

Christopher R. Madan *Editor*

Academia and the World Beyond, Volume 2

A PhD Is Not a Commitment
to Academia



Springer

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*For the PhD students unsure how to answer
“What will you do after?” and the
supervisors struggling to support those
considering non-academic careers*

Preface

A common question posed to PhD students from friends and family is, “What will you do after?” But many students are too focused on the PhD itself and have not yet had a chance to sufficiently think about post-PhD life.

I asked over 30 people about their career journeys into non-academic positions, and now share these discussions with you in this book. All interviewees provide background into their PhD topic and discuss how they transitioned to their current position, including what additional training was necessary and how their PhD training has helped them succeed. All interviews include actionable advice for current and recent PhD students to help them find their own path.

Nottingham, UK

Christopher R. Madan

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Post-PhD Possibilities: Discovering Academic-Adjacent and Skill-Transfer Career Paths



Christopher R. Madan



Christopher R. Madan

Abstract With far more PhDs graduating than academic positions available, we need to challenge the assumption that a PhD traditionally leads to an academic career—either as a guarantee or as a lifelong commitment. This book is comprised of interviews with those thriving in non-academic roles showcasing the many alternatives. From these interviews, I propose that non-academic roles be considered as two broad paths: academic-adjacent careers use research expertise through industry, policy, and publishing and skill-transfer careers, applying transferable abilities like critical thinking. For individuals in career transition, self-reflection and informational interviews help assess fit aligned with personal values. While finding a suitable path is disorienting initially, focusing on versatile PhD competencies reveals alignments with meaningful work beyond academia. Recognising a PhD need not lead to a faculty career opens possibilities to leverage doctoral skills in impactful new contexts.

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What's next after you complete your PhD? Even if you have postponed thinking about careers so far, friends and family have been asking. Rather than being stressed and unsure, in this book we will discover possible career paths that might resonate with you.

This book includes 31 interviews with a focus on those in non-academic positions. But, reality is more complicated than a simple dichotomy. Some interviewees have gone back-and-forth between academia and industry. Moreover, most of the interviewees in “non-academic” positions are still in roles that are part of the broader academic community: They may work at academic societies or journal publishing companies. They may read academic work and inform government or medical policy. They may work within a funding agency and help decide research funding priorities. They may work at a scientific equipment development company and sell equipment that we use within academia—such as eye trackers or brain measurement/stimulation. So many post-PhD job opportunities exist that are academic-adjacent careers.

What is a PhD for?

While a PhD is necessary for a future academic career, i.e. as a university professor, it is not sufficient. Some academics have liked being a principal investigator (PI) to running a small business. A PI typically does not interact with participants or conduct analyses themselves anymore, but instead focuses on the research vision and management. Some of these major responsibilities include applying for grants and leadership responsibilities (Wright & Vanderford, 2017). Within this view, a PhD student likely is not even a “management” role. Nonetheless, many transferable skills can be learned as part of a PhD (Campbell et al., 2005; Barnacle & Dall’Alba, 2011; Sinche et al., 2017; Weber et al., 2018; Reithmeier et al., 2019; Bernery et al., 2022).

Doctoral training should not only be about learning research skills and becoming a topic expert but also developing critical thinking (Schwartz, 2008; Almeida-Souza & Baets, 2012; Yanai & Lercher, 2019, 2020) and improved scientific literacy (Hubbard & Dunbar, 2017). Given how later academic positions diverge from the day-to-day responsibilities of a PhD student, the assumption that a PhD directly leads to a definite career as a university professor needs to be pre-empted by mentors. Moreover, mentors should have open discussions with PhD applicants about their motivations and expectations when pursuing PhD studies (Gibbs & Griffin, 2013; McAlpine & Emmiöglu, 2015; Tsoi et al., 2018; Vanderford et al., 2018; Madan, 2022b).

The mismatch between the rates of new PhD graduates and new faculty positions being created is not necessarily a sign that we should be training less PhD students. If people are willing to learn advanced scientific topics, why is this a problem? This is not to say that we should leave academia as is, there are plenty of ways it can and should be improved—such as improving student mental health (Flamez et al., 2017;

Evans et al., 2018; Moran et al., 2020; Dickerson, 2020; Ayres, 2022; Hall, 2023; Korreck, 2023) and including mentorship training for PhD supervisors (Denicolo et al., 2020; Hinton et al., 2020; Madan, 2021, 2022a; Cao et al., 2022; Ruedas-Gracia et al., 2022; Almlöv & Grubbström, 2023). Instead, as mentors we need to be clearer about the possible career paths upfront and should view academia as a skill-training period and opportunity to contribute to science, but not as a lifelong commitment.

Moreover, academia can involve a diverse range of skills (Sinché et al., 2017; Bernery et al., 2022)—perhaps there is a future where specialisation and larger teams have a place: one individual for science communication across a few research groups, another with statistical expertise alongside some domain knowledge, and a third who is practiced with data documentation and open-science practices. What if these roles are considered part of the “indirect costs” associated with research and underwritten by the university department? We have shared costs for building and equipment maintenance, why not also employ people that can help make our research capabilities greater?

Three Career Paths: Traditional Academic, Academic Adjacent, and Skill Transfer

What is generally viewed as the **traditional** route is to stay in **academia**—looking into teaching or research positions, planning further research studies, grappling with how to find a good potential next position while also moving to another city that’s affordable, and how to stay in touch with your family and friends. Unfortunately, positions within academia are quite limited, with far more PhD graduates each year than available job postings (Campbell et al., 2005; Schillebeeckx et al., 2013; Edge & Munro, 2015; McAlpine & Emmioğlu, 2015; Hayter & Park, 2019; Reithmeier et al., 2019; Berdahl et al., 2020; Lu et al., 2023), along with increasing training periods (Kahn & Ginther, 2017; Tsoi et al., 2018; Cheng, 2023) and systematic inequalities in academic progression—including gender, ethnicity, socioeconomic status, and characteristics of doctoral institution (Goulden et al., 2009; Clauset et al., 2015; Collaborative on Academic Careers in Higher Education, 2017; Meyers et al., 2018; Hayter & Park, 2019; Hinton et al., 2020; Morgan et al., 2022; Rennane et al., 2022; Wapman et al., 2022; Zhang et al., 2022; Edwards et al., 2023). Beyond these considerations, academic positions can be quite heterogeneous—with the same job title being associated with varying mixtures of research, teaching, and management responsibilities. Even then, academia has more day-to-day variation than most other careers (Faccio, 2023).

I am putting together this book and writing this introductory chapter from the position of someone in academia with a permanent position, but also as someone who wants to make sure that those planning or finishing a PhD are able to make an informed decision. Staying in academia almost requires you to move around the

world several times—this may not be an option given other life commitments. Personally, I am living in my fourth country now (Canada, Germany, the USA, and the UK). Even if it is a viable option or can be “planned around”, academia asks a lot of us in many ways. PhD supervisors are responsible for facilitating the career development of those they supervise (Concordat to Support the Career Development of Researchers, 2019; Berdahl et al., 2020; Denicolo et al., 2020; Madan, 2021, 2022a, b).

Often, it is discussed that the other path is “not academia”. However, this is a false dichotomy—the number of positions in academia and non-academia is far from balanced. In interviewing people for this book and the previous volume, I see two paths that both fall under non-academic careers. Many of those I interviewed are still part of the broader academic community, working at funding agencies, developing government policies, working for companies that make specialised research equipment, and developing training courses. In these interviews, a more accurate term has come up for these positions—“academic-adjacent careers” (Madan, 2022a).

Doctoral training involves developing in three categories: topic, methods, and general. Topic is what you study—I study memory. Others have studied music cognition, perceptual expertise, or moral decision-making. Methods are what approaches you use to study them—programming experiments, doing brain imaging analyses, and conducting interviews—all of these are methods. General doctoral skills include technical writing, giving presentations, working as part of a team, and managing projects. All of these are skills developed through a PhD but are distinct from the topic or methods. Those in **academic-adjacent** roles are using topic and/or methods skills in their new “non-academic” role. Thus, academic-adjacent, non-academic, and alt-academic are not synonymous terms—rather, these are different framings of using doctoral training outside of working at a university.

However, not all of those interviewed are using PhD topic or method skills in their subsequent role, but are still benefitting from more general skill development associated with their PhD (Campbell et al., 2005; Barnacle & Dall’Alba, 2011; Sinche et al., 2017; Reithmeier et al., 2019; Berdahl et al., 2020; Bernery et al., 2022). Careers prioritising data science, project management, or technical writing are relying on these more general doctoral skills—here I am suggesting we refer to these as “**skill-transfer** careers”. These individuals take skills developed during their PhD into another context where they are transferable and highly valued (Vitae, 2012; Sinche, 2018; National Science Foundation, 2023). It can nonetheless be a challenge to convey to a hiring manager how a PhD is a benefit for the role you are applying for (Hancock et al., 2017; Cornthwaite, 2021; Persson, 2021; Ward, 2021; Skakni et al., 2022). Two general tips are to prepare a position-specific tailored resume instead of an academic CV and to learn the relevant languages (e.g. in user experience research—terms such as user journey, persona, and prototype are common).

The Book Series

The two volumes of this book series comprise over 50 interviews. Most of the individuals interviewed in this book series completed their PhD in Psychology or Neuroscience. However, it is worth acknowledging that these are broad disciplines themselves. Psychology can span from humanities approaches, such as interviewing special populations and ethnographic research questions, to experiments with humans or animals to study behavior, to more data science focused on working with large data from a brain imaging dataset—perhaps without having collected any primary data. As such, there is a breadth of research approaches underlying the interviewees' PhD experiences—though interviews occurred opportunistically, people who I have met at conferences overlapped with in my own career path or otherwise sought out based on their career (e.g. someone with a PhD that works in a specific industry setting).

The reaches by which psychology interfaces with other fields have led to psychology being described as a hub science (Cacioppo, 2007, 2013), and the recent expansion of large datasets and secondary data has further cemented this (Nosek et al., 2015; Madan, 2016, 2022c; Hesse, 2018; Bainbridge et al., 2022). Neuroscience overlaps with some of these domains, but then further includes additional bench skills and related topics, such as understanding biochemical pathways, patch-clamp techniques, and histology.

The first volume (“Navigating life after a PhD”; Madan, 2022a) included 22 interviews. 9 of the interviews were with academics, while 13 with non-academics. Of the non-academics, many are still part of the broader academic community—academic publishing (StavroulaKousta, ArfonSmith), government policy (Andrew DeSoto), scientific equipment sales (Cleyde Helena), research infrastructure (Ana Van Gulick, Aaron Moss), industry research (Matt Wall, Alice Kim), intellectual property law (Anastasia Greenberg), skill training (MairaQuintanilha), and knowledge translation (Alice Kim, Jens Foell, Alison Caldwell). Apart from these academic-adjacent roles, there are also jobs that use doctoral skills in other contexts, such as data science (Joe Moran) or project management (Arfon Smith). This summary, however, loses the individual perspectives and value of these interviews. Paths to the same job sector and the advice they offer can be quite different—three interviewees were founders and Editor-in-Chief’s of three journals (StavroulaKousta, Arfon Smith, SimineVazire), but their paths have been very different.

Based on knowledge gained through my own experiences and in conducting the interviews from this first volume, I have given presentations at universities in the UK, Canada, and the USA about career paths. This has included being on career panels for the annual meetings of the Cognitive Neuroscience Society and Psychonomic Society. This spurred me on further—to conduct more interviews with those in non-academic careers.

This second volume (“A PhD is not a commitment to academia”; this book) includes 31 interviews, all with experience in non-academic roles. Broadly, many of the new interviewees could be categorised as similar topics—government policy

(TommiHimberg), funding agency (Katie Askew, Crystal Lantz), academic community building (Helena Ledmyr), scientific equipment sales (Ben Toovey, Tracy Warbrick), research infrastructure (within a university: Andrew Rowe, Donna Palmer; research software: Rebecca Hirst, Jade Pickering, Vijay Iyer), industry research (Kirsten Smayda, Veronika Vilgis), skill training (Sarah Treit), and knowledge translation (Elodie Chabrol). Skill-transfer careers include using data science in non-academic contexts, such as anti-money laundering (Sebastian Similä) and police services (Emily Batty), or in a large supermarket (Damien Neadle).

Insights into Academic-Adjacent and Skill-Transfer Career Paths

In conducting the interviews that comprise this volume, I have noticed re-occurring underlying themes that came up in multiple interviews. There are several ways to learn more about non-academic jobs—applicable to both academic-adjacent and skill-transfer career paths. Informational interviews, such as those in this volume, are very helpful in providing initial insights. Below I list the questions consistent in all interviews here.

1. Can you introduce yourself and tell me a bit about your current position?
2. What was the focus of your PhD? (*mention when, where, department*).
3. As you were finishing your PhD, what were you thinking about your career plans?
4. How have your career plans changed as you've continued on to your current position?
5. Can you tell us a bit about what day-to-day life is like in your current position?
6. What do you like most about your work?
7. And what do you like least about your work?
8. How do you think having a PhD has helped you succeed in your current position?
9. If someone currently finishing their PhD was considering a position similar to yours, how might they decide if it would be a good fit?
10. If someone was interested in pursuing a similar career path, what would you suggest they do to better prepare themselves?
11. 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?
12. 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?
13. Have you thought about returning to academia?
14. Based on your journey, what advice or suggestions do you want to pass on to someone who's currently finishing their PhD?
15. Is there anything else you'd like to tell someone reading this interview?

However, your own values may make other questions pertinent, such as the work-life balance, hour flexibility, and considerations of where the workplace is located. For instance, within the USA, there is a large degree of heterogeneity in state-level laws related to identity and expression. Conducting further informational interviews with colleagues you've met at conferences or more senior PhD student cohorts can be a great way to gain a better understanding of potential career paths. Internships can be a way to gain more depth of experience in exploring career options. The goal here is to gain insights into potential roles, understand job prerequisites, and get a feel for different industry sector cultures.

Leaving academia does not mean you have to give up your topics of passion and expertise. While the freedom and passion associated with academia are often romanticised, they might not always meet one's expectations. Nevertheless, skills honed during doctoral training—such as analytical abilities, critical thinking, project management, and communication—are invaluable across a breadth of roles, in and outside of academia. Many find a home in industry, non-profit, or government jobs, cherishing the supportive teams, autonomy, work-life balance, and joy of being a part of creating tangible outcomes.

It's imperative to reflect on one's values, priorities, and interests when considering career paths. There's a vast world beyond academia that might be a better fit for many. Prior choices are not a commitment to a specific path—transitioning between sectors is always an option and leaving academia is often the more sensible approach. It's also advisable for PhDs to highlight their transferable skills, gain experience early on, strategise their networking, and always bear in mind that a PhD is a testament to their capabilities, making them suitable for a variety of roles.

