PhD Advice – Job Seeking

***Early in your PhD***

**What do I want to do?**

I think the single biggest challenge most PhDs face is not being sure what they want outside of academia. Many of us come in with exclusive aspirations of becoming academics. This isn't inherently a bad thing, but pragmatically speaking, it can be dangerous to put all of your eggs in one basket.

*Lies I was told: "Always ask yourself, 'Will this help me graduate?'"*  
When I started my PhD, I was told that my main focus should be on doing what is necessary to graduate. Aim for four years so I can finish in five. Find a lab with high productivity and good graduation statistics.  
As such, there's not much emphasis on thinking about plans after graduation.

We need to dispel this mindset. Just like with undergrad, graduation is not your goal: it's an incubator for your career, be it academia or industry.

Because grad school programs often emphasize graduation and not careers, we typically don't get exposure to non-academic career paths, even though many of them hire (and prefer) PhDs. At most, we're aware that consulting is an option. This tunnel vision makes it difficult to see that PhDs are sought after in both highly technical fields and projects involving substantial ambiguity, such as IP law, academic publishing, industry R&D, product development engineering, project management, and finance.

Most universities actually provide many resources to get this exposure (check out your university career center for resume/interview/negotiation seminars, networking events, etc.), but it requires the student to be active about their career. I recently heard that the Duke Comparative Literature program actually asks questions during quals about what you'll do to make yourself more marketable outside of academia -- more PhD programs (including in STEM) should be doing this.

So first and foremost, start your career research early.

**What skills do I need to get what I want?**

I didn't put much thought in my post-graduate career until my fourth year, when I was drawn more toward industry opportunities. Even though I've been in engineering schools throughout my education, I've strongly operated at the boundary with basic science. I started by exploring other skills I'd need outside of materials chemistry and physics (my research area). Naturally, I'd be prepared as an R&D scientist, but there were other careers I was more interested in experiencing.

It's an absolute must to have strong soft skills regardless of your career, so nurture those if you're not comfortable speaking and thinking on the spot. These skills will be essential for interviews and, frankly, life in general. It's also important to think about how you can get skills that are most useful for both your research and career goals. One of the great things about learning completely new things is that it's a lot easier to see connections back to your research once you've learned them.

For me, I started taking classes on materials economics and decision analysis: I ended up constructing cost models to use in motivation slides for talks, which is great for appreciating and sharing the long-term vision of your research. I also did a lot of computational analysis and a minor in statistics. I taught myself Python and R. A class project on machine learning developed into a peer-reviewed publication and became a major part of my thesis.

I have to stress that none of these things were planned early on. But all of it came from thinking carefully about what skills I wanted to build and looking for ways to use them to address lingering research questions and arming myself for potential alternative careers. Many PhDs focus on reinforcing their core skills and this is great if you are absolutely certain you want to follow a particular career path. But if you're curious about other options like me, grad school can be a great place to freely pick up and strengthen skills outside of your core competencies to open a lot of new doors.

**Stay connected outside the Ivory Tower.**

I don't usually like the term "Ivory Tower." I use it here though to draw attention to the problem most PhDs will face (and anyone looking to transition out of an industry).

*The Ivory Tower is a problem of diversity, not social ineptitude.*

Academia is a homogeneous world as far as the people you interact with on a regular basis. Even when you collaborate across departments and institutions, everyone is highly educated (working toward or has a graduate degree, typically a PhD). Everyone is academically curious. Everyone in your field speaks a relatively similar language and is familiar with the state-of-the-art. It's really easy to fall into the habit of assuming the people you're talking to share the same values or follow your language.

Stay in touch with old friends not in higher education. It doesn't matter what type of job they have and don't do it with ulterior motives to land a job. Teaching undergraduate students can help as well, especially for intro level courses. It's just a natural way of keeping yourself from becoming too accustomed to interacting with others as an academic.

Plus, the bonus is that it helps to keep your non-academic network strong (as the other answers have pointed out).

***Both before and during the Job Hunt:***

**Informational interviews are great.**

Don't know what you want to do? No problem -- ask people who do it for a living. Don't be afraid to reach out to your extended network (friends of friends, alums, etc.). There are a lot of genuinely nice people out there who are happy to share their life experiences.

You'll meet awesome people you wouldn't otherwise have met. You'll learn about new occupations you've never considered. Some of them will sound cool. Some might sound drab. Point is, you'll have a better appreciation of what you want and don't want.

You'll get a better understanding of the state of the industry. You can ask to be connected to others who work in related areas that you might be interested in. You can learn about specific companies.

And sometimes you'll get lucky -- you'll meet someone offering to give you a job referral, which will dramatically improve your chances of an interview. Two birds, one stone.

***The Job Hunt:***

**People get jobs, not resumes.**

I applied to a good number of companies (it's really easy to submit resumes online), but I was mostly invested in getting jobs at five -- I landed phone interviews at three of them, a much better hit rate than my blind submissions. By "invested," I mean I spent a lot of time trying to learn as much as I could about the positions from people in my network, and they were incredibly helpful -- I really couldn't have moved forward without them. Most of my job search was spent chatting with people over the phone and coffee/meals. Of all the things that went into the search, I spent the least amount of time on my resume (though there was a decent amount I invested in that as well).

It's fine to apply broadly -- submitting a resume online is really easy and you might get lucky (I got one interview this way). But I found it helpful to take the time to decide on what positions I really wanted to land, then investing as much as I could into getting them.

Staying organized will help you keep focused. Have a list of companies and positions you want to tackle. Keep track of contact info for recruiters and your last contact with them. Make things easy for yourself to stay on track with all the positions you're pursuing.

**It's about what you can get done, not what you know.**

Remember those skills you were building? Now it's time to sell them.

Going through a PhD, we're often evaluated on what we *know* or *learned* about a subject. Qualifying exams, questions at conferences, peer review, and the PhD defense are heavily skewed in this respect. If you're looking for any position outside of what you directly worked on, you'll need to show how your skills can be transferred to the position.

On-the-job training is typical. And a PhD is generally an indicator that you're quick on the uptake. So your resume shouldn't show off your technical knowledge (especially not relevant if the position is outside your thesis area) -- like any previous work experience, it should display tangible examples of how you got things done and the skills you can bring. And no, publications do not count as tangible examples. Instead, focus on project outcomes -- the great thing is that these can even be the outcomes of unpublished milestones, so long as they solved an important problem in your work.

**Be prepared for behavioral interviews.**

Behavioral interviews are all the rage, so make sure you learn about [STAR Interviewing](https://www.livecareer.com/interview-questions/star-interviewing)

. The majority of my interviews -- both phone and on-site -- focused on behavioral questions.

You'll also probably have to dispel initial cautionary preconceptions:

* Can you communicate with people from other backgrounds and play well with others?
* Are you condescending or unwilling to learn from others?

But you'll also benefit from initial positive preconceptions:

* You're comfortable with ambiguity and long-term focus.
* You're smart, knowledgeable, and technically adept.