interviews, I have no problem forwarding on that request," he told me, showing a bit of the openness that he claims makes the Internet such a fertile ground for information gathering.

And he's got a point: We have all used the Internet to locate people who share our interests, whether it is to advance your skills in a hobby or to connect with professionals a few years ahead of you on the same career path. Cold contacts that begin via the Internet can warm up with a couple of e-mail exchanges, providing needed momentum to your research project.

On the Internet or off, that is precisely the right approach for setting up informational interviews: You are on a *research project*. You need help from people who are "in the know," whether it's to inquire about how long the workday is for a regulatory affairs manager or what the culture is like at a hot startup company. And those people, or some of them, are likely to be people you don't know right now.

Before you begin converting your networking contacts into a round of informational interviews, think about the reasons that person would be open to have coffee or sit down with you in his or her office for 15 to 30 minutes. Here are a few thoughts to help you understand why an already employed—and possibly senior-level—person would make him or herself available to you:

- Most senior-level employees believe that there is intrinsic value in having connections and facilitating connections. It's a cheap, relatively easy way to make the world a better place, and they consider their actions "paying it forward." They know that new opportunities can be created—all by giving up a few minutes of their time.
- Many employers recommend that their managers conduct a certain number of informational interviews every month. This is standard practice in many companies,

as it sets the tone for good PR in the community and says something about the company's culture.

- “Opportunity hires” occur even during a hiring freeze or in companies that have recently downsized. This happens when no specific opening exists and yet good people surface via informational interviews. So it makes good sense for both parties to reach out for informational interviews; for you, having a personal connection means you'll be in a better position for a job interview invitation; and for them, the possibility exists that you'll be a great “find.”

Practice, then plan your approach

Everyone you know has the potential to provide you with new knowledge of one kind or another, so any kind of informational interviewing can be a great learning experience.

Brooke and I discussed how similar this process is to an interview that a reporter would conduct—an interview with an agenda. “You can practice these anywhere,” Brooke says. “Ask your spouse (or lab mate), ‘I would like to interview you about how I might improve our relationship.’ Don't simply have a conversation—actually interview that person.”



Aim high: You can reach out and conduct an informational interview with a vice president of research if you approach the situation diligently and honestly.

When you feel ready to go, make your real-world, professional approaches. Most people do this by e-mail, LinkedIn, or another business or social networking site. More adventurous networkers will pick up the phone right away. Either way, here's a tip: If you don't hear back after three attempts, you are being ignored. Don't take it personally, but take that person off your list of prospective interviewers. Harassment is a bad idea in the midst of a job search.

Informational interviewing puts you squarely in the major leagues of networking. Aim high: You can reach out and conduct an informational interview with a vice president of research if you approach the situation diligently and honestly. You're *not* seeking a job right now, but if you make a good impression....

You're in charge

The informational interview is not like an employment interview. Instead, you need to be in charge, and that means you need to be comfortable. You requested the

meeting, so lead it. If you show the slightest, open-jawed “Why am I here?” gaze, the interview will end uncomfortably for both of you.

You’re in charge, so have something to say, and have a good list of questions prepared. Good questions could include how that person’s career has progressed, what the company’s culture is like, or, broadly, what it’s like to work at that particular company. Your questions may depend upon the location of your meeting. Off-site, questions about company culture may be answered more candidly than difficult questions asked in an office cubicle.

Most likely, anyone you meet with will know you’re looking for a job, but that doesn’t mean you should bring it up. Don’t pull that card out of your sleeve until you are asked. And although the informational interview is not a job interview, it could become one quickly, especially if you’re interviewing someone who makes hires. So, even though I’ve urged you to prepare differently for the informational interview than you would for a job interview, you should be prepared for the nature of the interview to change. You need to be ready for the “interviewee” and “interviewer” roles to flip-flop, when suddenly you find the usual job-interview questions coming back at you from across the table.

Finally, don’t become frustrated when your first attempts at informational interviewing do not go smoothly. Just like my skateboarding experience, you may fall off and get bruised a time or two. But what an accomplishment it is to find a job or make a new friend simply because *you had the courage to try*.