Advice for Individuals

It is important to consider your personal values and life considerations when evaluating job options. Some of these include work-life balance and job availability. Academia offers flexibility in working hours, but is difficult to step away from. The academic job market is stressful—often sparse in new positions. Jobs can vary in their rate of progress; academia typically involves a narrow focus with projects that take years to complete (from inception to publication), with little real-world impact. Geographic restrictions are also a limitation of academic jobs; universities are often located few and far between, with hiring priorities varying from year to year. Priorities also change over time—especially in relation to major life events such as getting married and having children. These major life events particularly have direct influences on work-life balance, geographic restrictions, as well as financial factors (e.g. stability).

Leaving academia can be difficult. It often becomes viewed as a core aspect of one's identity, but people are multifaceted and have other talents and interests. Nonetheless, changing career focus is disorienting, and these feelings should be

validated and viewed with self-compassion. Friends made during PhD studies can still be a support network. Focusing on personal values can be important in determining priorities going forward. Academia is just one potential path of many.

Advice for Institutions

PhD programs can try to alleviate some of these anxieties and concerns. Workshops cantered on transferable skills (e.g. project management, data visualisation, and science communication) can help prepare students for skill-transfer careers. Providing support for finding and exploring industry internships will also help students see the value in the expertise in other work settings. Inviting alumni to visit and talk to current PhD students can also make these career paths appear more approachable. Guidance on applying for non-academic roles (e.g. resume vs. CV, portfolios) can also be beneficial.

While the interviewees are in non-academic roles, most of these are still academia adjacent. These careers are still part of the broader academic community and interact with academics on a regular basis. PhD programs should highlight these career paths, where PhD is still very applicable, such as in industry research and science policy, where research skills and subject expertise remain highly valuable. Academic-adjacent careers provide opportunities to collaborate with and positively impact the academic community, even if not directly as an academic. Encouraging informational interviews and job shadowing with people in these academic-adjacent roles directly shows how research skills are valued and applied in these positions. The breadth of academic-adjacent options allows PhDs to find alignments with their specific skills, interests, and values; there are many potential good fits. Pursing an academic-adjacent career can be viewed as building upon one's doctoral training, not abandoning it. It leverages their graduate education in a new context. The goal is conveying that research-related non-academic careers allow PhDs to continue doing meaningful, impactful work that builds on their graduate training. They are a natural continuation of the PhD journey, not an off-ramp. (Additional, complementary resources have been made available at <https://worldbeyond.ac>.)

Conclusion

In exploring career paths after a PhD, it becomes clear there are opportunities beyond the traditional academic route. Many fulfilling roles exist that allow PhDs to continue applying their expertise, though perhaps in a different context. Academic-adjacent careers provide chances to collaborate with academia through industry research, policy, publishing, and more. Skill-transfer careers make use of transferable abilities honed during doctoral training, like critical thinking and project management. While leaving academia can be disorienting initially, focusing on personal

values and interests helps reveal alignments with these alternative paths. They should be seen as a natural continuation of the PhD journey. With an abundance of options, through informational interviews and self-reflection, PhDs can find non-academic careers where their passions, talents, and training remain relevant. The key is recognizing that a PhD need not be a lifelong commitment to academia; there are many ways to leverage and build upon that education. With an open mind to possibilities, PhDs can find pursuits where they continue doing impactful work that resonates with who they are.

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“I Love that Something I Design Can Become a Real Product that Could Be Used to Find New Treatments or New Biomarkers”



Michele Veldsman



Michele Veldsman

Abstract In our interview with Michele Veldsman, she shares her journey from cognitive neuroscience to Director of Neuroscience R&D in industry. Initially planning an academic career, Michele became disillusioned with the precarity of short-term contracts and grant funding uncertainty. Through self-reflection exercises, she realized academia is no longer aligned with her values and priorities. Michele highlights the importance of actively evaluating your career goals. She advises gaining commercial experience through internships and collaborations. Though no longer doing her own projects, Michele finds meaning applying her expertise to real-world problems like biomarkers for dementia. She values the teamwork, clear objectives, and faster pace of industry.

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M. Veldsman (✉)
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Chris: Can you introduce yourself and tell me a bit about your current position?

Michele: I am Director of Neuroscience R&D at Cambridge Cognition. I am a former academic, having spent 9 years in academia following my PhD in Cognitive Neuroscience from the University of Cambridge. I am also a mum of two small kids.

What was the focus of your PhD?

I investigated individual differences in visual short-term memory using behavioral tasks and magnetic resonance imaging (MRI). Most visual short-term memory tasks, at the time, used very simple stimuli, like colors or shapes. I wanted to make visual memory experiments more relevant to the sort of complex images we process in our daily lives. I used prominent mathematical models of visual short-term memory storage to estimate how many complex visual images we could store, whether this storage limit was associated with intelligence and whether we could decode these images from activity in the brain captured with fMRI.

I was based at the Medical Research Council, Cognition and Brain Sciences Unit at the University of Cambridge, finishing in 2013 (which doesn't seem that long ago!)

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

I was only funded for 3 years, but it took me closer to 4. In the last few months of writing up, I took a full-time job as a Higher Statistical Officer at the Department of Energy and Climate Change in the UK (a now defunct government department). I

was basically a data-scientist, before it became cool! I did want to stay in research though, so that job was mostly a means to an end (to pay the rent while I finished writing my PhD). I managed to get my first postdoc position in Melbourne and left about 6 months after submitting my PhD to move to Australia and start that. Although I was keen to keep doing research, I always had in the back of my mind that I might not stay in academia (whether or not I chose to) and so I amassed other skills while I did my research.

How have your career plans changed as you've continued on to your current position?

After having kids, I became increasingly disillusioned about my future in academia. It became too stressful to carry on working on short-term contracts and worrying about having to pay for childcare and support my family. I had two children under four, while still in academia. Childcare costs were over half my salary. While the university did provide generous maternity leave cover and subsidized childcare (childcare was paid from my salary before tax), my children's place at the nursery was dependent on me having an ongoing contract of employment with the University. As my original contract was only 2 years, I kept having to find ways to extend the contract (and I am grateful to a very supportive PI for helping me do this) and keep my children's place at the nursery. I found it very stressful, as well as the looming threat of a contract ending and there being no funds left anymore to extend it. Having already done four postdocs across Melbourne, Singapore, and Oxford, I knew that I was becoming increasingly unlikely to get another postdoc and would be forced to move to independence and start my own lab. Having two small children, I couldn't take the risk of the low success rates of fellowships and grants to start my lab. It seemed an unsustainable and financially insecure way to raise my family.

Can you tell us a bit about what day-to-day life is like in your current position?

I'm very grateful that my days are all very different and engaging. In a typical week, I have one weekly lab meeting – where we discuss data and papers and present our results – very much like a typical lab meeting, I have one weekly touchpoint with my team and one with the company in which we learn about what all the other Departments are doing. I also have meetings with collaborators – academic, pharmaceutical, and other biotech companies. Sometimes in person, often online. I really enjoy these as the topics vary widely and I have always loved to collaborate. I spend a lot of time analyzing data from different projects – I still write papers and

present at conferences – and designing new experiments. I also try to initiate new collaborations that will help validate some of our work and bring new clients.

What do you like most about your work?

I love that something I design can become a real product that could be used to find new treatments or new biomarkers. When I designed cognitive tasks in the past, they were usually used in a single experiment and rarely got used again. Here, something I develop could be turned into a real product (like a task on one of our apps) and used in clinical trials to find new treatments.

I love how varied my job is and how fast things move. Because we work as a big team, things move very quickly and we have very clear objectives. I felt this lacked in academia, where some things would just hang around forever with no clear end point.

I love collaborating with people and constantly learning – sometimes I am asked to work with new customers or academic partners on a completely new area of neuroscience or a new clinical population, and I love learning about that area and working with world class experts.

And what do you like least about your work?

I have lots of meetings which can give me zoom fatigue! Because we are a large interconnected company, there can be lots of meetings updating each other on progress. Sometimes these can feel irrelevant to your personal projects, but most of the time it is useful to understand how several moving parts are working together and where your work fits into everything. This is partly due to me working remotely too, a lot of these meetings would be in person chats, but that isn't possible because I am remote. I prefer to be remote though, as it gives me more flexibility with looking after my kids too.

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

It was absolutely necessary, I couldn't do my job without a PhD. My postdocs were also important as it allowed me to build the skills I need for my current position and the academic network that I still collaborate with.

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 suggest that they think about how much they want to consider doing research in their specific field or whether they are more interested in doing science generally.

I don't always get to choose what I work on, but I still love everything I am researching and the projects I lead and collaborate on. For example, my expertise is in aging and neurodegeneration, but I've done projects on schizophrenia and psychedelics. I would also consider how much you like to travel and whether you are, or could learn to be, more commercially minded. For example, if I'm designing an experiment, I need to think about whether our customers would find it useful and build a use case for it.

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

I would get some commercial experience, either an internship or placement in a company, or some consulting experience. With the explosion of neurotechnologies, there are a number of start-up companies and growing biotechs that often need ad hoc consultancy. Contact your university enterprise office to ask them for consulting opportunities. You could also try to get involved in collaborations with industry; there are now several large consortia and networks involving academia and industry, allowing you to get experience working with industry. The benefit of these consortia and industry partnerships are that you can see how industry works differently to academia and how often the industry partners you work with are often PhDs or former academics themselves. Try to get leadership experience. Volunteer for committees and take on leadership roles when they become available.

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?

Absolutely. I care very deeply about finding biomarkers for cognitive decline – something I still work on now. It is true that I can't focus solely on this – I also work on projects to do with schizophrenia, psychosis, and psychedelics, and I don't have much choice on that. However, since our product is cognitive testing, all these projects require my expertise in cognition.

When I was in academia, I didn't have my own lab, so I still had to do projects that my PI gave me and didn't have much choice in that either. In both positions, a basic love of cognitive neuroscience has helped me find everything I do interesting and important.

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 have a lot of freedom to work on things I find interesting. I think this is a common misconception. I am lucky that I work in R&D so a lot of my job involves exploring new avenues of research and advances in technology. Recently, I became more interested in gut-brain interactions and how diet affects cognition, so I have reached out to academics and industry partners to explore how we can study this. I have also been fascinated by AI advances and so am finding ways to use these tools in our technology and in design of our cognitive tasks.

Have you thought about returning to academia?

No. The only thing that would have kept me was the amazing network I had built up and the wonderful people I worked with, but since I still see them all at conferences and can collaborate with them, I have no desire to go back to academia. While I loved a lot of my time in academia, I think it probably wasn't right for me.

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

Make sure you are making active decisions in your career. It can be easy to just go with the flow or do what is expected of us and not take time to reflect on what we really want from our careers and our lives. I spent most of my academic life preparing for the next stage of my academic career and only after a personal development course I went on did I deeply reflect on what I actually wanted from my career.

The main reasons I was remaining in academia was because I had gotten so far and I didn't know what else was available for me and because I felt like leaving would be a failure. On deep reflection and research on what was out there, I realized

academia was not the path I wanted to choose and it is never too late to change your mind.

It is also not a failure to leave academia, since the number of jobs is far, far below the number of PhDs. As is becoming recognized, the “alternative career” is *academia*, not the other way around. Because of the revelation this was to me, and how much it changed my life, I have put together a course to help other people thinking of moving out of academia. <https://t.co/vxyyAnCIyN>

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

Reach out to me if you want help (michele.veldsman@gmail.com or <https://www.linkedin.com/in/micheleveldsman/>). I have helped a lot of people through mentoring and I am happy to add to your network. Always be open to contacting or reaching out to people, most people are nice and happy to help – those that aren’t will probably just not respond. Almost everyone has gone through career transitions and know what it’s like when you are exploring new options.

Don’t underestimate your skills. When you have been in academia for a while, you start to think having a PhD and having all this knowledge and skill is nothing special – it is! You have a lot of skills, and all of them are translatable.

Thank you for sharing your experiences with us, Michele!

“I’m Not a Researcher Anymore, I’ll Be a Scientist Forever”



Elodie Chabrol



Elodie Chabrol

Abstract In our interview with Elodie Chabrol, she tells us how she went from neuroscientist to science communicator. Elodie discusses her journey from PhD research on a new cellular pathway for epilepsy, through several postdoc positions, to her current multifaceted roles which include Director of the International Pint of Science festival and a freelance science communicator. She provides insights into her transitions from academia, the importance of network and experience, and the freedom and challenges of her current roles. Elodie also discusses her perspectives on the transferability of skills and experience from her PhD to her present position, the value of trials in career exploration, and the significance of passion in one’s work. Elodie provides valuable guidance and inspiration for those contemplating a similar transition from academia to science communication or freelancing.

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

Elodie: I'm Elodie, a French scientist that left research in 2017. I now have several positions: France and International Director of the Pint of Science festival and a freelance science communicator. As a freelancer I work for different clients in various areas, for example, training scientists in science communication, project management, hosting or moderating events, and podcasting. Teaching science communication is by far my favorite activity.

What was the focus of your PhD?

I did my PhD in Paris (2006–2009) in what is now the Paris Brain institute with Stéphanie Baulac and Eric Leguern investigating new types of cellular pathways in epilepsy. <https://institutduncerveau-icm.org/fr/team/equipe-genetique-et-phisiopathologie-epilepsie/>

I started by looking for gene mutations in patients and to identify new genes. I then looked at the effect of these mutations in cells and ended with a mouse model lacking my gene of interest. As you can imagine, it was a very full PhD! I loved this subject because it was a great story to tell: from finding mutations in DNA and then zooming out to developing an animal model.

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

After my PhD in Paris, I wanted to do a postdoc, have great papers, and come back to Paris to get a permanent research position. It didn’t really go like that – my first postdoc (2.5 years) at University College London (UCL) was not very fulfilling, the lab was directed by people close to retirement with only one interest: getting some last answers to their questions. They were not interested in the big picture and kept on asking me to switch the focus of my project once they had the beginning of an answer... I didn’t get papers and I was thinking of leaving research. However, I got offered the postdoc position of my dreams at UCL (again), I’m a geneticist, and I was dreaming of doing some gene therapy work. I decided to give academia and research another go.

I wanted to stay in research, but at the same time I started my second postdoc, I started working on Pint of Science. I coordinated some events in the first year when it started and then went on to create and become founder of the French branch of it. After four- and-a-half years of juggling with a demanding postdoc and directing Pint of Science France and being involved a lot in science communication, I made the big decision to leave research to be a full-time science communicator.

I left my second postdoc after having enough data to submit a patent and a paper so I feel like my research time was useful and productive, and it was a good time to switch careers. After 4.5 years of working in research and doing Pint of Science, which was like having two jobs, except I sometimes had to take holidays to do the second one... I needed a more “normal” rhythm and routine.

