As you may have gathered from my presidential columns in the Observer, I am a strong advocate for broad training models for psychologists. Effective training provides not just essential grounding in basic research but also skills and knowledge that translate readily into a variety of jobs. With faculty positions available only to a minority of PhD graduates, psychology programs need to prepare their students for careers outside of academia, including industry, technology, law, and administration. I believe that this is a societal imperative, as PhD researchers and teachers are a central driver of innovation and human wellbeing.

In this guest column, APS William James Fellow recipient James W. Pennebaker, a renowned academic and software entrepreneur, shares useful advice on pursuing careers in the technology sector. Pennebaker is the Regents Centennial Professor Emeritus of Psychology at University of Texas at Austin and cofounder and chief scientist of Receptiviti. He is also the owner of the Linguistic Inquiry and Word Count (LIWC) software, a commercial text-analysis program.

—Wendy Wood, APS President

So, you are considering a job in the technology sector. I might be able to offer some advice. Around 10 of my last 20 doctoral students are working or have worked in tech-related jobs. I’m a co-owner of a
text-analysis company as well. Most of those former students love their jobs. But all of them would counsel you to seriously consider your decision. Industry, like academe, is not for everyone.

The tech jobs I’m most familiar with range from small start-up companies with a handful of employees to behemoths such as Microsoft, Google, Facebook, and TikTok. These companies share a mentality of being innovative, fast moving, and results oriented. They can be exhilarating and highly lucrative to work for. But they can also be toxic and unstable.

**Values and goals about research in science and business**

In many tech companies, scientific values are somewhat different from those at a university. Most companies care deeply about empirical research. Their goals, however, include making money, reducing inefficiencies, and ensuring their employees and customers are happy and safe (often because low turnover, high productivity, and happy workers and customers result in more profit). Scientific advancement and publishing are often secondary. In fact, your discoveries may never be published because they will be used to give the company an advantage over competitors.

Getting a job in the tech industry may seem daunting. How does someone with a PhD in
psychology pursue a career in tech? Here are three quick tips.

Learn about the tech world.
Talk to people who have graduated from your university who have taken a job in the tech industry. Find tech company employees and take them to lunch. Spend some time with faculty and graduate students in computer science, engineering, data sciences, and/or information technology.

Look for internships.
Almost all tech companies have summer internship programs. They pay well and give you a chance to see if this is the kind of life you might like. Many companies have rotating internships over the entire year. Internship opportunities are typically listed on companies’ websites.

Make sure you’re ready for unconventional hours.
If you want a comfortable job with a 40-hour week, a top tech company may not be a good option. The top tech companies and start-ups are a little like top academic departments. They expect you to be deeply committed to your work and the goals of the company. You will have periods where you will work long hours and weekends. There can be periods of stressful interactions with others. Many non-tech companies or governmental institutions may offer more stability.

In academe, a typical lab experiment, survey, or archival project may take 6 months or longer. The academic model emphasizes precision, minimal confounds, and sound measurement tools. In business, people often want an answer to a question quickly and efficiently. Does my YouTube video get more hits with a blue background or a white one? As a researcher, you might slap together two versions of an ad with different background colors. Show each version to 100 MTurkers and get their ratings (or better yet, measure how long they actually look at the two versions). You might do a t test to see if they differ. Let’s say you find that the blue version receives a slightly higher rating ($p = .15$). Write a one- to two-page summary of your study and send it to your boss. Mission accomplished! This should take no more than a day or two. Institutional Review Board? Not needed. This is not a scientific study. Should you say that the blue version is better? Probably, but you should also point out that statistically it isn’t different from the white one. Keep in mind, your company has to use either a blue or white background. The company understands the rules and you should, too. You are essentially a research advisor who can make the best recommendation based on the limited evidence you have.

Social structure and functioning

Most companies are structured like the military. You have a boss, your boss has a boss, and that boss has a boss. If you are asked to run a study on a particular problem, your job is to run that study. This is not a suggestion. If you think you have a better problem to test, be sure and get permission from your boss. If you don’t follow orders, it will make your boss look bad in the eyes of their boss, and so on. You could get fired. Your boss could get fired. This may sound draconian, but the reality is that people in organizations quickly learn the rules. Work with your boss, be honest, and get the job done, and everything will work out just fine. At least most of the time.
There is also a deeper value at work. Everyone in the company should be working together for the good of the company. Tech organizations value close collaborations between people, even people in different work units. If your work is successful, everyone in your unit will benefit. Indeed, everyone in your company will benefit. If others help you, share the credit.

Skills needed for a tech job

Remember that tech companies need people in many different capacities. Some of my former students have gone into human resources to conduct research about management styles, reasons that people join or leave the company, or the effectiveness of various training methods. Others go into communication, advertising, or public relations because the company wants to know what works. Yet others go into user experience—determining how to design a game or website that results in great engagement. Many psychology PhDs end up working with computer scientists, clinical psychologists, or engineers in building new tools that can serve as:

- personalized robots;
- systems that help lawyers figure out why people do or do not sue their clients; or
- virtual assistants that help teachers or clinicians understand students or clients better.

And some end up in education or government doing institutional research, asking what teaching methods work best or which tax structures result in the greatest savings for the government or citizen.

All of these jobs require you to be smart, a good problem solver, and proficient with research methods and statistics. Depending on the tech company, it’s helpful to have working knowledge of R, Python, and the basics of machine learning. It may help to know some JavaScript, SQL, and an array of web tools. It’s also to your advantage to be up on the latest stats programs that allow you to do multi-level modeling, esoteric regression procedures, and topic modeling. Oh, and of course LIWC. In reality, you probably won’t do much basic programming, but it’s critical that you be able to talk with computer scientists and engineers about what they are doing.

Your strongest asset to most tech companies is that you are a psychological scientist. Never forget this. Always ask yourself how your knowledge of psychology can make your company’s infrastructure and products work better. In my experience, computer scientists are wonderful to work with. They can make a computer sing, but they really don’t understand other people well. It takes some time to get into the computer science mindset. They have been trained to predict the behaviors of people and machines, but they don’t know why people behave the way they do. Once they realize your strengths and you understand theirs, you will have a productive relationship.

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Feedback on this article? Email apsobserver@psychologicalscience.org or login to comment.