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The One-Minute Talk

By Victoria McGovern—*March 13, 2009*

When someone asks you who you are and what you do—whether it's a random stranger on a conference elevator (who may just end up being your next boss), or a Nobel Prize-winner sitting next to you at dinner after an on-campus lecture—your answer needs to be clear, crisp, accurate, interesting, informative, pleasant, friendly, optimistic, articulate, and succinct all in a single, relaxed burst of speech measured in seconds, not minutes. You need to say all the things you mean to say without going off course; rambling; giggling; stumbling over your words; speaking to your navel instead of the person you're supposed to be addressing; mocking yourself; inadvertently insulting the person you're meeting or his or her place of employment, country, family, or favorite athletic team; spilling your coffee; forgetting to breathe; apologizing for being unworthy; or stating unequivocally that your scientific work is irrelevant, small, and likely to burst into flames at any moment.

When you introduce yourself, you must give a tiny talk, full of facts about yourself and your work without forgetting that the entire moment is about not you, but, rather, this person to whom you are speaking.

Only a moment

When it's time to introduce yourself, you typically get only a moment. At that moment, all eyes are on you. How do you make the most of your moment? Or, at least, how can you avoid embarrassing yourself or making your science seem dull, trivial, inane, or wrong?

With a little forethought, you can become more confident at delivering the "one-minute talk." That's good, because over the next few years you will find yourself giving this talk over and over again, to peers and senior scientists at meetings, to seminar speakers who have come to visit your institution, to visiting dignitaries or new recruits you may be asked to shepherd from place to place. And if you manage to hang on and establish a career in science—and probably even if you don't—you'll give versions of this talk hundreds, maybe thousands of times over the next 30 to 40 years.

Who, what, why, and why

When you meet someone new in a professional context, your goal should be to communicate four things: who you are, what you do, why you're meeting them, and most of all, why they should care that they are meeting you. A little reflection will help you develop your opening lines and find natural answers to these four questions. Thinking about the particular words you will use to start these tiny talks will help you be more at ease in professional conversations. Then, once you've got those answers mapped out, try them out at every opportunity. Seek out strangers in scientific settings and practice. A little practice can make a tremendous difference on the type of impression you make and how lasting it is. And that can make a big difference in your professional life.

The personal introduction is a tiny speech, but it's more than that; it's an exercise in fulfilling expectations. Your one-minute talk is part of a common transaction, which, just like a knock-knock joke or a waltz, has an expected rhythm that leads both participants through the ever-changing terrain of the exchange. In science, you're likely to find yourself, more often than not, conversing with someone who'd rather be writing code, plating gels, or hiding in the bathroom. You can win points by keeping to that expected rhythm, allowing your partner-in-conversation to remain comfortable and at ease—or as comfortable and at ease as it is possible for them to be.



Seek out strangers in scientific settings and practice. A little practice can make a tremendous difference on the type of impression you make and how lasting it is.

The seminar lunch

The seminar lunch is one important occasion during which you can practice giving your one-minute speech. There you sit at a table full of napkins, water glasses, menus, and other obstacles, with The Biggest Person in Your Field or a Nobel

Prize-winner seated to your left. The group sits and pleasantries are exchanged: "This seems like a nice place." Or "How was your flight into town?" Menus are fiddled with; a waiter appears; drinks are served. Some members of the group cower behind menus; others look out the window; some guzzle caffeine; at least one is furtively fingering a BlackBerry under the table. The speaker, who seems comparatively approachable, turns to you. She looks you in the eye and starts the show: "So what are you working on?"

What do you do? First, relax. No matter how important the guest is, he or she is just a person. Trite as it may sound, that observation is a key to becoming comfortable around intimidating people and allowing them to be comfortable, too. Be calm. Take a moment to think through what you want to say. The story you tell should have a beginning, a middle, and an end. Who are you? What do you do? Why are you here? Why should the person you're speaking to care?

Breathe, then start talking. Say your name clearly and indicate your status—student, postdoc, whatever. Mention what lab you work in. Then frame your work with the big picture: what you're interested in, how you approach it, and how it got you an invite to this lunch. Look the other person in the eye as you speak. If the angle is bad, pull out your chair slightly so that you can address Nobel Laureate face-on. Don't glare like a vulture, just make eye contact—"check in" often to see if his face registers understanding, engagement, or a strong desire to ask a question. Pause if there seems to be a question brewing. Finish up by connecting what you've said back to the guest's interests or work. When you're done, stop talking and smile a natural smile. The guest might ask a question or just nod and shift his or her glance to the next person at the table, indicating that it's time for them to give their own introductions. You're off the hot seat.