How have your career plans changed as you’ve continued on to your current position?

Since I’m a science communicator, I don’t really have plans and the things I do keep changing depending on the opportunities, the mood, and the trends (and also COVID). My only plan is to enjoy my work, create opportunities, and try new things. I had a plan when I was a researcher, and it didn’t really go according to it, so now I decided to just go where I feel happy and enjoy the ride.

I started freelancing to be the International Director for Pint of Science, and after a few months, we realized that we didn’t have enough money for me to do that full time. Luckily people began to contact me to ask me to work on a range of different projects. For example, I worked with the publisher Hindawi to create a science communication guide for scientists: <https://tinyurl.com/guidescicomm>.

I do a lot of training in science communication for scientists (around 200 hours per year since 2019). When COVID hit in 2020, you can imagine how stressful it was not being able to run Pint of Science – events in bars and cafes around the world. We had to support countries to run online festivals or just cancel; it was a lot

of stress. As a “therapy,” I needed to create my own content – I had my mind on podcasts for a while so I decided to start the podcasts, “sous la blouse” in French and “under the lab coat” in English, the idea being that it’s a place for scientists to share their life with me: their research, personal journeys, stories, and hobbies. After starting podcasting, I found that I really enjoyed it and I now do a few professional podcasts too.

As you can see I’m doing a lot of different things depending on what I want to do and am willing to try. It’s an amazing freedom and I love it. It’s actually not very different from the lab; I will come up with an idea or direction, read around the subject, ask people how they do it, and then try it myself, much like when I was developing new experiments!

What do you think was important for you to do in the transitions from academia to freelancing?

For me, two things were really important: firstly, I got a lot of experience before I jumped into the life of a freelancer, almost 5 years of Pint of Science, on a national and international scale. All the things I learned while working on Pint of Science was what enabled me to set up and work as a freelancer. Having a range of experience allows you to work out things you like to do and don’t like to do. For example, I love oral science communication: talks, podcasts, etc., but I hate writing, it’s a good thing I tried because I always thought I would enjoy it... and I really don’t!

At the time I started, I was working on my pure passion and I didn’t think (or dared to dream) it would be my job 1 day.

Secondly, networking allowed me to transition to freelancing; people would come to me with jobs and tasks because when I started I went to a lot of events and met lots of people and gave my work visibility on social media. Meeting people is important when you are working independently and for yourself because they are a source of help and inspiration. When you’re in academia and you think about leaving it, networking helps you meet people and know more about other jobs and vocations that exist. Don’t be afraid to ask people what the job involves practically, what is a typical day for them? Some jobs appear amazing from the outside, but the everyday aspect of it wouldn’t suit you!

Can you tell us a bit about what day-to-day life is like in your current position?

My day-to-day life is different depending on the job or task I am working on. Some days I work on multiple projects at the same time; some days I’m dedicated to one project only.

I could either be at my laptop with my cat editing a podcast or making visuals for Pint of Science, or in meetings organizing the festival and its communication or creating training programs for scientists to then deliver and teach online.

Some days I may be traveling to either teach in-person, host and organize meetings, or give talks about my experience. I could also be going around with my podcast microphone recording episodes.

It can really go from me in my pajamas working in bed with the cat (yes my cat is my work mate!) to being with lots of people all day. The only thing that is ALWAYS happening is me being on Twitter first thing in the morning and as much as I can during the day.

My hours are very flexible and I've learned to appreciate having lighter days or days off after big events or missions to compensate and get a rest for my brain. It took a while for me to feel at peace not working while others may typically be working (during weekdays), but I realized that I don't have typical work hours and I often work weekends and evenings and I shouldn't feel bad for taking time off when others are working!

My activity depends on the time of year; during March, April, and May, I work mostly on Pint of Science and you can even find me in a garage packing big boxes to send merchandise to the local teams around France!

What do you like most about your work?

The freedom to work where I want and when I want on the projects that I like. It's chaotic but I love it! Yes I sometimes need to open my laptop in the middle of the street to send something urgent, but I also have the possibility to go to a lot of events that inspire me (that I might not be able to attend if I was working in a company maybe).

I worked in an office doing 9-to-5 for 2 months and I found it really difficult. I like being able to wake up late and work late in the evenings or weekends if I need to. I also love that I can choose projects where I feel I add real value – but that has only come after many years of trying to establish myself.

I love the part of my job where I get to read around different areas (rather than one if I had stayed in academia) and continue learning; it can go from weird animal facts to astrophysics. I was scared I would miss science, but I still keep reading science papers. I meet scientists almost every week, I'm really close to research but I don't have to actually do it, and it's the best of both worlds.

And what do you like least about your work?

The admin part, it can take a big chunk of your days sometimes. I like doing the work but making quotes and invoices can be really boring... but you need to do it to be paid!

The insecurity was also a bit of a negative side of my job at the beginning. I was really stressed not to have enough projects, but now it's much better. I even have the luxury to say no to some jobs and to do some unpaid events/talks for causes I like (like a lot of career/science communication talks for PhD students).

I left a paid contract with paid annual leave for freelancing work where I don't get paid if I don't work. It can be stressful and also tempting to work all the time, and at the beginning, I worked more than I needed to. I was feeling bad when I wasn't working, because I could make money instead of resting or being out with friends or my partner. Now I'm able to enjoy taking a day or half day during the week, because this is why I'm a freelancer, and as soon as the work is complete, I can enjoy a nice break.

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

I have a PhD and 8 years experience of being a postdoc. When I left academia I thought, and people told me as well, "all of that for nothing" or that I was stupid. However, if I had to do it again I would do exactly the same, my time in research helped me in many ways and I couldn't be a science communicator without it.

Firstly, my time in academia has given me resilience and I am resistant to pressure and stress. It's also made me very well organized, and I can manage, juggle, and handle many projects simultaneously. This was a skill I learned that transferred to my freelance work.

Having been a biological researcher, I was used to failure and not afraid of it. I think it's a huge skill as it allows you to try things and not get paralyzed by the fear of failure. You design the idea and spend time on preparing it, but eventually you jump in. I see so many people with great ideas that don't do anything because they are scared of the stress of failing. It might fail, but so what? Does that mean you never do anything ever in case it doesn't work? Or you try and you learn from the failures and you improve it and yourself for the next time!

The other reason I love my experience in research is that I'm often in front of PhDs and postdocs and usually they trust me more when they know I've been through that and I know research. Some Principal Investigators (PIs) were reluctant to learn science communication with me, saying I'm the communication person that doesn't know anything about how research is carried out, but once I say I've got a PhD and 8 years worth of postdoc experience, they usually relax and trust me. I have learned a lot about how research is carried out.

On a personal note, I left research after a paper and a patent so it also feels like a chapter has been completed. I didn't leave suddenly or in a haste.

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

My biggest advice is to try. If you want to do science communication, you should try and find what kind you like to do either by volunteering or doing an internship. The field is so large and varied and so be sure you understand what you are getting into and if it’s something that uses skills that you like using.

A few people think they want to have the same job as me because I look happy doing it and it appears to be a great lifestyle or they have helped me on some tasks and enjoyed it. However, it’s not the same as doing it as a job full time and just because someone else looks happy doing it doesn’t mean you will. Do your research, ask people about their daily work lives, and talk to people in positions you think you’d like if you can’t try it yourself.

To be a freelancer you have to be motivated, be comfortable with uncertainty, enjoy the chaos and predictability, and be used to working alone for most of the time. If that sounds ok for you, then freelancing can be an option!

My situation can appear misleading because it looks like I jumped from academia to freelancing, which is true; however, I was already doing science communication work for nearly 5 years on top of a full-time job before leaving research – which is a long time and a lot of experience.

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

Get a lot of experience, have different examples on your resume, and know what you like. Meet lots of people to get to know their job roles better and to grow your network. You don’t have to wait for results in your project or be in a senior position to do science communication. Try as early as possible! There are a lot of people that consider this career option after a PhD and experience or even trying is definitely something that can make you stand out from the crowd.

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 totally. My topic may not be a scientific one, but I deeply care about helping scientists to share their knowledge, improve their communication, and gain public trust. For me it’s not “just a job” it’s a real passion. I loved research but sometimes

I felt trapped in a very small topic, and the more I discovered science communication and listening to different talks or any type of scientific content, it made it more accessible and my world expanded. Usually when you have a PhD, you are a passionate and committed person and your work motivates you. That's why if you plan to leave academia, you have to find something that will have the same effect. For the 4.5 years I was a postdoc and working on Pint of Science, I didn't realize how much work it was, because for me it was almost a hobby to develop and direct Pint of Science France. I know I'm very lucky to have found a job that is my passion and makes me so happy.

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?

As a freelancer I have total freedom, probably more than in academia. After a PhD on the genetics of epilepsy, I really wanted to move on to genetics of addictions or something else. However, it was really difficult to find a postdoc and I had to go back to the epilepsy topic. Now as a freelancer I can work on different subjects but also different types of media, for example, I do podcasts but also host shows, and it's up to me to decide how much of it I do. It wasn't always like that, at the beginning I was usually going for all projects that were offered to me, but now after 5 years of freelancing I can choose to say no to projects that I won't enjoy or I might not be good at. Not all science communications positions allow you that freedom though, freelancing is special.

Have you thought about returning to academia?

I left in 2017 and I have never thought of going back. I think I really closed that chapter of my career and I stayed long enough to make sure when I left that it was a forever goodbye. It was hard at the beginning because I felt like I lost my identity, I even found it difficult to refer to myself as a scientist. However, I realized that even though I'm not a researcher anymore, I'll be a scientist forever.

It's been 6 years now since I left the lab, and in biology that long without a paper (and by the additional time it would require to work before getting one if I was going back to the lab), I wouldn't be successful anyway. When I left, it was one way in my mind and I never regretted it!

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

I know the PhD is a busy time, but it’s important to start thinking about the after PhD and be proactive. Even if you want to stay in academia, it’s always good to think about a plan B because researcher positions can be uncommon.

If you love science communication and you want to maybe work in this field, here are my two tips:

- Try it! There are several ways to do science communication and many more types of communicating, if you can try some by volunteering it will help you decide if you want that as a job or not!
- Grow your network (virtual and in real life). Meet people that do the jobs you might be interested in; ask them questions about their path and their everyday jobs. It will help you know what’s out there and maybe find out about opportunities!

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

When I left academia, I had struggled with my identity – am I still a scientist or not? I also had some people say that it was “all that work for nothing.” However, in science communication I’m always in contact with PhD students and researchers, and it would be impossible to do my job without my previous research experience. Most importantly, when you do a PhD you acquire many transferable skills that are very useful in other jobs: you’re very good at learning new things, working under pressure, dealing with failure and bouncing back, finding solutions to problems, adapting...to name but a few. The list is long, but take time out to think about your skills and you realize you can do much more than you thought possible.

Leaving academia was the best thing I did and I’m flourishing now. I feel I’ve found my calling, and helping scientists share their work to the public is a bigger contribution to science than I could have made had I stayed in the lab!

Thank you for your advice, Elodie!

“Make a Prioritised ‘Life List’ of All the Things You Desire from Life: Independent of any Single Job or Career”



Dave Hayes



Dave Hayes

Abstract In our interview with Dave Hayes, he shares his journey from behavioural neuroscience to a senior researcher and behavioural scientist in Canada’s federal government. Initially on the academic track, Dave realised at the tenure-track offer stage that traditional limitations would not align with his goals and values. He now applies his expertise to improving Canadians’ financial well-being through surveys, experiments, and programs to enhance financial literacy. Dave values the direct positive impact and freedom to develop large-scale projects. He continues leveraging his critical thinking, communication, and philosophical skills from academia. Dave encourages listing life priorities and potential career matches and Dave advises taking chances that open new beneficial experiences, not just the next logical step.

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

Dave: I'm a behavioural and clinical neuroscientist currently working in the Canadian Government as a research advisor and behavioural scientist in the financial sector.

Although it's very different from academic research about the brain, I'm currently using a lot of my skills to help improve the financial well-being and financial literacy of all Canadians. We do this by gathering and interpreting national-level data, by conducting experiments, by creating programs and providing accurate and neutral content, and by influencing policies.

The world of finance is very new to me, but it has so much in common with the health sector that the transition has been quite smooth. For instance, both health and financial systems are complicated and have many challenges and gaps which are not easily managed by consumers.

I left academia in late 2018 (by choice), and it was an incredibly difficult decision that I've not regretted for a minute! (But that story is perhaps for another time.)

What was the focus of your PhD?

My PhD work and thesis were completed in 2009 and focused on the role of the neurotransmitters serotonin and GABA on reward and reinforcement behaviours and brain circuits. I completed it under Dr. Andrew Greenshaw (who remains a trusted friend and advocate – he even attended my wedding years ago!) at the University of Alberta in the Department of Neuroscience (Medicine & Dentistry).

We used rat models to try to understand the nuanced role of key brain areas (e.g. the ventral tegmental area and nucleus accumbens) on motivation and reinforcement. For example, we implanted electrodes, using brain surgery, in these areas to get the animals to self-stimulate. This is kind of like closing the normal behavioural path of “seeing something you like→ working to obtain it→ finding it rewarding” and instead allowing the animals to activate the related brain circuits directly (i.e. “work to push a lever→ activate the brain circuits directly→ repeat!...”). This helped us to get around the usual signals that tell you to stop (e.g. “I ate a lot and now I’m full, this chocolate doesn’t taste good anymore”). We also implanted tiny tubes into these areas that allowed us to mimic or block the chemical signalling in these brain areas through the direct injection of highly specific drugs.

At the highest level, this kind of work allowed me to think broadly about how the brain codes for “pleasant”, “unpleasant”, “desired”, and “aversive” events and the connections to our emotions, mental health and mental illness. These philosophical underpinnings led me to move away from animal research and toward clinical research in hospitals.

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

I wanted to move from animal/preclinical work into work with humans, and I wanted to get closer to the clinical world. This began nearly 10 years of hospital-centred research on mind and brain health (i.e. psychological, neurological, psychiatric, and neurosurgical illnesses) in Canada, the USA, and the UK. This work resulted in 34 publications across these different areas using techniques such as brain imaging and behavioural assessments and allowed me to look at the connections between emotion-related behaviours and brain function and structure in many different populations (from healthy “neurotypicals” to people living with depression, anorexia nervosa, and chronic pain).

As I was finishing my PhD, I felt ready to pursue the career of professor, but I didn’t feel that I “needed” to end up as a prof. Although I would often look at other career options, I only rarely dug deeper into those other possibilities.

Before leaving academia, I was a Neuroscience and Psychology Professor at a US private liberal arts university. I enjoyed working with the students and teaching the courses, but when it came time to sign my name on a tenure-track offer, I suddenly realized that I needed to search for other options to better support what I wanted from life. This led me to back to Ottawa, Canada – where I had previously held a postdoc position and welcomed my first child! – and into the world of government.

