"Ask Yourself: Does This Role Fulfill the Aspects I Enjoy in My Current Career Path?"

Rebecca Hirst

Abstract   In our interview with Rebecca (Becca) Hirst, she tells about her roles as a Chief Science Officer at a company that develops behavioral experiment tools, while still working as a postdoctoral researcher 1 day a week. She shares her enthusiasm for experimental methodologies and shares practical advice including the importance of developing a strong online presence and coding skills. Her current position has a lot of strengths relative to academic careers, including stability and flexibility. Finally, Becca asks us to think about what we like about academia and how might industry roles also fulfill those aspects.

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Chris: Can you introduce yourself and tell me a bit about your current position?

Becca: Hi I am Becca (Rebecca Hirst); currently I live a dual life, which makes me sound more interesting! One day a week I am a postdoc at Trinity College Dublin and the other 4 days a week I am a Chief Science Officer at Open Science Tools, the creators of PsychoPy and Pavlovia.org. PsychoPy and Pavlovia are tools used to create behavioral experiments for linguistics, psychology, neuroscience, and economics – anything involving behavior!

In my postdoc role, I investigate multisensory perception across the lifespan. In my Science Officer role, I spend my time helping scientists who want to make behavioral experiments to run either in lab or online. The two main ways we help are through training and consultancy. In terms of training, I organize and run a range of workshops; these can range from departmental sessions with staff, training undergraduate students in their methods classes, organizing multi-day courses for researchers to learn our tools in depth, and scheduling training on specific methods (e.g., eye tracking). In consultancy, scientists typically approach us with a brief for an experiment they want to make, and we make it! If our tools don't yet do the thing the scientist wants, we can even develop the software to do that thing, so I work closely with developers to test and debug the software. I find my role very rewarding as it sits on a bridge of academia and industry. I get the chance to use my skills to help scientists on a range of different experiments and topics. I also find myself constantly learning new techniques that I was not trained directly in before (such as learning about new hardware), and I get to play a role in the world of software development, seeing an idea turn into a tool that will benefit science.

What was the focus of your PhD?

I completed my PhD in 2018 from the University of Nottingham. I had two fantastic supervisors and mentors, Dr. Lucy Cragg and Dr. Harriet Allen. The focus of my PhD was audiovisual attention across the lifespan, so this involved working with

children and older adults. The methods I mainly used were psychophysics and EEG, and I was fortunate enough to do a research visit to Macquarie University Sydney to help validate portable EEG for in-lab studies (so you could say I was always a bit of a methods nerd!).

As you were finishing your PhD, what were you thinking about your career plans?

Ironically, as I finished my PhD I thought "I never want to make another experiment, I do want to play with data and I do still want to be in academia," I somehow wanted it all! My reason at the time for not wanting to make experiments was that I had found it a steep learning curve to learn to code so quickly and worried about making mistakes in my own experiments, I would spend a lot of time focusing on the detail and considering the repercussion of different approaches on my experimental outcome (upon reflection I think this experience has benefited me greatly in my current role, as I can help others to learn something I understand is not always easy, and I have a good appreciation for the details researchers need to consider when making experiments). I wanted to stay in academia because it was where my passion and skills were, I was still very much interested in my research field, I enjoyed many of the benefits academia had to offer (e.g., opportunities for travel, time to focus on something you are interested in, teaching), but I also knew that staying in academia could involve uprooting my life and moving around the world to get a position in a competitive job market, and I wasn't sure this was the right fit. Friends and colleagues of mine were leaving academia for the world of data science, and I thought if I landed a role where I could analyze data all day, this would make for a very transferable skill, should I ever want to branch out to industry and do something similar. Towards the end of my PhD, a job came up in Dublin – my current postdoc role. The role involved secondary data analysis of a large existing data set from older adults, The Irish Longitudinal Study on Ageing, abbreviated as TILDA. The TILDA cohort had completed a measure of multisensory integration, and they needed someone to analyze the data. I couldn't believe how perfect the role seemed to be, and I certainly learned a host of new data analysis skills for Big Data contexts.