But what if things go wrong? What if you spill your water on the other person? Just apologize and hand over your napkin. What if the speaker turns to you just as you unhinge your jaw and commit wholeheartedly to an ear of corn? Just as you would at a big family dinner, raise your eyebrows, shrug your shoulders, and shift your eyes toward the person sitting next to you—the international signal for "skip me and come back when I don't have my mouth full."

What if you say your name incorrectly, forget where you work or what you work on, or can't even bring yourself to speak? It happens. Relax. Bobbling the one-minute speech is rarely fatal. If you start speaking and nothing comes out right, it's fine to acknowledge that you're nervous and start over. It's just us humans here, so focus, relax, breathe, and make sure that you keep the second try short. Smile. Look 'em in the eye. Be confident that you know yourself and your science, and begin to speak.

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Enhance Your Job Search Online

By David G. Jensen—*October 24, 2008*

I hate the word "networking." It must be one of the most overused words in the English language. It gets thrown at you by every person you ask for advice during a job search. I'm as guilty as anyone of using it too much: It's one of the most frequently found words in a search of my previous Tooling Up columns.

But there is no getting around the fact that networking is the single most important activity for any job seeker. Done right, networking means the difference between a job search lasting 10 to 15 months (or more) and one that produces job offers in half that time.

For years, I've been a proponent of the *hands-on* job search instead of an *Internet* job search. Rather than hiding behind a computer screen, I advocate getting out there, talking to other people about their transition to industry, and learning from their experiences.

In the last year, however, I've seen one Internet networking site, LinkedIn, begin to show some lasting value, and I've used it myself to develop contacts for client-company assignments. Things change quickly in the Internet world, but for now, this site appears to have the professional market sewn up. I still believe there's nothing more valuable than developing quality, in-person relationships, but I think that a strong LinkedIn presence can and should be a part of your overall job-seeking plan.

In this article, I'll delve further into how you can use LinkedIn in your job search, how recruiters use LinkedIn to advance client-company searches, and how you can optimize your chances of being "found."

A few degrees of separation

As you probably know, the philosophy at work behind LinkedIn is that everyone is connected via just a few degrees of separation. You "connect" to coworkers and colleagues on LinkedIn, and each of them has their own contacts that you can tap

into, allowing you to advance your career by transforming those online leads into assets. That's the key thing to remember about success on LinkedIn: What begins as an Internet connection should end up benefiting you in the real world.

Very likely, someone you'd love to meet—who could prove very important to your job hunt—could be one or two degrees away from you, connected to people you already know. The first step to getting the most out of other people's connections is to ensure that *your* connections are meaningful.

The best connections are with people you know well in the real world—people who can provide a positive reference about you when they receive a connection request. It isn't the total number of connections you show on your LinkedIn profile that advances your job search; it's the quality of those connections. Once you are connected to labmates and close friends, branch out from there, but do it methodically.

The overriding rule of the LinkedIn world is that both parties must sense some kind of real connection. If you've met someone, even briefly, or share a common interest with them that you can call upon in a well-written introductory e-mail, I think it's okay to approach that person for a connection on LinkedIn. When you approach your new colleague, don't use the site's boilerplate: "I'd like to add you to my professional network on LinkedIn," because many people consider that spam. Instead, send a personal note explaining your connection or common interest.

Use LinkedIn the same way industry people do

You may have just 30 people on your list, but that gives you access to many more who are one, two, or three degrees of separation away from you. I'm a relatively cautious LinkedIn user and still have fewer than 200 contacts. But those contacts yield more than 300,000 connections.

For a recruiter like me, it's a great resource, but an employer would be crazy to pay me a recruiter's fee if all I did was search an Internet site. I like LinkedIn because it allows me to ask those "Who do you know?" questions that headhunters are known for. You, the job seeker, can use the site in the exact same way by seeking information on the type of job you are interested in or by seeking people who can share their experience transitioning to industry.

Just as in real-world networking, the focus of a contact at LinkedIn is to find mutual areas of interest, not to overtly seek job leads. Those leads will come once you start growing your field of contacts. Rule No. 1 for in-person networking and for Internet networking: You are on a search for information and the experiences of others, not to ask point-blank if people have open positions on their teams.