How have your career plans changed as you've continued on to your current position?

I didn't start a PhD to become a professor. I started a PhD because I was interested in the research and its philosophical underpinnings, and I had a particular interest in the connections between mind-brain-behaviour since I was young.

I had no idea where my PhD would take me, but I've always had an affinity for questions that contain a lot of subjectivity and uncertainty – which led me towards the study of emotion and mental illness. Near the end of my PhD, I started to seriously consider a career as a professor, but I didn't know if I could teach! Public speaking was something that gave me a lot of anxiety, but I didn't want that to be an impediment. So in my third year as a PhD student, I went looking for a job as a part-time instructor. I started teaching first year psychology at Grant MacEwan University and was quickly asked to take on more courses, including those at higher levels.

For my next position, I took a postdoc with Georg Northoff, because his work allowed me to study the questions that interested me with more freedom – given his own background as a neuroscientist, psychiatrist, and philosopher. This was the point at which I really thought that my future involved teaching and research. From this point on, I looked for opportunities to teach and train others, as well as opportunities to do interesting research and continue learning in different environments. This led me to the University of Cambridge, as a Visiting Scholar, and then on to the University Health Network, in Toronto, as a Research Associate.

When I became a Visiting Professor at Union College, I was really looking to experiment with a model that doesn't really exist in Canada. Where Canadian universities focus mainly on research or teaching, many liberal arts universities in the USA take a more balanced approach to research, teaching, and service.

I excelled in this environment, ending up with 34 career publications and over 2000 citations, outstanding teaching reviews, and developing an active lab which produced senior thesis projects and journal publications. I also had leadership roles in university service and was an advisor of student groups. Overall, I really enjoyed working with the students and my day-to-day activities. However, I still wasn't certain that I'd be able to create the kind of career and life balance that I was aiming for – especially given the increasing demands and pressures found in most academic positions.

My career can easily be described as translational and multifaceted. I've approached similar problems from different philosophical, conceptual, and methodological perspectives and have often combined these approaches where appropriate. I have enjoyed being someone who is able to “translate” insights between fields or sectors and ultimately help to connect the dots.

The biggest single shift in my career was when I went on the academic job market and started getting interviews and tenure-track offers. On the one hand, I thought “I made it. I broke into the academy as a permanent member!” On the other hand, I faced the future reality of living in a place that I didn't want to raise my family, writing “low-hanging-fruit” grants on topics I didn't really want to study, and being

asked to teach unreasonable numbers of courses. Being a professor these days is really about performing a number of full-time jobs simultaneously!

Although I had been exploring options for leaving academia for some time, it was at the point of offer that things really became clear. It seems quite silly, but I think it is a very common conundrum for academics. Without the fear of walking away labelled a failure or not being good enough (re: tenure-track offers as a validation of worth), I felt compelled to walk away and build a life more in line with my personal goals and values and less confined by the narrow paths of academia.

Step 1: My wife and I decided to live in Ottawa. a wonderful and beautiful city which is outstanding for quality of life and raising a family.

Step 2: My wife knew that she wanted to be a business owner and quickly put things together to make this happen (she had been prevented from doing so while we lived abroad).

Step 3: I started looking for a new career where I could do the day-to-day activities that make me happy, support my goals, and allow me to work with clever and engaged people who are all doing meaningful work.

Step 4: I moved my wife and kids to Ottawa in August (without a job myself) so that the kids could start school on time.

Step 5: I commuted back and forth from upstate New York (about a 5 h drive each way) every 2 weeks, while searching for that new career!

Putting our own needs and desires first and ignoring those set out by academia was cathartic. I didn’t set out to work in government. I went looking for positions that met the professional and personal criteria alluded to above and below. After many informational interviews with colleagues and helpful strangers, I went on a handful of interviews and ended up in a position that gave me everything I was looking for and more.

Do you have any advice for someone who is unsure if academia is right for them, or if they should be looking elsewhere?

It’s somewhat ironic that most of us researchers don’t take the same kind of approach in our own lives that we take with our research projects. We’ve developed all of the skills necessary to make very challenging decisions – especially the ones with high levels of ambiguity and uncertainty. Our training has helped us grow into above-average decision-makers in this capacity. And yet, we typically don’t apply these skills well in our personal or professional lives. Most of us don’t even *know* about what other positions exist outside academia – for professional researchers, this should certainly be an embarrassing admission.

On the other hand, from a psychological perspective, this is not surprising. Humans are well-known to procrastinate on making challenging life-focused

decisions, like those related to health and finances. Nonetheless, we must take time to work through this problem as though our lives depended on it – because they literally do!

So here's the advice:

1. Make a prioritised “life list” of all the things you desire from life – independent of any single job or career. Some examples would include the basic things that you love to do in your professional day (e.g. public speaking, analyzing datasets, writing, working alone or with a team to solve problems), in your personal day (e.g. take the kids to nearby parks/trails, be able to walk to the grocery store), and what your ideal place of residence looks like (e.g. safe, near water, walkable, in a big city, quiet but with easy access to amenities). Don't forget to make notes related to money, time, and health – without these three things, nothing else is possible.
2. Now make a list of the kinds of academic jobs that you are likely to get (or be a strong candidate for), and use the items generated from #1 as a checklist. Are you able to check off all of your must-have items? Will you be able to check off a fair number of “desired” items as well?
3. Now make a list of the kinds of non-academic jobs you are likely to get and do the same exercise. Note that in order to have a good understanding of whether you will be able to meet your needs and desires/wants, you'll have to have a good understanding of the job types and specific jobs themselves. (Note: I'm using the term “job” and not “career” here on purpose to try and nudge you to get as “dirty” as possible – details are important to really understanding the day to day and getting as close to the “lived experience” mindset as could be possible.) I learned a lot by searching for non-academics who had done Psychology or Neuroscience PhDs on LinkedIn or getting referrals from others and then reaching out for informational interviews.

When my wife and I did this exercise, it wasn't even close. Not only were we able to use this list to create an incredibly valuable “bare-minimum requirement” list for potential academic offers, we were also able to see clearly that by simply picking a city of our own choosing, we could check more boxes than if we'd ended up in a random town with a university (i.e. wherever I got a job).

When I was finally offered a tenure-track position (with a pretty incredible list of features), our “life list” helped us to see clearly that we still had to compromise a lot and that the overall offer was below our bare minimum set of requirements. Without such a list (and all the work that went into thinking things through ahead of time), I'm certain that we would have accepted the offer. Walking away from this life we had built for years was an incredibly difficult (re: existential crisis!) thing to do – especially with no other offers on the table – but I've not once regretted that decision. When I've thought in hindsight about “what could have been”, I'm struck by how much easier it was to get more of what we desired or wanted from life by *not taking* the academic job.

Of course, for you, the traditional limitations and caveats that come with seeking out an academic position might be perfectly acceptable – minor inconveniences located near the bottom of your “life list”!

Can you tell us a bit about what day-to-day life is like in your current position?

I work with a team of clever, kind, and engaged folks in the Behavioural Finance Lab. We do research, develop interventions and programs, and make policy-related suggestions all aimed at helping to better understand and strengthen the financial well-being and financial resilience of Canadians. I also work in partnership with folks from across the country, such as academics (in psychology, economics, political science, and others), those representing community groups, practitioners (helping consumers directly), and folks in industry.

My day-to-day life can involve many things (often at once!). Our team is involved in designing surveys, experiments, and programs aimed at better understanding and supporting the financial literacy, behaviour, decision-making, resilience, and well-being of Canadians. We gather and analyse data, integrate research findings into our products (e.g. surveys, interventions, programs, research papers), and make recommendations to senior executives on next steps. We also rely on research from psychology and economics to employ “behavioural insights” into our work.

What do you like most about your work?

I like that my projects have a direct, tangible, and positive impact on the lives of others. Working for the federal government means that my choices and actions can be driven by a motivation to achieve positive impact for everyone living in Canada, and not by profit margins or other goals that can sometimes detract from thinking about the well-being of the end user.

When considering leaving academia, I worried a lot about losing freedom and the ability to be creative. I’ve found that I have much more freedom (in different senses of the word) outside of academia. In under 5 years in government, I’ve helped to create a series of projects from scratch – including a national student competition, an experiment and intervention with hundreds of thousands of participants, and a nationally implemented strategy involving hundreds of organisations across the country.

The goals of academia are, from my perspective, usually much further removed from such pursuits. Although our research achievements are intended to improve all of our lives through an increase in knowledge (and eventually, practical impact), most research never touches the practical world. For instance, while I had published many papers using brain imaging to explore emotional processing in healthy folks and those with mental illness, brain imaging is used in only a handful of clinical circumstances – and these are typically only for structural imaging of the brain before and after brain surgeries.

When I compare the day to day of these two worlds, the differences are even more stark. My current working conditions are very flexible, and I have more

mental space for my family and the things I want to accomplish outside of work. I personally found that academia promised a sense of freedom that it never really delivered. I was mostly free to schedule my own teaching time and could do research, paper writing, grant writing, mentoring, volunteer, and service work any time I liked – but there was never enough time for these tasks and they had me working 7 days a week at all hours of the day and night.

Don't get me wrong, I really enjoyed the tasks involved in being a researcher, teacher, volunteer, and administrator – in fact, I still get to do all the tasks I enjoyed in academia. My work involves being a researcher, an experiment designer (and this process also includes making interventions, intended to help others improve their knowledge, confidence, or behaviours), an analyst, a strategist, and so much more. I liaise with, and read work from, academics from across the world and also have the benefit of working closely with many non-academic stakeholders who are also trying to have a positive impact on people's lives.

And what do you like least about your work?

One of the biggest challenges I face is related to the “red tape” barrier. Although government is infamous for such barriers, they are really similar to what I encountered when working in universities and hospitals. When trying to complete a project, there are a lot of internal and external considerations, and each need to be addressed carefully in order to move forward. Unexpected roadblocks and frustrating moments can happen, but this is really true of all the environments in which I worked.

When it comes to working in government specifically, the greatest challenge is also one of the greatest benefits. Although I'm well-supported to develop and promote my ideas (and to identify and support others' ideas), I'm never alone in pushing them forward. We work in teams, with many other teams of people, and with a supportive senior management team that helps to make sure we're delivering great products. It means that every proposed experiment, paper, or program needs to go through many hands for reviews, feedback, and approval. It makes everything take a lot longer than it might in some other sectors, but it also means that our work is well-vetted by a lot of clever people.

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

My PhD has many direct and indirect impacts on my current role.

At a basic level, my reasoning, communication, writing, management, and leadership abilities were all refined during my PhD (and continue to be!). At a higher

level, being able to think deeply, communicate clearly, and move forward on very challenging topics – which contain many ambiguities and uncertainties – has been fundamental.

Having worked in the very complicated health sector has also benefited me, as the financial sector parallels many of the same challenges. At its core, systems are guided by minds, brains, and behaviours. My focus on translational work has allowed me to become comfortable with speaking the many different “languages” of research/academics, practitioners, and policymakers and has helped me develop skills related to the communication of narratives across a whole range of levels.

Having developed a detailed understanding of different approaches and viewpoints (e.g. preclinical researcher, neuroimager, clinician, patient) has allowed me to more easily appreciate the nuances of new and varied perspectives and helped me find solutions to apparent conflicts or misunderstandings more readily.

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

The key first step, as many will tell you, is to reach out to folks in these roles and have a discussion. Reading a job posting will never tell you the whole story – in fact, it won’t tell you much of the story at all! When I decided to leave academic research, I did two things:

1. I tried to learn as much as I could about the types of positions that might require the skills I’d developed.
2. I reached out to people in person and on LinkedIn (and via contact info on websites) with similar backgrounds to me that were now working outside academia.

I didn’t plan on working in government (or in the finance space!) – in fact, I thought I’d end up at a non-profit health organisation. A few chance encounters nudged me to look more broadly across government, and interestingly, these interactions were not with people at my current Agency. There are a lot of folks with health- or science-related degrees these days, and the training in these programs is valuable and often highly valued. Sometimes it pays to not follow the herd – because while science/health organisations receive a glut of resumes from people with similar backgrounds, your skills might be better appreciated and considered more unique in other sectors.

Feel free to reach out to me at dave.hayes@neuroscientist.ca if you’d like to chat. I’ve had hundreds of such conversations over the last 15 years or so, and I’m always happy to meet new people.

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

As I said above, start by looking for examples of people with similar backgrounds who have left academia. Where are they now? Connect with them. I would also encourage everyone to really take stock of who you are, what you want to be doing everyday, what you want to achieve in the longer term, and how you want to live day to day.

When my wife and I made that “life list” of the things most important to us, it became glaringly evident that by simply leaving academia – which, I know, feels terrifying – we could immediately guarantee more of those boxes were checked. If you’re not sure you want to leave, at least make a list of the things you’d need to accept a position in academia (e.g. a city with a certain quality of life, a good school and safe neighbourhood for your kids, enough support to do the research that interests you, a certain salary, etc.). Do this BEFORE you would ever consider an offer, and if the offer doesn’t meet these basic requirements, reject it right away. People tend to talk themselves into opportunities that are placed in front of them – but if you’ve already taken the time to really lay out what minimum requirements were needed, there is less guesswork, second-guessing, and cognitive dissonance at play!

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?

I care deeply about helping people to make better decisions – ones that are more aligned with their own goals and aspirations and that ultimately help to improve their lives. My greatest strength is my knowledge of the brain and behavioural sciences. I’ve found that I can use my understanding of health, psychology, neuroscience, behavioural economics, and even philosophy to this end.

For instance, I know that sharing information with people is not enough to change their behaviour for the better. We all know we should exercise, save our money, and spend quality time with our friends and family. But we typically do too little of all these things. Even knowing how to take the first step is often not enough to make a significant change. To this end, I always use little “tricks” and “experiments” in my own life to do more of what matters to me and help improve my overall sense of fulfilment.

I originally thought I’d use these skills as a professor and clinical health researcher (which I did), but I’ve found that they are more applicable and appreciated outside of academia. I loved doing health research, but I think my greatest impact on people’s lives as a professor was as a teacher. It’s one reason I’ve continued to mentor

and coach people (particularly undergrads and grads, but also some junior colleagues) – and this kind of active mentorship continues to have a remarkably positive impact on my own life too.

In my current position, I have the immense privilege of working with many different kinds of people, with all sorts of backgrounds, towards a common purpose. By working for a larger organisation, we’re able to work on much larger projects and have greater reach when compared to typical academic research projects. While I don’t get as much public credit for my work, I don’t personally find this to be a downside to working in the public sector.

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?