In the second year of my postdoc, the COVID-19 pandemic hit, and like a lot of people at the time, being closer to home became more important to me. I applied for a role as a software developer with Open Science Tools in Nottingham (to develop the experiment creation software PsychoPy). I didn't get the role. However, I did get the chance to make an impression at the interview, and this led to me being invited to apply for a new role when it came available, the Science Officer role, which I got! Everyone at Open Science Tools has a day a week as "project day" where they can engage in self-development relevant to the role or their own research. For me, I wanted to continue my work with the multisensory cognition lab at Trinity, and my PI (Prof. Fiona Newell) was keen to still have me on board as an employee. This is how I ended up with a dual life situation, as I was able to remain working on research

for 1 day a week (as a postdoc), while working in industry (as a Science Officer) the other 4 days a week, which seemed like the ideal situation.

Can you tell us a bit about what day-to-day life is like in your current positions? How do you balance it all?

Balancing two roles can be tricky, I started by separating my two roles by days (working on Tuesdays for one job and the other days for my other job), in reality though both roles need some degree of flexibility, so I spread my time for both across the week to some extent now, and that actually is quite nice to give some variety to the days. I find physical boundaries between jobs helps me mentally switch between roles, for instance I have separate email inboxes for my two jobs and actually go as far as to use different browsers for my different jobs (i.e., chrome for one Firefox for the other) for a time I actually had different laptops for each job (so that I could physically close one and open the other).

My role at Open Science Tools involves coordinating a team as well as myself. So we use some productivity apps to help with that, and I've learned a lot more about how to create an efficient workflow. We use Click Up so that we can assign tasks, set priorities, and update each other on the status of different tasks. This really helps me to organize myself, and my team, as I can clearly see "urgent" jobs that need tending to and handle those first.

What do you like most about your work?

I find it very rewarding to empower researchers and students to learn a new skill, in particular, if they may have found that skill daunting before. For instance, coding is often something that researchers can find intimidating at first, and that is something that I heavily empathize with from my own PhD years. I enjoy watching people grow and learn as we work together in training and ultimately watch them achieve something they found hard before. The other thing I enjoy most is getting to make fun and creative experiments with researchers from a range of fields. This role allows me to learn techniques I might never have used in my own research field – from candy dropping robots to webcam face recognition! There are so many new things to learn, and the technology is always advancing – it is certainly never boring!

And what do you like least about your work?

Having come from academia, I find myself very much sympathizing with my clients when they are under severe time constraints to achieve a project. In most cases, we can deliver projects really quickly, but sometimes we do have to scale expectations

(e.g., if workload is high and the timeframe isn't realistic). Drawing boundaries like this can be really hard, learning to say "That won't be possible in that timeframe" in certain situations is a challenge, but it is a skill that makes life much easier with practice, as it means you become less likely to outface yourself and it means that your clients have clear expectations on what can be achieved in reasonable time frames.

How do you think having a PhD has helped you succeed in your current position?

My experience in academia is essential to my current role: Firstly, I understand experimental design and the research process – that qualifies me to advise others on this topic and with confidence. Secondly, I am a researcher myself, I have a good understanding of what researchers want – this helps when working with the team of developers creating the software, because I can help guide and prioritize features that our users are asking for. Thirdly, and most importantly, it allows me to connect with our users because I am a user – I am a scientist doing my research too, and that helps when having open and honest discussions about what is or isn't working in our tools and how we can make the tools better. Finally, I still get to use many of the skills from my PhD day to day, I attend conferences and present scientific work, I am still involved in generating publications (albeit from a methods perspective), I network with researchers seeking to create experiments, and essentially I still take part in the bits of academia that I enjoyed in my PhD.

If someone currently finishing their PhD was considering a position similar to yours, how might they decide if it would be a good fit?

I would ask "what bits of academia do you like" – in my role I still get to conduct research and write manuscripts, I help design and create experiments (for other scientists), I get to attend conferences, and I have a teaching and communication role. The difference of this compared with a traditional academic role is that I am not designing course materials for undergraduate and master's courses directly, I am focused on methods as opposed to advancing psychology theory, and I am not applying for my own grants to lead my own lab group; if those aspects of academia appeal to you more, then perhaps a more traditional academic role is a good fit.

If someone was interested in pursuing a similar career path, what would you suggest they do to better prepare themselves?

