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Degree: When, where, what, and what in?

I completed my undergraduate degrees at the State University of New York at Albany, where I double majored in physics and fine art. After graduation, I stayed in the same department, planning to get a PhD in physics. About a year and a half into it, I realized I didn't want a career where I was trapped in a lab and decided to leave with just a master's degree. After working and figuring out what to do, I moved to Seattle in 2003 to start graduate school (again!) in physical oceanography at the University of Washington. I received my PhD in 2010.

Did you stay in academia at all, and if so, for how long?

After graduating, I moved to the University of Alaska Fairbanks for my first postdoc, researching internal waves and turbulence in the Arctic. In 2013, I returned to Seattle for another postdoc at the University of Washington and NOAA/Pacific Marine Environmental Laboratory, working with the interdisciplinary EcoFOCI group. Its members are oceanographers and fisheries scientists who monitor the Bering Sea ecosystem. The plan when I took the position was to eventually transition to a permanent position within EcoFOCI.

How did you go about searching for a job outside of the university setting?

When I started hunting for jobs during my postdoc years, I knew that I was not going to go down the traditional academic route. Because I had been active on social media and in science communication, I had already seen many of the career opportunities for scientists that existed outside of academia. One of the first things that I did was to make two lists: things in science that I liked to do and things I did not. When I started searching, these lists not only helped me to narrow down which jobs I should apply for, but also to understand whether I was a good fit for positions outside of environmental science.

Another important step was talking to my network outside of oceanography and academia. I would ask my friends questions like: *How did you get your job? What was the application and hiring process like? What do you and don't you like about your job? What was your career trajectory to get to this point?* Because they had been through the process, they were a wonderful resource for understanding it.

I did my homework. I had a great CV, but that is a highly specialized document intended for other academics and not broadly understood outside of academic settings. Quite honestly, I spent a lot of time googling questions such as: *How do I write a resume? What does a good cover letter look like? How do I translate my skill set for this job? What to do during the interview process?* There are so many great examples out there that can be used as models when you start applying for jobs. Scientists are pretty good at doing research. In this case, I just pivoted to address the current task of searching for a job.

Lastly, I phoned a friend. After preparing my application, I asked a colleague to review it. We all have strong points, but sometimes we aren't that good at highlighting them. An outside perspective can remind you of the strengths that make you a great fit for the job.

Is this the only job (post-academia) that you've had? If not, what else did you do?

It really depends on your definition of academic. Long-term monitoring with a group based at a government institution has a lot of similarities with a career at a university, but it's not strictly academic with regards to funding and possible career trajectories.

What is your current job? What path did you take to get there?

In simplest terms, my job is to make your data better. But a lot of what I do still mirrors the daily life of an academic. I work at Sea-Bird Scientific, a company that makes instrumentation to study the physical and biogeochemical properties of the ocean. If you have ever used a CTD on a ship, you've used one of our instruments. As Senior Oceanographer, my main responsibility is to be an expert on CTD design and function. I work with engineering to design sensors and with production to streamline manufacturing. I develop processing and analysis tools to improve sensors and data. I collaborate with scientists at various institutions and write peer-reviewed papers. I even design and teach courses.

At the time that I applied for my current job, I wasn't planning on leaving NOAA. But I had been gently exploring other options and applying to a handful of jobs that interested me. I was downloading a manual on the Sea-Bird website and thought, "Why don't I just look if they have any positions available?" And they did! Because I had already been

applying, I had practice with the process, and it didn't take long to tailor my resume and cover letter for the application. I also applied even when I didn't have all the experience listed on the advertisement. I knew that I was bringing a lot of expertise in other areas and could learn the rest when I got the job.

What did your oceanographic education (or academic career) give you that is useful in your current job?

My most useful experience in academia comes from what I call "the year of odd jobs." Between my postdocs, I took on two projects very different from my previous trajectory as an oceanographer. One was designing a data acquisition system for a novel observation platform. The other was mining buoy data to understand sea ice deformation in the Arctic. Both really broadened my skill set and also gave me confidence that I could successfully take on and complete tasks outside my training.

Is there any course or other training you would have liked to have had as part of your graduate education to meet the demands of the job market?

I can only speak for my current position, but I would have liked to have more training in business and managing people. But don't worry if there are gaps in your education when moving outside of academia. When you work in industry, you will often be provided with the training you need to succeed. It's simply not cost-effective for you to spend the time to learn it on your own.

Is the job satisfying? What aspects of the job do you like best/least?

I love my job! I help people with their science, solve difficult problems, and get to work with a lot of very smart and nice people. The atmosphere at Sea-Bird is very social and collaborative. It's rare that I get to spend a day at my desk just quietly doing research. Because we make so many of the instruments that people use to study the ocean, it's really satisfying to know that as a scientist behind the science, even small changes will have a big impact on science globally.

It has not always been an easy transition moving from a research to a manufacturing and business environment. We use many of the same tools, but the methods and vocabulary are often different. Initially, I was reluctant to learn new processes because I felt it was slowing down my work. But after chatting with a friend who works at another company in the Seattle area, I gave incorporating new approaches into my work a chance. In the end, I found I came up with better solutions and was able to communicate them faster and more clearly among my colleagues. I still struggle sometimes, but it has become easier as I realize that being flexible and open to new ways of doing things can lead to better outcomes overall.

Do you have any recommendations for new grads looking for jobs?

As a person who has left academia, I get asked this question a lot. While I can't say that I am an expert, I have applied for and gotten a job outside academia, I've interviewed over a dozen people for multiple positions across my organization in the past three years, and I've asked people the same question. This is my short summary, written up as a useful to-don't list.

- Don't wait for the perfect job to start applying. In this case, practice does make perfect. If you have already gone through the process, you will be ready when the perfect job does come up.
- Don't ignore the Internet. Get a profile on LinkedIn. Fill out your profile completely. Make a website. Employers do their homework, too.
- Don't be afraid to take risks. Sometimes a different path ends up being the most fruitful.
- Don't do this alone. Lean on your network inside and outside academia. And once you succeed, make sure to pay it forward.
- Don't underestimate yourself. You are all highly capable people. It just doesn't always feel that way when you are in a room full of other highly capable people.
- Don't give up. It takes work to find the job that's right for you. You may not immediately find the right job. You may not. But keep trying—you can do it!