As I mentioned above, I’ve been able to build a career with a tremendous amount of freedom. But I think it’s really important to explore what we mean (and what YOU mean) by “freedom”. If freedom is being able to do whatever you want, that certainly isn’t academia. Your position as a professor will require you to teach courses, some of which you might not prefer and at times of the day (or to class sizes) that are not optimal. Your research program will be restricted by the kinds of funding you get, by the quality of trainees and support you have access to, and by the current economic and competitive climate you find yourself in.

Having offers for tenure-track positions in front of me was a turning point and really made me think about this notion of “freedom”. As I said above, by accepting an academic offer it was clear that I would not have checked as many boxes (e.g. related to quality of life, financial stability, etc.) as I would by simply looking elsewhere. I also knew that it would be harder to leave academia if I chose to do so at a later point.

What felt like a risky decision at the time was really, for me, a gaining of many new freedoms. It opened up a world of thousands of potential jobs instead of dozens; it allowed us to choose where we wanted to live instead of finding a merely acceptable home (that we might have needed to move away from in a few years); it allowed me to explore the kind of impact I might be able to have on people’s lives. And it didn’t – contrary to what you might have heard – close the door on academia. I now know many people (from non-profits, for-profits, and government) that have returned to academia as professors or administrators. I continue to work closely with academics, attend and present at conferences, and create new findings – but to be honest, I’m more confident in my new role that the work will simply “matter” (at least to me).

Have you thought about returning to academia?

No. I really enjoy working with academics and learning about their detailed contributions and trail-blazing new discoveries. But leaving academia was one of the most difficult, existential, uncertain, and subsequently most rewarding decisions I've ever made. I've never fully ruled out the possibility of returning – if the right position materialised – but I have no intention of looking for it (so I guess that does rule out the possibility!?). From my current perspective, it seems that there are just too many different and exciting opportunities to have a positive, and ultimately fulfilling, impact on the world.

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

A common piece of advice I'd often heard from others was to not be afraid to take chances. I think that's right, but it's hard to interpret what that means for you and your own situation. Of course, there are a lot of silly "chances" one could take – none of which will likely lead toward greener pastures.

Thinking about this now, I think that the "chances" people are referring to are the ones that would leave you in a better place even if they don't take you to the next, most logical, place. From my perspective, I took a chance in saying I wanted to move away from animal work in my PhD toward learning about, and using, human neuroimaging and spending more time thinking about the philosophical underpinnings of what a brain really does and what it is to be human. I took another chance when I (we, really) decided to move my family to Cambridge for a short visiting scholar position – where I had all the benefits of seeing what life was like there and recognizing that it wasn't what I aspired to. I took another chance in moving my family to the USA and working at a private liberal arts college and, most recently, another chance in choosing a lovely city to move to (without having employment first!) and starting a new career as a researcher and behavioural scientist in government.

I've had the privilege of experiencing many different lives by taking each of these chances. I think I've been fairly successful as a clinical health/neuroscientist/behavioural science researcher, teacher, speaker, author, professor, mentor, and public servant. I can tell you confidently that the grass always appears greener because I've been in a number of different pastures! There are wonderful (and not-so-wonderful) aspects to all of those roles, and the key is to find the best combination of lifestyle choices, goals, tasks, and challenges that works best for you.

So, go back up to that life list advice and start writing – you owe it to yourself as the singular most important thing you can do. Start right now – today. Or literally, *right now*. Getting another paper published will almost certainly not change your

life. It won’t likely lead to the perfect faculty position or to next year’s greatest scientific insight. If it turns out that you burn the brightest in the lab, then so be it! But figuring out what you want your life to look like, from every detailed angle, will help make every future decision a lot easier.

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

I regularly try to apply my own advice, and being a behavioural scientist makes some aspects easier and others a little harder! I’m constantly reminding myself to be kind to myself – my worst critic. Just because I’ve adopted the life list and made some pretty satisfactory choices over the past few years doesn’t mean that I’m completely happy with every aspect of my life. It does, however, mean that those issues don’t weigh on me like they used to, or force me to ruminate about my choices in quite the same way. And I have the freedom to choose which challenge to take on next – from learning a new language to starting a new pet project.

I get to contribute to exciting projects through my work, like creating and implementing national strategies for the betterment of society. I have the time and space to create new memories with my family, like planning a series of camping trips throughout the summer. But I also get to think about the future – getting new personal projects off the ground, looking for new opportunities, and taking fresh chances.

Feel free to reach out if you want to chat.

Thank you for sharing your advice with us, Dave!

“It Was Really Inspiring to Find Companies Carrying Out Really Impressive Missions”



Kirsten Smayda



Kirsten Smayda

Abstract In our interview with Kirsten Smayda, she tells us about her role at a neurotherapeutics company. Here she does applied research that relates to her earlier PhD work, using music for clinical applications. Kirsten discusses her transition from academia to the industry, the similarities and differences between the two, and her passion for her current work which aligns with her academic background. She highlights the importance of viewing the academia-industry spectrum as a set of opportunities rather than a dichotomy. In particular, she emphasizes the importance of networking, gaining industry exposure during doctoral programs, and considering initial industry jobs as stepping stones. Kirsten also explores the notion of academic freedom in an industry setting and reflects on the potential to have a greater societal impact by working in industry. Lastly, she advocates for increasing collaboration between academia and industry.

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K. Smayda (✉)
MedRhythms, Portland, ME, USA

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

Kirsten: Sure thing. My name is Kirsten Smayda; I'm from New York, currently living in Maine. My background is in voice performance and cognitive psychology, and I currently work for a company called MedRhythms, a music-based neurotherapeutics company, where I lead the Applied Research and Data group as a Senior Applied Research Scientist. Our initial product is a walking intervention for people who have chronic stroke walking impairment. The intervention is built on the principles of rhythmic auditory stimulation. Our pipeline currently includes interventions for other populations that experience walking challenges as well. In Applied Research we work on testing and iterating on early-stage concepts that may or may not make it into a product or product candidate, working with internal and external business (including academic) partners to provide scientific perspective, and building research- and science-based community through partnerships. The common theme among my responsibilities is that it's related to "science." Be it research, literature synthesis, manuscripts, abstracts, or posters, or grant writing, or data analysis, most of the activities I'm involved in are activities that occur in the translation of science.

What was the focus of your PhD?

I completed my PhD in Psychology at The University of Texas at Austin in December 2017. The focus of my PhD was in auditory cognition. When we are listening to the auditory world we exist in, we recruit cognitive resources to process sound and

derive meaning from it. Several of the cognitive and auditory faculties required to conduct such a task are also components that instrumental and vocal music training can hone. I received an F31 from National Institute on Aging (NIA) to study the impact of group piano lessons on cognition and speech perception in adults over 50. Cumulatively, my work resulted in a dissertation titled “Enhancing Older Adult Speech Perception in Challenging Listening Environments: Contextual Cues and Music Training.”

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

I was thinking a lot of things. Before I finished my PhD I realized I needed a job, I didn’t have any stand-out leads within academia, I wasn’t thrilled at the prospect of *trying* to get an academic job, I wasn’t thrilled at the timeline for a secure academic job, and I wanted to make a bigger impact sooner. Having been part of the cognitive aging world, I realized there were huge missed opportunities for applying basic concepts of healthy cognitive aging in the development of commercial products or tools created for people. My ultimate goal was to try to find an avenue to do something music psychology related because that was what I have always been most fascinated and driven by. A few people in my lab had attended and successfully obtained jobs through a fellowship program called Insight Data Science. So I applied for the Fall 2017 semester and completed my PhD while pursuing the fellowship in Palo Alto, CA. I was hopeful that I would find a job that would allow me to get my foot into the industry door, and the door that opened was for a prescription digital therapeutics company called Pear Therapeutics. I started as a Data Scientist for them in January 2018. I realized quickly the value of being able to communicate about data, and how much of a bridge “data” is between academia and industry.

Can you tell us about the skills you learned in the Insight Data Science fellowship?

For me, the skills that Insight helped me learn were multifold. I was paired with a startup company, Gobble, which is a meal prep kit with a one-pot, few steps approach using generally healthy ingredients. Gobble is where I first learned how a company could use data to answer questions that support business decisions. For instance, using social media posts, can we tell what dietary interests are most popular?

I learned how to connect business value to data analyses. What I mean by that is we each have a limited amount of time in the day, and work needs to happen fast in a startup or otherwise generally fast-paced environment. And your time is valuable – the more value you create for the company, the better the company can do,

and the bigger impact your work can have. However, you must also take care of yourself and prioritize your wellbeing, which means you need to make tradeoffs on tasks that are most critical for the company. If a task, big or small, does not contribute meaningfully to the mission of the business, it will likely need to be deprioritized. This practice can help maintain control over your wellbeing, while making the biggest impact at your company. And in order to make those decisions, one must build intuition around what moves the needle for the company.

I also learned a lot of new acronyms: OKR (Objective Key Result), MAU (Monthly Active Users), KPI (Key Performance Indicator), etc.

How have your career plans changed as you've continued on to your current position?

A lot hasn't changed for me. I am still working to progress the use of music for clinical applications, which is consistent since my PhD. And a lot resembles great aspects of my PhD career. I still get to have scientific conversations and collaborate over scientifically-informed ideas. I also have the honor of collecting data on the behavioral and neural impacts of music for different clinical populations. However, along the way, I've also learned more about what aspects of research and work, broadly, I don't enjoy. For instance, I don't love running analyses. I'll do it when needed and I very much appreciate the insights that data analysis affords; but I don't really enjoy the process of number crunching. It has been a privilege to be able to tailor my work environment to suit these preferences.

Can you tell us a bit about what day-to-day life is like in your current position?

This varies day to day, sometimes drastically. Some weeks are full of meetings, and other times I'm heads down in a writing project. The meetings I attend range from 1-to-1's, team meetings, project meetings, presentations, conversations with academic partners, conversations with other third party vendors, and ad hoc meetings. During the meetings and outside of the meetings, a lot of my job is coordinating people and processes so that we achieve our research, scientific, and commercialization goals. For instance, partnership development, mentoring, scoping and planning software engineering work, study design work, working with data, and meeting with external folks. In general, I have flexibility to work earlier or later in the day, from the office or remotely, and I try to get home in time to exercise before it's too late.

How does research work in this type of industry setting?

Research works in a lot of different ways in an industry setting, and there are a lot of different types of research in this type of industry setting. Here, I’m defining research as a set of activities that includes data collection from an experimental process and the dissemination of such results. Types of research include (probably not exhaustive) the following:

- *Product Research*: Includes user experience research, clinical trials, early prototype development, observational.
- *Model Development*: Designing experiments to test different computational models of some process or behavior.
- *Clinical Research*: Including clinical trials, early stage concept development with the purpose of impacting the health of a human or animal. This could be conducted entirely internal to the company and could be in partnership with an academic collaborator or another company.
- *Market Research*: In order for a team to know where and for whom a product is best served, research is conducted about the target user(s).
- *Health Economic Research*: In order to know how much a product or service impacts the healthcare system from an economic perspective, research is conducted to characterize what services increase or decrease as a result of the introduction of a novel product or service and the resulting cost savings.

What do you like most about your work?

There is no one thing that I like most. I like the gestalt of it – I’m paid well for work that I find fulfilling, and I’m empowered to make decisions that drive impact for the company. It’s great in its gestalt.

And what do you like least about your work?

I dislike having to be on zoom calls for a large proportion of my work. I wish more meetings were in-person. It’s easier to empathize with people in-person, and conversations are easier for me too.

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

Having a PhD regularly helps me succeed in my current position. From a PhD skillset perspective, the ability to learn is very helpful (and valuable!) in a start-up environment, and I regularly use my skills in reading and writing scientific articles and grants

to support the business goals of the company. And there's a certain grit that you receive throughout a PhD that has been helpful in weathering storms that might blow in. My ability to analyze and, more importantly, communicate the results of an analysis has also been invaluable in my role. Lastly, I think my current position is unique in that I interface with academic labs regularly, so the ability to empathize with the system and processes at play in their environment has definitely helped me succeed.

How do you think doing academic research in industry compares with doing research in a university setting?

This will depend on the company you work for and its goals. Based on my experience, I see a lot of similarities *and* differences. In terms of similarities, you may do research that translates a familiar scientific concept into a unique application, work with similar clinical populations, or domains of science (e.g., cognition, movement, perception). There are logistical similarities too: recruitment, data collection, data analysis, grant writing, and conferences. However, I found new types of research that I didn't know existed from my time in academia: user experience research, implementation research, and health economics research, to name a few. User experience research can be used to find common themes from among users of a product or service. Implementation research can study how to best implement a new product or service into an existing model – for instance, prescription digital therapeutics are a new class of treatments that must coalesce into the existing healthcare industry. And health economics research characterizes how the introduction of a new product or service in healthcare impacts the cost to health insurance companies. So, I learned about new types of research after taking a job in industry, and there are a lot of familiar research activities in the research that I currently carry out at MedRhythms.

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 recommend that they talk to some of the employees to see if they like the people they'd be working with. I'd also recommend that they think about all the different types of tasks they do in their PhD and notice what overlap there is in the position. In my position, I wear a lot of different hats, and depending on the week, I might be doing very different activities than I was the prior week. For instance, 1 week I might be getting a new study going with a collaborator for the whole week, and the next week I might be in full editorial mode trying to get publications out the

door. If you crave a stable, closed set of work activities, the position I have may not be the best fit. Contrastingly, if you love hopping around to different teams and solving different problems, this role might suit you well.

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

It’s hard to give a one-size answer here. Everyone has a different experience in academia, so everyone could enter an industry career at vastly different places. I would want to talk to this person to understand what gaps in experience they may have. I can recommend one piece of advice that likely holds true for a lot of people: get on LinkedIn sooner. Find foundations, institutions, people, and companies whose content you like and interact with those posts. LinkedIn is a set of algorithms so it will only provide recommendations based on the data you give it. If you’re looking for what jobs exist (even just to browse before applying), spend some time intentionally feeding the algorithm your interests. And consider the fact that “likes” carry a different weight than “posting” or “reposting with comment” in the algorithms. It was really inspiring to find companies carrying out really impressive missions, just by using LinkedIn. One limitation, though, is that it *is* a social media which can carry its own drawbacks as a tool you might use regularly.

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, absolutely. For me, it’s an extension of the work that I did in academia, and I’m fortunate to partner with academia to continue the work that I deeply care about. My PhD research focused on how music training can impact our speech perception abilities from a cognitive and neuroscientific perspective, which exposed me to research on music perception, motor and skill learning, and music therapy. My current company uses music to treat neurologic disease and injury, so I’ve already been exposed to a lot of the foundational scientific concepts and even applications for music that we might develop as a company. In my case, I care deeply about what music does to the brain and how music can be leveraged for therapeutic applications, which has not changed since even before my PhD.

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?