These are not necessarily specific to this role, but make a website, learn to code, and talk to people you don't know at conferences (i.e., build those people skills). For point 1, "make a website" online visibility is really important for getting a job – it also acts as an easy to access CV and portfolio of your work and experiences. For point 2, "learn to code" it sounds cliche but it really does help improve efficiency. Code can really speed up so many jobs to lighten the workload – writing spreadsheets, extracting data, saving powerpoint slides en masse, sending emails, and making certificates in batch – pretty much any task can be automated. Even if it takes some time to learn how to automate that thing in code, it is never wasted time, because you learned a new skill on the way. For the final point, this is tricky, because for some people talking to people you don't know is terrifying, and if that is the case, a Science Officer role might be difficult – because it is so people facing and so important for us to be able to connect with our users. Nevertheless, people skills can be built if you are happy to put yourself out of your comfort zone – apply for talks, go to a conference alone (i.e., not with your lab), and go to the social events, these things all put us in situations that might be mighty uncomfortable at first, but that allow us to work on how we connect with others and identify common scientific interests and goals.

A lot of people like academia because they feel it gives them an opportunity to work on a topic that they deeply care about. Do you think this is also true in your current position?

Yes. It just turns out the topic I cared about was more methods based than theory based. I like advancing methods to "do science," and I am passionate about making science accessible as possible.

Another reason many like academia is that they feel it provides them with more freedom than they think they would get in other positions. How much freedom do you feel you have to work on what you think is interesting?

I am very fortunate to have a lot of freedom that I have in my current role. My day-to-day hours are not fixed; I can work when I want so long as I fulfill my contracted hours and meet the needs of my job. Sometimes I do have to work late evenings or mornings, because we have a global user base that work on a variety of time zones, but this is also the case in academia, where global collaborations are common. We

have a hybrid team, some of whom come into the office at the University of Nottingham and some of whom work remotely or fully overseas. I believe if I needed to or wanted to I could work fully remotely, but it works for me to have an office base to go to and separate my day. From this perspective, I believe I have more flexibility than if I were in a traditional academic role, where I would most likely need to be present in the University for teaching and administrative aspects of the role.

Have you thought about returning to only having an academic position?

I have thought about returning to academia, and I still haven't fully closed that door. Unfortunately, the things that put me off returning to academia are practical things. For example, my Science Officer role is permanent, whereas in academia I may have to apply for a series of grants before securing a permanent position. I also currently have a day a week where I can pursue my own research, and in academia there are many positions where 20% research would be a luxury. In my current role, I can stay close to home (but could work remotely if I needed to move), whereas in academia it would be typical to uproot life regularly to move institutions, and that doesn't appeal to me. I still love research, teaching, science communication, and learning; however, at the moment my current role fulfills these needs, not to mention that I do still have an academic/postdoctoral position – which I also love! However I prefer my current balance compared to a full-time academic role because it fulfills my science love while also providing the lifestyle benefits that work for me.

Based on your journey, what advice or suggestions do you want to pass on to someone who's currently finishing their PhD?

Firstly, a saying you will probably have heard a lot, "a good thesis is a finished thesis." If you are going into academia or industry, try to submit your thesis before starting a new role. Balancing writing a thesis and taking on a new role can be challenging, and I'd highly recommend getting yourself in a position such that when you start your new role you can give it your full attention. Secondly, make a note of your transferable skills, and continue to build on these. Even if you are not sure leaving academia is for you, it is useful to ensure you have a desirable skill set should you want to change directions in the future. Thirdly, be creative in negotiating working structures in your roles moving forward. For instance, I never thought

it would be a possibility to retain a postdoctoral role and also work in industry, but many employers might actually be open to this idea of sharing roles, so don't be afraid to propose a different working structure.

Is there anything else you'd like to tell someone reading this interview?

I may sound negative about academia in some of my answers here, but I don't want that to put anyone off staying in academia if it is what works for you. Academia still offers many benefits: the ability to travel, the capacity to work on a topic you love, teaching skills to the next generation of scientists, and the continuous learning of new techniques and skills. I was really fortunate to find a role where lot's of the things I enjoy about academia were still fulfilled; nonetheless, the decision I made to move was a gamble, particularly working for a smaller start-up company (you could say I still left my foot in the door of academia as I was also aware of this gamble, and I think it is good to keep doors open where possible). Essentially, if you still love aspects of academia, but you're applying for roles in industry, ask yourself "does this role fulfill the aspects I enjoy in my current career path" – hopefully the answer is yes!

Thank you for sharing your journey with us, Becca!