Here are some ways I sort through the data available to me through my LinkedIn connections. You can sort the same way once you've got a small network going.

Keyword Search. Search by keyword (using "advanced search" parameters) to find those in your network with whom you have something in common. Use technical skills, scientific areas of interest, or business terms as keywords.

Company Search. Search by company to identify employees of a particular company. You may only know one person at Merck, but when you look at the network

available to you through three levels of separation, you may find dozens of people to connect with there.

Combination. Looking for contacts in protein chemistry at Genentech? Start with a keyword search and then refine the results to show only employees of the company you are interested in.

Help the search engines find you

When you set up your LinkedIn profile, do so in a way that increases your likelihood of being found online. Set up your public profile so that it is available to anyone who comes across it via a search engine, and use your real name for the public-profile URL.

Avoid any "chat room" style abbreviations as you write up your LinkedIn profile, and write in your best "business English" style. As Eric Butow and Kathleen Taylor advise in their excellent book *How to Succeed In Business Using LinkedIn* (AMA-COM, 2008), use as much detail as possible in the profile. Although most profiles list only the current affiliation, it is far better for you to show all your relevant prior work experiences (but you can leave out that McDonald's stint during high school). A wider world of networking opportunities will arise when you list each of the locations at which you've worked or trained professionally.

Finally, remember how important the LinkedIn Recommendations feature is. When someone writes you a recommendation, it shows up on your profile and very visibly tells the world that you are targeting industry or that you have something special to offer to an employer.

When recruiters or hiring managers with open positions start sorting through their LinkedIn contacts, they generally look for industry people, which is a big problem if you are a postdoc in an academic lab. But these same managers will move forward to talk with postdocs who have LinkedIn recommendations from contacts in industry. Have a friend who went to work for a local company? Have that person write you a brief recommendation.

An environment well suited to job seekers

LinkedIn differs from social networking sites such as Facebook and MySpace, through which considerable damage can be done to one's career if you aren't careful. Just like the job applicant with an X-rated Snoop Dogg track on a home answering machine, social networking sites with photos of beer bonging and bachelorette parties actually turn off hiring managers.

But will LinkedIn or any other Internet networking land you a job? I can't promise you that, but I can tell you without a doubt that it will introduce you to more hiring managers and recruiters. I wouldn't have said this a year ago, but there's fertile job-seeking turf on the Internet after all. Just don't let your online efforts get out of balance with *real, live* networking!

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Books

- *“So What Are You Going to Do with That?”: Finding Careers Outside Academia*, Susan Basalla and Maggie Debelius
- *The Chicago Guide to Your Career in Science: A Toolkit for Students and Postdocs*, Victor A. Bloomfield and Esam E. El-Fakahany
- *What Color is Your Parachute? A Practical Manual for Job-Hunters and Career Changers*, Richard Nelson Bolles
- *Put Your Science to Work: The Take-Charge Career Guide for Scientists*, Peter Fiske
- *Getting What You Came For: The Smart Student’s Guide to Earning a Master’s or a Ph.D.*, Robert L. Peters
- *Never Eat Alone and Other Secrets to Success, One Relationship at a Time*, Keith Ferrazzi

Career-Related Resources from *Science* and AAAS:

- *Science* Careers Job Board
scjobs.sciencemag.org
- *Science* Careers Forum
scforum.aaas.org
- Other Career-Related Booklets
sciencecareers.org/booklets
- Career-Related Webinars
sciencecareers.org/webinars
- GrantsNet
sciencecareers.org/funding
- Communicating Science
communicatingscience.aaas.org
- Science & Technology Policy Fellowships
fellowships.aaas.org
- Science News Writing Internships
aaas.org/careercenter/internships/science.shtml
- AAAS Mass Media Science & Engineering Fellows Program
aaas.org/programs/education/MassMedia
- ENTRY POINT! Internships for Students with Disabilities
ehrweb.aaas.org/entrypoint
- Social Networking Communities—MySciNet & CTSciNet
community.sciencecareers.org

Information from Other Organizations

- American Chemical Society
www.acs.org/careers
- American Physiological Society
the-aps.org/careers
- American Society for Cell Biology
bit.ly/14sAgg
- American Society for Microbiology
www.microbiologycareers.org
- National Postdoctoral Association
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