If you have a good manager, they can help find paths for you to pursue projects that you're interested in. Oftentimes, the work has to align to a business goal, but it's not entirely dissimilar to academia where you have a grant and you have to carry out research that pertains to what you wrote the grant about. There are boundaries for what you can work on in both circumstances. And, just like you can switch labs if another topic becomes more interesting to you, so can you switch jobs or roles (potentially more easily) if you find you would rather work on something else.

There's also an additional freedom that the financial aspect of an industry job can provide outside of the job. It allows freedom for how you spend your after-hours. You may find you have more freedom outside of your job to pursue other passions or spend it however you would like.

Lastly, some jobs offer benefits that afford additional freedoms like really good paid time off, unlimited vacation days, hybrid working arrangements, flexible working hours, or opportunities to attend conferences and workshops. These flexibilities create a different context in which you do your work, so I would consider those flexibilities as well.

Have you thought about returning to academia?

Engaging with academia from an industry side is a sweet spot for me right now. I feel like I get the best of both worlds because of the collaborations that I take part in and the work that I do. And, in a lot of ways I'm still an academic – if “being an academic” were a spectrum, I would certainly land on the “more of an academic” end of the spectrum than coworkers who have not gone through a PhD; so I think it's a matter of what you define as “academia.” If I were to return to a research position within a university or college setting, the work would need to be translational in nature and include industry collaborators. I'm interested in my work making an impact on a larger scale than what is typically afforded within academia.

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

Seek to understand the variety of opportunities that might be awaiting you as soon as possible, ideally before finishing your PhD. Get on LinkedIn. Use your network to make connections at places you find fascinating, and don't worry about what you

take as your first industry job. Once you have an industry job, it is a lot easier to get subsequent jobs, so don't put too much pressure on finding the perfect job from the outset – think of it as a necessary stepping stone.

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

Try not to limit yourself by thinking of moving into industry as a unidirectional movement. There will be more and more opportunities for collaboration between academia and industry with every year. You may even be part of the movement to create those opportunities. Don't fall prey to the false dichotomy of “industry” and “academia.” Appreciate them as spectrums because you can do academic research in industry. And just because you're in academia, doesn't mean you're doing “science” well. Also, as universities evolve with the times, I predict there will be more and more academic positions that advertise for skills in industry in order to bring resources and perspectives into departments and support their students who have interest in translational work and roles within industry.

This is a great point, this is definitely becoming increasingly true. Thank you for telling us about your career and sharing your insights with us, Kirsten!

“I Can See Team Members Grow and Can Help Them Reach the Next Step in Their Career”



Marjolein Spronk



Abstract In our interview with Marjolein Spronk, she shares her journey from studying attention with EEG and MRI to working as a data science team lead in industry. Originally planning for a postdoc, Marjolein discovered her skills were a great match when she began her current position in research services. She continues leveraging her analytical and technical abilities from her PhD. Marjolein encourages building a portfolio and networking to learn about industry science roles. She has found developmental opportunities and flexibility. Marjolein advises proactively exploring potential career options.

Marjolein Spronk

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M. Spronk (✉)
Rancho BioSciences, San Diego, CA, USA

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

Marjolein: I am a cognitive neuroscientist and data scientist. My journey started with an interest in Psychology, and I’m still fascinated by the human mind. My analytical side probably led me to follow the academic route of bio- and neuropsychology rather than one of the other branches that psychology has to offer. Currently, I work as a data scientist and team lead for a life science data services company in San Diego. Here I get to apply my technical skills on neuroscience data but also on data from other fields, like oncology, immunology, etc. We help clients leverage their research data, for example, by applying F.A.I.R. data standards (making data Findable, Accessible, Interoperable, and Reusable) to prepare large datasets from various sources for downstream analysis. Projects can involve development of code to automate workflows, data visualization, and statistical analysis. The work requires an understanding of the biological data as well as data science skills. The people I work with are all passionate about contributing to projects that lead to new discoveries that can have an impact on patients’ lives, which is a great environment to work in.

What was the focus of your PhD?

I received my PhD in Developmental Cognitive Neuroscience in 2012, at Maastricht University in the Netherlands, the Department of Cognitive Neuroscience. My research focused on the development of attention and working memory in young children and adolescents with and without ADHD. I used electroencephalography (EEG) to measure brain activity while they performed computer “games” in which their working memory, attention, or both were challenged. I compared their performance and brain activity to that in adults to draw conclusions about brain development, for example, that adolescents are less capable of ignoring distracting stimuli – as measured by EEG and behavior – compared to adults.

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

As I was finishing my PhD, I knew I loved doing research and wanted to continue in academia with a postdoc. I had worked on a functional MRI study as part of my MSc degree and particularly enjoyed the image collection, processing, and data analysis, which is why I started looking for opportunities in that area. I didn't necessarily see myself end up in a tenure-track position, I just loved doing brain research and data analysis, and at the same time didn't have a good idea of what else was possible outside of academia.

How have your career plans changed as you've continued on to your current position?

When I started my current position, I knew I was passionate about science but honestly not sure what to expect working as a scientist in an industry environment. I started to work as part of a team on different projects and was happy to find out my skills and background were actually very useful. I was especially focused on automation of data processing steps, preferably in neuroscience but also in other therapeutic areas. Because the company was growing quickly, opportunities for career development also arose relatively soon. After being a technical lead on several projects, with mostly responsibilities for day-to-day technical tasks, I subsequently found myself in a data science team leadership (manager) position, maybe earlier than expected. This however has been a valuable learning experience. I feel lucky that my company recognizes that managerial skills need to be developed and has invested in professional development in this area. What I love about the position is that I can see team members grow and can help them reach the next step in their career. I also get to be more involved in the growth and direction of our data science group, which is exciting. At the same time – and very important to me – I still do a lot of technical work every day.

Can you tell us a bit about what day-to-day life is like in your current position?

As I'm sure is the case with many positions, I don't think the typical day really exists. The majority of tasks however revolve around client projects. Often, there are technical data science tasks to work on, like data wrangling, visualization, or analysis of life science data. Since we work with many different clients and groups, this is a pretty wide concept. I have contributed not only to projects handling

neuroimaging data but also expanded to other types of data from different therapeutic areas, which is in part what makes this job interesting since there is always something new to learn. Besides focusing on the technical work, there are meetings with the client to clarify their goals, plan, and discuss what needs to be done, as well as internal stand-ups to align our project teams. Occasionally, I help write project proposals, and naturally every project comes with some documentation work as well. As a team lead, I also have the responsibility to make sure that my team members have everything they need to do their work, are assigned to projects that fit them well, and can develop their skill set further so they can advance their careers. I meet with them regularly and work in the background to support them and solve any issues that may arise. Our leadership recognizes the importance of a good company culture and the need to destress and reload every now and then, so even though we all work remotely since the pandemic, there are plenty of opportunities to meet for social events, both virtual or in the area, and have some fun.

What do you like most about your work?

I work at a data science services company where we help clients by providing solutions to their data problems. In most cases, our team and the client's team work together on a project towards a deliverable. These projects can involve all types of life science data and therapeutic areas. This means that I don't exclusively focus on neuroscience but can contribute to any type of life science project where a data solution is needed. As a result, I'm constantly learning new things and the work is never boring. Technically it's diverse as well: I've set up data processing pipelines and curation workstreams, performed data analyses, built data models, led a team that created an application, etc.

What I also really like is the opportunity to work with many different people. We assemble a team based on the skill set that is needed for a project so who is part of the team varies with each project, and obviously the client team is a different one each time. As a result, I've had a chance to meet many smart and creative people (with and without PhDs!), and they are all driven by the same desire to better understand diseases and find new therapeutic solutions for patients.

And what do you like least about your work?

The biggest difference with scientific research in academia for me is that I work mostly on small parts of bigger projects now, whereas during a PhD you focus on one topic and research that from all possible angles. This deep dive approach and seeing a project through from concept to publication is usually not an option in my current position. There are times, for example, that I'd really like to explore a dataset more, but if that is not in the scope of a project, there are no opportunities to do that.

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

Getting a PhD requires creativity and resourcefulness to come up with original research ideas and to solve any problems that we encounter when answering research questions. Every PhD can tell you their stories on how they had to overcome certain obstacles. Similarly, in my current position, there may not always be a straightforward solution to a data problem, and we have to tap into our creativity to find the best approach. Also, many of the analytical and technical skills I developed during my PhD have been directly applicable. EEG and neuroimaging data are complex data types that require strong analytical skills to extract insights and present these in a meaningful way to others. Data analysis, statistics, programming, and visualization are all part of my work. Finally, while not something you learn during your doctoral training, I believe most PhDs have in common that they are naturally curious. This intrinsic motivation to learn is also what makes me enthusiastic about exploring scientific areas that are new to me, learn about new scientific methods and techniques, and expand my data science skills.

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

If you really enjoyed "handling data" during your PhD, i.e., wrangling and cleaning messy data, programming, visualization, and interpreting results, more than the other parts of a PhD, that would be a pretty good indication. You will also need a learning mindset since the data science field is developing rapidly and there are always new things to learn. But before making any decision and excluding other career paths, I would advise talking to as many people as possible to get a better idea of the different positions and companies out there. Also, one data science position may be very different from the next and will likely also evolve in the next couple of years.

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

For a data science career specifically, I would strongly suggest building a portfolio with machine learning or other data science projects. This can be on a topic related to your research interests, but it may also be helpful to show that you have interests beyond this and can apply your analytical and programming skills in other areas as well, i.e., something unrelated to your PhD. Since a lack of experience is an often mentioned hurdle to overcome for new PhDs, a portfolio illustrating your skill set

can give a future employer that extra bit of confidence that you would be able to do the job, despite not having worked in a similar position before. Online courses may help broaden your data science toolkit beyond what you already know from your research experience.

I would also suggest being proactive and start thinking about your next steps early on. Start looking into possibilities and explore what job types exist and which ones interest you most. See if there are any programs in your university that can help better prepare you and if there are opportunities for an industry internship or collaboration for example. This is a great way to learn more about the type of work you could do and also to build a network outside academia.

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, I think you can care deeply about more than one topic. It's true that I'm fascinated by the brain, which is why I chose to do a PhD in Neuroscience. I have been very lucky to find a position where I can still work with neuroimaging data but, in addition, I now also contribute to many other life science projects. What all these projects have in common is that the goal is ultimately to find new treatments for patients. Just like in academia, we may only contribute to a small piece of a big puzzle, but every piece plays a crucial role in the overall picture, i.e., can help us get closer to understanding diseases and developing new therapies.

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?

There is indeed a lot of freedom in academia. You can more or less choose any research topic, develop your own methodological approach, draw out your timeline for completion, etc. If you work in a service company, a large part of this is determined by the client. However, knowing when a project is expected to finish, what the general approach will be, and what the deliverables should look like can also give a sense of clarity/freedom and peace of mind. And there is always still room for interpretation, such as choosing the best methods, tools, visualizations, etc. you think the project would benefit from. So there is that creative freedom as well. A lot of it probably comes down to your preferred working style. Also, if a project isn't a good fit for someone, that would most likely reflect in their performance, so they would not get assigned to that project in the first place. Overall, a lack of freedom therefore has never been a big concern in my experience. Many employers also

provide flexibility by having a professional development program in place, which allows employees to choose and plan out their career path and actively work on their professional growth, something that isn't the norm in academia.

Have you thought about returning to academia?

I have very much enjoyed my academic journey and worked with many great scientists that became friends and had some excellent supervisors that have been a great inspiration. The period since my last postdoctoral position has been similarly exciting and has given many opportunities for growth. Overall, this scientific journey is still ongoing. While I don't work at a university, I am still a scientist in life science research, handle the same datasets as I did before, and have been able to transfer my programming and analytical skills to other areas and types of data pretty easily. While I don't know what the future brings, I love the continuous learning and tackling of complex problems that are part of scientific research and I don't expect that to change.

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

First of all, be proud of what you've already accomplished! If you can finish a PhD, you have proven to be more than capable for a great number of positions, whether in academia or industry (or somewhere in between). If you don't really know what types of jobs are out there, start exploring and networking. Personally, I learned a lot from informal chats with people who worked in academia and industry and shared their experiences. Once you figure out your next career goal, make a priority of learning new skills or brushing up on skills that you know are important for that position. Lastly, they say that asking for help is a strength, not a weakness. Reach out to people in your network that you think may be able to give advice, provide a new perspective, connect you to someone else, or otherwise help you.

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

The decision to stay in academia or to transition to industry is a very personal one. Don't feel pressured to make a certain choice and don't compare yourself to others. Everyone's career path is unique.

Thank you for sharing your advice with us, Marjolein!

“Being Good at Question-Asking Is a Transferable Skill”



Nicholas Diamond



Nicholas Diamond

Abstract In our interview with Nicholas Diamond, he shares his journey from cognitive neuroscientist to behavioral scientist in Canada’s federal government. As Nick was finishing his PhD investigating human memory and aging, he planned to continue climbing the academic ladder, envisioning becoming a professor. Through postdoctoral experiences and a broadened perspective, Nick realized academia did not hold a monopoly on meaningful scientific work. He now applies his research skills to policy issues like COVID-19 and misinformation. While unsure of his future path, Nick embraces uncertainty and finds satisfaction in his current role.

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

Nick: My name is Nicholas Diamond. Most people call me Nick. At the time of writing (Fall 2022), I’m a Behavioral Science Fellow in the Impact and Innovation Unit (IIU) in Canada’s federal government.

Since starting this job just over a year ago, I’ve been working mostly on COVID-related projects. I do research on Canadians’ pandemic-related behaviors, beliefs, and attitudes, with the goal of improving policy decisions and outcomes, and identifying potential challenges. I design online surveys and experiments, conduct hypothesis-driven and exploratory analyses with large datasets, and help guide the development of our research programs. One area I’ve focused on is misinformation and its links to trust in public institutions – understanding how individuals’ trust and information consumption shape health (and climate-)related behaviors, how the proliferation of verifiably false information affects public health choices and policy outcomes, and how government communications and processes can be made more trustworthy and transparent. The ultimate goal is to identify, test, and scale up individual- and systems-level solutions.

As an example: here is a public report on an experiment my teammates and I ran (in collaboration with the OECD and the French government’s behavioural insights team) to understand what drives misinformation sharing on social media, and assess the potential impacts of two light-touch, platform-level interventions adapted from the scientific literature: <https://oecd-opsi.org/publications/behavioural-science-tackle-misinformation/>

This work is embedded in several different large-scale longitudinal and cross-sectional data collection efforts that serve multiple policy purposes. I wrote a blog about my work in the IIU here: <https://medium.com/impact-canada/on-becoming-a-better-scientist-and-a-bigger-nerd-in-the-public-service-e10bdb9bc46a>.

What was the focus of your PhD?

