

# CAREERS

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## COLUMN

# Know your network

Seek and cultivate professional relationships to advance your career, says **Peter Fiske**.

**N**etworking is one of the most important activities that a researcher can engage in to develop his or her career. Yet many young scientists are highly anxious about actually doing it. Early-career researchers often fear that networking requires ‘schmoozing’

strangers, attending tedious meet-and-greet events or relentlessly self-promoting to a degree that would tax even the most outgoing of extroverts. For those who are shy or who do not speak the native language, the prospect of being forced to mix and mingle may seem an

insurmountable barrier to career success.

In reality, junior scientists should find professional networking easy and enjoyable. Establishing contacts does not have to involve huge amounts of face time. The key is to aim for a steady level of regular interaction with others — think titration, not chain reaction.

PhD students and postdocs almost universally receive the message from their professors, laboratory heads, mentors and advisers that their publications and research record are the principal means by which they will advance their careers. Those same people tell these researchers that their adviser’s colleagues will be the main source of their next professional opportunities. They might implicitly or even overtly discourage students and postdocs from engaging in non-research activities for fear that these extracurricular pursuits could marginally erode the trainee’s research productivity. Although this advice is generally well intentioned, it can leave early-career scientists thinking that they have no effective professional network of their own.

### SHELL BY SHELL

As a junior researcher, you might not realize that you already have the building blocks for a large and powerful network. A professional network is not simply a list of your colleagues and friends; your network comprises all of the people you know directly and to whom you feel comfortable reaching out with a question or a request. Think of this group as your career ‘valence band’, or the ‘first shell’ of your network, populated by the people you know first-hand.

Many young scientists assume that friends and family members in their valence band who are outside the scientific enterprise hold little professional-networking value. In reality, friends and family members have their own networks, and those networks may contain a few people who might be able to help you in your job search or with career development. And because your friends and family members know and care about you, they are often eager to do whatever they can to help you, including warmly introducing you to anyone in their own networks.

The ‘second shell’ of your network — your friends’ friends and contacts — plays a huge part in fostering your career progress and development. For one thing, there are a lot of people at this level. If your immediate network consists of 150 people to whom you feel comfortable asking for help, and each ►

► of them has a similarly sized network, theoretically, you have a 'conduction band' in your network of 22,500 people. At least a few people will be in careers or positions in which they could be of enormous help to you.

It is the importance of this second shell that makes social-networking sites such as Facebook and LinkedIn so valuable: these sites help you to see who is in that shell. You know who your own friends and contacts are, but you have no way of knowing who all your friends' friends and contacts are. Before the launch of sites such as LinkedIn, you would have had to explicitly query all your friends to find out if they knew anyone who worked at a specific organization or company. Now, you can see their network links for yourself. Of course, doing so requires that you first set up and cultivate your own profile on such sites (see [go.nature.com/znl2ea](http://go.nature.com/znl2ea)).

Research<sup>1</sup> — including studies that use data from these and other social-networking sites<sup>2</sup> — suggests that although the numbers in the 'third shell' of your network — friends of your friends' friends — are huge, their utility in your career is limited. Third-shell people share no personal connection with you and so are not predisposed to help you. If you want to communicate with a third-shell contact, you should first solidify your relationship with the person in your second shell who connects the two of you. In effect, you are turning the second-shell contact into a first-shell friend. How do you do that? Build a relationship with that person through correspondence or by meeting them in person, if possible. An informational interview could work in this case.

### NURTURE YOUR NETWORK

The development of a professional network does not in and of itself immediately solve your networking needs. You must effectively manage and cultivate your network, no matter how large or small it may be.

Junior researchers need to remember that their professional network is nothing more than a set of personal relationships.

And personal relationships thrive with a bit of attention. Some people send out periodic updates to members of their network (we used to call these letters). Some post updates on social-networking sites. And others prefer to maintain and nurture their network by calling one person each day to whom they have not spoken in a while. This 'depth versus breadth' strategy might help you to learn about important news, updates and leads.

Of course, a network is not simply a set of relationships to be tended, but also a specific and powerful tool to use both during a job search and throughout your career. When you learn of an ideal job opportunity, you can ask members of your first-shell network for a personal introduction to someone whom they know in that organization. Or, if you are

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seeking an opportunity at an organization, institute or company that is not advertising an open position, you can reach out directly to someone in your second shell who works there and ask that person about his or her employer. Better yet, set up an informational interview with that person. Face time almost always yields better results than does electronic communication or even a phone call.

You may worry about asking for too many favours from members of your contacts' network. But if you feel embarrassed to ask for help, or fear that someone will be offended or disappointed if you ask, get over it. Often, a member of your network will be more disappointed if they learn that they missed an opportunity to help you because you failed to reach out.

And remember that your network operates in two directions: the degree to which you help others is often linked to how much help you yourself receive. Your network becomes stronger through the help that you give.

A well-tended and extensive network is one of the most valuable assets for professionals in today's economy. Those who invest in both their work and their relationships will reap the greatest number of opportunities. ■

**Peter Fiske** is chief executive of PAX Water Technologies in Richmond, California, and author of *Put Your Science to Work* (American Geophysical Union, 2001).

1. Travers, J. & Milgram, S. *Sociometry* **32**, 425–443 (1969).
2. Kietzmann, J. H., Hermkens, K., McCarthy, I. P. & Silvestre, B. S. *Bus. Horizons* **54**, 241–251 (2011).

## TRADE TALK

### Impact assessor



**Arie Meir** works at Google.org, the philanthropic arm of the technology giant in Mountain View, California. He and his team evaluate grant proposals for technical feasibility and their level of social impact.

Here, he describes his path from a PhD in biophysics to team leadership at Google.

#### Why did you go to graduate school?

I was programming for GE Healthcare, and I realized that everything I was doing was the result of someone else's intellectual process — the product of someone else's thinking. I wanted to get to the source. I thought that if I could learn to do scientific research, that toolkit would enable me to apply those skills to a lot of other problems.

#### How did your training help you to get this job?

I gained exposure to other careers. I probably did 100 informational interviews. When you say you're a student from a university that people know, it opens doors. For example, I didn't know there was a field called management consulting until I met someone who was doing it.

#### Which skills have been the most useful?

I learned how to solve complicated problems and to communicate in a structured way. I know how to convert an abstract idea into practice and how to design an experiment. It doesn't matter what job you do; you will use this skill set. Another thing was strategic-skill development: how to position myself for opportunities. When I learned about technologies such as 3D printing, I also became curious about social entrepreneurship. I was talking with friends about it, and one from Colombia told me, 'I have a non-profit; go talk to them.' So, while I was working on my PhD, I launched a small non-profit organization focused on technical education in Latin America.

#### Is that how you came to join Google.org?

That was just an experiment, but I used the experience later, during my job interview with Google.org. I knew how to speak the language that the people on my team speak. Then I became relevant — it was not, 'Arie is a scientist'. It was, 'Arie is one of us'. ■

#### INTERVIEW BY MONYA BAKER

This interview has been edited for length and clarity; see [go.nature.com/y7qxc](http://go.nature.com/y7qxc) for more.