I did cognitive neuroscience research investigating human memory, its neural underpinnings, and how it declines in older age. This was in the Psychology Department at the University of Toronto. I worked with Dr. Brian Levine, in his lab at the Rotman Research Institute at Baycrest Health Sciences. I focused in particular on *episodic memory* – our ability to mentally jump back in time to specific past experiences spanning our life history – which I found to be extremely cool and mysterious.

A big focus of my research was on developing new ways to rigorously experiment on human memory as it manifests in the real world, beyond the artificial constraints of typical psychology laboratory studies. This involved some unusual stuff – e.g., designing immersive experimental “staged events” in places like a hospital or at the Ontario Science Centre and then testing different elements of people’s memory (and their corresponding brain activity) for these experiences after delays of minutes to years. Towards the end of my PhD, I got especially interested in memory search dynamics – how we mentally jump through time and space to past experiences, why one memory brings to mind another, and so on – and how these dynamics come apart in older age. I used functional magnetic resonance imaging (fMRI) and magnetoencephalography (MEG) to understand these dynamics in the brain, but was fundamentally most interested in cognition and behavior.

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

The short answer is that I had no idea what I should, or could, do next. The same was true when I was finishing my undergraduate degree some years earlier. My life has largely been a series of lucky coincidences.

The long answer is that I loved doing science and thought I therefore ought to try to become a professor. Or more honestly: I was enjoying the game I was playing, so I wanted to keep playing it until I got kicked out or it stopped being fun. I don’t remember how much I actually wanted to be a professor per se, or whether I had even carefully imagined what that life would be like. It was not a childhood dream of mine. I just thought – probably more by virtue of inertia and social influence than by active planning – that I ought to climb up to the next rung in the ladder: postdoctoral research.

I reached out to a few scientists I admired, working in cities that seemed interesting, to ask about joining their lab as a Postdoctoral Fellow. My partner was doing the same – we were trying to land positions in the same city. It was stressful (one wrinkle: she was/is much more talented than me). But it worked out. We both got positions in exciting labs in Philadelphia, me at University of Pennsylvania. It wound up being a very chaotic couple years in Philly (e.g., COVID, immigration quirks, some postdoc disappointments), but it was a great time overall.

How have your career plans changed as you've continued on to your current position?

I was uncertain about what my professional future would look like when I was in academia, and I am still uncertain now. But my career outlook has changed. I have a richer picture of the space of possible future careers now, and I've transcended some small-minded ideas I used to hold: for example, that I had basically no good job prospects outside academia, that non-academic work must be comparatively uncreative and inflexible, and that you have to be in academia to ask your own big questions, use data and experiments to answer them, read and write scientific papers, talk nerd-stuff with nerds, and exchange ideas at international conferences – I do all these things in my current job. Among other things that are totally new to me, of course. Frankly, some of the things I loved about academia, I can enjoy more freely now than when I was a postdoc. This has been a pleasant surprise.

Now, I'm wary of being disingenuously ra-ra positive about work outside academia. It is very easy to view one's current job and life circumstances through rose-colored glasses and their prior trajectory through oatmeal-colored glasses. This comparison in particular – academic vs. non-academic careers – can get pretty emotionally charged (at least on Twitter, which surely must be an accurate picture of real life), and I think it's often silly. Based on my (limited) experience and social connections, there is as much variability in people's satisfaction with their careers *within* each of academia and non-academia as there is between them. The challenge isn't choosing which of these two distinct lanes one should occupy for life – it's realizing what your priorities are and then balancing them, living with the consequences of often arbitrary life choices, and figuring out when and how to make a change.

So: No job is perfect. I've just...relaxed a bit. Or matured, maybe. I hope I get to sample all kinds of interesting and useful careers, if I am lucky enough to be conscious for a few decades more. I've realized the nature of the work, and the people around me, is more consequential than the type of institution in which I find myself. And, of course, feeling in control of my career destiny and in control of where I live – these things felt elusive when I was a grad student and postdoc, and now they're priorities.

Can you tell us a bit about what day-to-day life is like in your current position?

It varies quite a bit, but in a nutshell: I design online surveys and experiments, analyze data, visualize and write up findings for various audiences, and deliver presentations. This involves the usual ambient scientific work: brainstorming, reading papers, writing data analysis code, learning about statistical methods, discussing

with teammates, etc. This is punctuated by all kinds of communication and knowledge exchange opportunities: meeting with folks in various government departments and agencies, non-profits, and academics. On an average day, I have a couple meetings, I write some code, I might skim a relevant paper, and I might discuss priorities and next steps with teammates. I craft lots of decks – slide decks, that is – with teammates. Sometimes I work independently; sometimes I collaborate in real time with colleagues. Sometimes the pace is steady, sometimes it’s a mad dash (it feels fast, by comparison to academia). The output of the work takes many forms: talks presented to government decision-makers or other research groups, evidence-sharing products, policy briefs, academic products (scientific manuscripts, book chapters, and conference presentations), etc.

Work was totally remote when I was hired, though we recently moved to a hybrid model. Before the pandemic, this job would have required that I move to Ottawa, Canada’s capital (I live in Toronto). At the moment, there are people and government office spaces in various places across the country.

What do you like most about your work?

My teammates and leaders are fantastic. There’s a great mix of (A) appetite for ambiguity in the pursuit of ambitious and complex goals and (B) drive to make evidence-based real-world change happen effectively and efficiently.

It’s also been great to be granted the opportunity to build expertise on a set of topics that are different from my prior academic work. And I know the work will continue changing over time to address changing challenges in the country and the world. I’ve enjoyed that – some time and space for some deep long-term projects, mixed in with urgency and external pressures to keep the work fresh and useful.

And what do you like least about your work?

The government is very big and complicated and hierarchical, which can be confusing and annoying. Also, I don’t know how much career growth potential there is above me, in this kind of hands-on scientist role that I am enjoying.

Also – saying that you work for the government plays less well at a party than saying you’re a neuroscientist/memory researcher*. The stories we tell ourselves and each other about what we do are not the same as what our job actually feels like on a given Tuesday, but stories do matter, and I’ve had to come up with a new one. That’s been inconvenient.

**I don’t actually go to parties.*

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

Being able to look at a problem and ask a good question – one that is consequential, novel, interesting, and answerable – is very useful. Being able to answer that question is even more useful. My PhD training prepared me to sit with big and complicated topics, boil them down to actionable questions, and devise clever new empirical ways to answer them. That’s helped me in my current role, where my teammates and I are wrestling with big questions related to mis- and disinformation, trust, democracy, collective behavior, systemic inequalities, etc. Being good at question-asking (and its precursors like literature review, statistical literacy, etc) is a transferable skill. It also opens the door to developing new interests and passions, quickly.

More pragmatically, my PhD training helped me get reasonably good at each phase of the academic scientific cycle – literature review and problem scoping, survey and experiment design, data analysis and visualization, synthesizing key insights, and communicating those insights clearly. Outside of academia, my impression is that most jobs and skill sets are more siloed. It’s useful to be able to do work “nose to tail” like this (sorry for the gross metaphor) – or to flexibly plug in to one phase or another as opportunities arise.

Finally, PhDs (and postdocs) afford people the opportunity to go really deep on certain skills or topics. For example, I was and am obsessed with pretty data visualization and have lots of experience doing multivariate statistics. This let me contribute in a specific way when I started my job, given the massive volumes of valuable data my team had collected. As a second example, I cared a lot about public speaking in academia – giving compelling and visually interesting presentations on my own work, or as a lecturer. Over the years, I gave many talks to all kinds of audiences. I’m pretty comfortable talking to most audiences now, which has helped me.

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

If any of this sounds interesting to them, I suppose. If you like the idea of doing scientific work aimed at real-world issues (which means more teamwork, more changing priorities, less control, and less focus on papers and personal brand compared to academia).

You can always reach out to people who have jobs that are interesting to you and see if they’ll answer a few questions. But, don’t put too much weight on what any one person says. These kinds of interviews and conversations are great resources, but everyone – including me – is an unreliable narrator about their life and career path.

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

Become the best scientist you can on whatever topic interests you most, but try to build generalizable skills and maintain an interest in big picture, real-world questions beyond the minutia of your field. Read widely. Be a good collaborator. Produce things that people can see.

My not knowing what I would eventually do was a key part of my path, in retrospect, so: embrace that, if that applies to you, and trust you’ll wind up doing something cool if you work hard, be a nerd, and be kind.

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?

That is mostly true for me. I think that is partly due to luck and partly due to me choosing to be malleable. Also, I think this is a sneakily deep question, so please forgive a self-indulgent rant:

Why do you care about what you care about? “Caring” is more elastic, and active, than is usually implied. I cared extremely deeply about memory as an academic, and still do. I still gladly work on some lingering PhD and postdoc papers in my free time. But before graduate school, I didn’t care about memory science at all. In fact, I found memory to be one of the duller topics in my undergrad psychology and neuroscience courses – the field seemed full of boring box-and-arrow models about mental storage units and rats in boxes studied by people who respected rats too much or humans not enough. Not exactly the deep exploration of the nature of human consciousness that I was craving as a weird 20 year old. When I initially decided to do my PhD with Dr. Brian Levine, it was to do research on traumatic brain injury.

So – why did I come to care about memory so much? It was probably a combination of: getting the opportunity to explore complex questions for long periods of time, feeling the work was important, engaging with a community of people dedicated to exploring these questions collaboratively and competitively, having good advisors that supported me, building new skills, feeling I was professionally progressing, and building a social network of friends with similar interests.

I am lucky enough to have much these ingredients much of the time in my current role, and accordingly I do care deeply about the interrelated topics I work on now. I also care more about applied research impact now, and public policy, and...Canada. It’s my job, so I get to care about this stuff. I do think I got lucky though, to land in a role that gave me some space to choose my area of focus early on. I think I also created some space for myself *by* caring so much about certain projects and questions – if you sink your teeth into something relevant enough to

your work, and produce cool and useful stuff, my experience is that people won't tell you to stop. You can bend the work towards you.

Do I care about these new topics the same way I cared about memory as a grad student and postdoc? Maybe not. I haven't been doing this as long, and I'm also not a 20-something grad student any more. Transitioning out of academia, there was definitely some whiplash from changing topics and cultures so dramatically – to be working on *anything* besides memory. But very quickly, it felt like a pretty sweet privilege to be given the opportunity to become a nerd about some totally new topics. Caring about new stuff doesn't make you care about old stuff less. Not to mention that I feel much more headspace to care about things beyond my day job now.

I leave it to the reader to decide whether this is all useful and genuine, or hollow platitudes and self-deception. If you know the answer, please email me.

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?

Lots, but not as much as in academia. I'm one member of a team trying to get big things done, reasonably quickly. My current job is also much more tethered to changing problems and priorities than my academic job was, or would be. Basic research in academic psychology, by comparison, can be very intellectually free – some people are so free they can spend decades studying things that don't even exist *mentally*, like schemas and short-term memory systems (just joking).

I often felt a lot of freedom as an academic, probably peaking in late grad school, but again, it's complicated. When I eventually wrote a research statement for a faculty job application, my postdoc advisor told me my research program was too broad and varied, and he was right. Grant commitments, intellectual inertia, incentives to build a cohesive and incremental research brand, external demands for reviews and academic service activities, and constraints from the personnel and technical resources at one's potentially lifelong department – there's no free freedom, even in academia. That's not a bad thing, that's just life. It's constraints all the way down. Constraints are good.

And then of course there are other aspects of freedom – freedom to choose where you live, to draw truly clean work-life boundaries if/when you'd like, to move throughout one's career, and to sample different roles and topics. Everybody needs to weigh these priorities for themselves.

I like to think about parallel universes when making big life choices. Every alternative life path exists in a universe somewhere, I've heard. In the universes where I stayed in my postdoc and maybe eventually became a professor, I'm probably doing experiments on episodic memory (a topic I randomly stumbled into when I was 22 years old) until my department kicks me out in my mid-70s. I bet it's a wonderful

life, filled with great colleagues and mentees (and AI-robot assistants on Mars). In those universes, do I have more or less freedom than my life in this universe? Ask me in ~40 years.

Have you thought about returning to academia?

Of course. I’ve also thought about trying to be a professional funk guitarist.

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

I hope you’re enjoying this time, it’s pretty special. Be honest about what excites you, and don’t get too caught up in other peoples’ hype or cynicism. Try to notice what kinds of work bring you the most satisfaction in the moment and what kinds of people you enjoy working with. Make sure you start working on your hips and glutes if you’re not already, otherwise you’ll get lower back pain in your 30s. And remember that we’re all going to die.

Thank you for sharing your experiences with us, Nick!

“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.

Rebecca Hirst

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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 Pavlovio.org. PsychoPy and Pavlovio 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 cliché 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!

“It’s Healthy to Evaluate Your Situation and It Might Lead to Staying Where You Are or Finding New Challenges”



Tracy Warbrick



Tracy Warbrick

Abstract In our interview with Tracy Warbrick, she shares her journey from using EEG and fMRI methods in her PhD and postdoc to working at a company that develops the equipment for this research. Tracy initially worked in customer support for the same company, but after a few years she was able to shift to a role that challenged her in a different way and provided more freedom. Tracy highlights the many skills that are developed in a PhD – including project management, problem-solving, and communication – that can go far in many other work contexts. Tracy didn’t have a long-term career plan but was able to leverage her knowledge and skills to find a role that fit her interests and motivations.

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

Tracy: I would describe myself as a scientist and educator. I've had quite a varied career with a few years as a postdoc/research scientist before leaving academia to take a position in a company. I've been working for the same company since leaving academia at the end of 2014. I started as a scientific consultant in the support team and moved on to being an Application Specialist for EEG-fMRI which was a bit more R&D focussed rather than customer support.

My current position is Head of Education and Scientific Communication. The work is quite varied in terms of responsibilities and day-to-day tasks. I take care of our educational program (online workshops, offline workshops, webinars, etc), our education-related products (e.g. product on-boarding), and engagement with the research community (e.g. supporting graduate schools, cooperation with academic partners for research or writing white papers). I also teach workshops and webinars in my area of expertise (simultaneous EEG-fMRI). I've been in this role since the first of April this year so it's a recent promotion, maybe a bit of background on what I was doing prior to that might be helpful. I've been taking care of establishing the Brain Products Academy for the past 2 years alongside my role as an Application Specialist for EEG-fMRI. As the Academy grew, it was clear more resources were needed for this and other projects so the new role was created. While it sounds like this role is quite a change in career path, my current role requires a lot of the skills I've developed over the years, during my PhD and outside of my PhD. I started teaching before I started my PhD and completed a Post-Graduate Certificate in Education (PGCE) for higher education, and I've done a bit of teaching alongside my PhD and research career. So my current role brings all of that together.

What was the focus of your PhD?

I did my PhD in the Psychology department at Staffordshire University, UK, and I completed it in 2006. The main focus of my PhD was investigating the effects of psychological factors on pain perception. More specifically, I looked at how

attention and anxiety influence our subjective responses to pain and the EEG responses to pain. I used two different types of painful stimulus across different experiments; electrical stimulation as a short, sharp stimulus and a "cold pressor" test as a longer challenge. The cold pressor test is essentially keeping your hand in very cold water for as long as you can. To manipulate attention, participants were given additional tasks to do or were asked to focus on the stimulation. To manipulate anxiety/arousal, I devised a script that described (fake) technical issues with the equipment and that the participants might get an extra large electric shock by mistake and to let me know if anything felt strange – it was harder to get the deception part of the protocol through the ethics committee than the painful stimulation part! I measured EEG in response to the stimulation and collected subjective ratings of the stimuli. In addition, I gathered further information about the participants' general state and trait anxiety and their pain-related fear using questionnaires.

Analyzing – and making sense of – the electrophysiological, behavioural, and psychological measures was challenging, but I learned a lot and appreciated the value of multimodal measures. Consequently, I then went on to add fMRI to my research in my years as a postdoc.

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

I was working as a research assistant while writing up my PhD. It took me longer than my funding period to actually finish and submit, and one of my supervisors had moved to Birmingham University part way through my PhD; he had a part-time RA position available so I worked there while writing up. My focus was on continuing in research and I was applying for fellowship grants to continue working on my PhD research topic. There were also a few postdoc positions on offer at Birmingham, and I was lucky enough to get one and I stayed there for a couple of years. I didn't even consider looking for jobs outside of academia at that point, I wanted to be a research scientist, and I enjoyed being in the University environment. I was also aware of the possibility of working abroad as a researcher, and as my postdoc funding was coming to an end, I started applying for research jobs outside of the UK. At the time, I was only looking for research and academic positions, I didn't consider other options. I think that is partly because I didn't know what else was available to me. I enjoyed research and was happy to continue on that path but had I been more aware of my employability in different jobs I might have considered changing career paths sooner. I haven't always had a clear career plan and I probably wouldn't have predicted that I would be doing the job that I do now, but at the same time it feels like absolutely the right job for me at this stage of my career.

How have your career plans changed as you've continued on to your current position?

I've never really had a long-term career plan. I know this sounds a little odd because we're always told to have a plan and long-term goals. However, I think remaining flexible and being open to new challenges and opportunities has benefitted my career. When I left academia, I'd considered the paths open to me within academia and decided that they weren't for me and I didn't want to spend the rest of my work life in that environment. When I started working in industry I really didn't know where it would take me, I just knew that I wanted to take a chance on trying something different. After working in my role as consultant in the support teams, I realised that I missed the autonomy that I had in my research roles. While academic life can be quite stressful and the workload high, being able to plan your projects and your work yourself is nice. Also, I enjoy working on bigger, more in-depth, projects and driving those projects forward. My plans therefore shifted towards having a role with more responsibility and more project-focussed daily work. Fortunately, my skills and expertise were recognised by my supervisors, and I moved into a different role as an application specialist. I did briefly consider returning to academia, but I found fulfilment in the new role and decided that staying in industry, at least for the next few years, was the right decision for me.

The company I work for had been planning to develop an education-related strategy for some time. Given that I have a background in teaching as well as research, this was an interesting development for me and I asked to be more involved. As the project grew into what is now our Academy, it became clear that someone was needed to lead the project. I decided that I would like to have more responsibility and have the space to develop my own ideas as well as those of the company. I made this known to the company management, and when they were ready to push forward with the project, I was given the role of Head of Education and Scientific Communication. I think it's important to note here that you have to make your plans and goals clear to your employers. I did my job well and proved that I could handle larger projects and manage working with diverse groups of people, but once I realised what I wanted out of my career, I had to say that I wanted a leadership role and make it clear to my employers that I was open to such an opportunity if it should arise.

I'm happy with my current job and my plan is to stay in this role for the coming years. The department is new and there are many projects on the horizon, and I think this level of challenge is just right for where I am in my career.

Can you tell us a bit about what day-to-day life is like in your current position?

My daily work is quite varied depending on what projects are active or urgent. Most days I will spend quite a lot of time answering emails and participating in meetings, which are the less exciting aspects of the job (depending on the topic). Perhaps,

taking today as an example would be useful to get an insight into what my days are like.

We're planning the release of a new product in my application field, and we had a release planning meeting this morning to make sure that the following things are in order: technical specification of the released version, safety and regulatory documentation, user manuals and conditions of use, marketing material, and information for the sales and marketing teams. As you can see, even for just one product in my field, there's quite a variety of aspects to consider and coordinate, and these topics will occupy quite a lot of my time in the coming weeks. This afternoon I will be working on our latest workshops. I will process responses and create a report on the customer evaluation of our most recent event and then feed that back to the teaching team in our event debrief meeting. We have two more workshops next week, and I will be doing the final preparations for making sure the content is ready and the teaching team have what they need. Tomorrow I will leave for the airport with the teaching team to provide assistance on site and to promote our educational activities.

This is quite a busy week for me and not every week involves travelling, but handling multiple tasks and topics each day is quite common. This is in contrast to my time in academia where I would be focussed on one project or a particular aspect of that project and would spend less time switching between topics throughout the day or week.

What do you like most about your work?

I like that it's varied, I would get bored doing the same thing day in day out. I like to be able to work on different topics with different groups of people, either different departments within the company or with cooperation partners. All of the projects that I'm involved in are interesting to me and most involve a degree of challenge, either because it's new (e.g. some of the tasks associated with the head of department role) or because the topic is complex (e.g. research and development for EEG-fMRI). I also need to get some kind of intrinsic reward from my work, and I do get satisfaction from completing projects in my current role, especially something like releasing a new product or delivering a successful education event. I think this is quite similar to research, for example completing the data acquisition phase of a study, finally having your results, or having a paper accepted. I like to work on a defined project with a measurable outcome and that is a huge part of my current job.

And what do you like least about your work?

I'm often reliant on other people doing their part of the project according to the planned timeline, and this doesn't always work out. So I would say that managing other people's contributions to projects is the part that I like the least. It's something that I've had

to get used to managing over the years, especially as my role has become more senior. On the one hand, I have to consider that I can't expect people to work to my timeline but I also have to keep to project deadlines. The flexibility to adjust and the communication skills needed to navigate these situations are things I have had to develop.

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

There are two main ways I think it has helped. The first is related to the non-subject-specific skills and experience gained during a PhD. I think we get so focused on our subject or specific projects we forget about the other skills we develop along the way: for example project management, time management, cooperation strategies, problem-solving, and communication (written and verbal). These skills are vital to my current job, and I started developing all of these skills during my PhD and have continued to use and develop them throughout my career. The second way is that people do acknowledge that a PhD gives you some authority on your subject. I know this sounds a little odd, and I don't think that one must have a PhD to be an expert on a particular topic, but I do have the feeling colleagues introduce me (and themselves) as Dr. when they want to emphasise expertise and/or knowledge. I would never say that this is a good reason for doing a PhD, but I think it is a consequence of having one and I have the impression that it does help you progress and succeed.

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

They should enjoy teaching and making their knowledge and experience accessible to others. I don't work on research projects anymore and I'm not contributing to new scientific knowledge, so they should be comfortable with leaving that part of science behind and focusing on how to provide quality learning experiences for others in the field.

Being comfortable with working with a wide variety of people is an absolute must. The nature of my work means that I cooperate with many other departments within the company, and I also work with our distributors, with external partners, and directly with customers. Being able to adapt the topic, level of detail, and communication style to the needs of the situation is essential, and it's actually a nice part of the job. If they have strong communication skills and like working with diverse groups of people, meeting new people, attending conferences, teaching, etc., then my current job would be a good fit for them.

They should also be prepared to work towards the goals of the company they work for, while ideally this will align with their own interests – sometimes you need to work on what needs to be done not necessarily what you want to do. As I said in one of my earlier responses, my work is varied and sometimes I have to jump from one topic to another, and this is often driven by external deadlines or deadlines where others are depending on my input. I think this is a little different to doing a PhD and working in research where you’re often driving your own projects and do a lot of work independently.

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

I would recommend writing more and gaining some teaching experience. Regarding writing, this is an essential tool and I would recommend this to all PhD students not just the ones looking to pursue a similar career to mine. I recommend not focusing on academic writing, try writing for different audiences, e.g. science community outreach projects, write for non-experts, or school children, and maybe even try writing about something that’s not related to your PhD topic, e.g. student newsletters for any societies associated with your work. Being able to get your point across is essential, and being able to adapt your style and content to the needs of the audience is a valuable skill to have. Gaining some experience in writing for different purposes will help with many aspects of a job in industry.

Regarding teaching, again this is a valuable skill that can help in many jobs. Learning how to pass information on to other people effectively is not only useful for formal teaching roles but for many aspects of cooperative work, customer facing roles, and many other non-education focussed jobs. Think about delivering information in a meeting, doing a presentation for prospective business partners, or on-boarding a new colleague. All of these would benefit from some experience in preparing and delivering material. I think teaching is also good for improving communication skills and increasing confidence in situations where you have to talk to a room full of people. In my current role I teach, prepare teaching material, and support colleagues in their own teaching preparation. My PGCE gave me a good foundation for this, but I completed that quite some time ago and I’m happy that I took many opportunities to continue teaching during my career. If you have the opportunity to take a teaching class or course during your PhD, you should take it. If there is nothing offered as part of your PhD program or graduate school, actively seek it out. There is probably an education department (or similar) at your university, it can’t hurt to check out what courses they offer for current students.

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, I think this is true in my current position. I care a lot about the projects that I'm working on and I feel very invested in them. I think a good employer will also recognise that caring about your work is important and where possible will encourage you to pursue the projects that matter to you; this is beneficial for them too. I'm fortunate that this is the case in my current position. I do think this is a little different to academia though, as I mentioned above you have to be prepared to work on projects and meet deadlines that don't always align with the projects you really like or prefer to work on. So while I do work on many projects that I really care about, sometimes I have to work on topics that are not that interesting to me. But this is okay, and I think it's important to acknowledge that this happens too. As long as there's a balance that keeps everyone satisfied, this can work well. I would definitely recommend bringing up this topic during any interviews. I know it sounds obvious, but it's important to know how you will spend your time and to be clear about what projects and topics you will be required to work on, e.g. which parts of the job description carry the most weight in terms of time spent.

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?

There is definitely less freedom than in academia, but I think the degree to which it is different depends on the job. I've had a few different roles in the company I work for. In my current role, I do have a lot of freedom to work on projects that I find interesting, and this is because we are setting up many new things and developing an education strategy within the company. This means there is a lot of scope for new ideas and projects that I would personally like to pursue. I think this freedom also comes from experience or seniority in the company, as I mentioned above, my current role is quite new to me and is a promotion that allows me some more freedom with topics (while still aligning with the company goals of course). So it might be unrealistic to expect a lot of freedom as a new hire, but it is worth considering how that could change as you progress in your chosen career and/or within a specific company.

In my previous roles in the company, particularly those in customer support, there was much less freedom to pursue projects I was interested in; the daily work was driven by the needs of the customers. In my more research and development-oriented role, the decision regarding what to develop and when was not mine to

make; it was a collective decision by all stakeholders in the company. This meant that I was not always working on something I was interested in or passionate about. But, it’s important to find a balance.

Have you thought about returning to academia?

Yes, I’ve thought about returning to academia a couple of times. The first time was actually quite soon after leaving. I missed working on my research projects, I was still interested in them and I was still writing up some papers from the last project I finished so I remained very close to the topic. I was also struggling to adjust to the less independent working style associated with starting a new job in industry, and I was questioning whether I had made the right decision. I went from being autonomous and working independently to having my every task supervised and checked. It’s also worth noting that I came to my first job in industry after almost 10 years of postdoc research, while most other team members came directly from their PhD without any work experience outside of that. I really felt like I had taken a step backwards in my career and that maybe I should reconsider my choice. After a few more months of learning the new job, I settled into it and adapted to the working style of the team I was working in, and I decided to continue. The second time I genuinely considered returning to academia was maybe 2 years after leaving. It was due to a combination of not feeling challenged in the right way in the customer support role that I was in and the limited project-related freedom associated with that role. I wasn’t comfortable with the job not matching my preferred working style and I didn’t feel that I was working to my full potential. This led to frustration with my work situation and pushed me to reconsider my career plans. At the same time, I was also considering moving back to the UK for personal reasons and I started to look for a job in academia. After discussing my concerns with the management of the company I work for, I was assigned a new role as an application specialist. I found what I was looking for in the role, in terms of job satisfaction, and I decided to stay in industry. It’s been a few years since I had the feeling that I might like to return to academia, and I would be surprised if that feeling came back.

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

Figure out what’s important to you. I know this sounds obvious, but it actually took me a little while to understand what motivates me, what I want to get out of my career and my daily work, and how I would like to balance that with my non-work life. Related to this point is setting boundaries; know what you want to get from

your work but also what you're prepared to give. It's very easy to get caught up in the unhealthy work culture often associated with academia, especially for new PhDs. It's okay to set boundaries with your time and your commitments, in fact I would consider it essential. Being good at your job and committed to your research doesn't mean you have to sacrifice other aspects of your life.

Acknowledge that it's okay to question your choices and change your mind. If you find yourself questioning the path you've chosen, that's fine. It's healthy to evaluate your situation and it might lead to staying where you are or finding new challenges. Either way, regularly evaluating your career and whether you are moving in the direction you want is beneficial.

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

It's okay to not know exactly what you want to do for the rest of your career. As long as you make smart decisions about what skills to work on and what experience to gain, you can figure some things out as you go. The non-subject skills learned during a PhD will take you far, even if you decide not to stay in academia. It's important to remember that and to take opportunities to develop communication, writing, project management skills, etc. and to acknowledge these skills in job applications. A PhD prepares you for much more than you can imagine when you're lost in the very focussed, almost self-centred, task of writing up your thesis.

Thank you for sharing your advice with us, Tracy!

“My Work-Life Balance Has Clearly Separated Boundaries”



Ben Toovey



Ben Toovey

Abstract In our interview with Ben Toovey, he shares his journey from cognitive psychology to a scientific support consultant role at a neuroscience equipment company. Initially planning a research career, Ben became disillusioned with academia after an unproductive postdoc experience. He now handles customer requests, sales, and R&D projects related to EEG products. Ben values the separation between work and personal life but misses conducting research. He continues applying problem-solving and technical skills from his PhD. Ben experienced grief initially leaving academia, but sees it as the best path forward. He advises being realistic about limited academic positions and recognising industry interest in expertise. Ben encourages viewing non-academic careers positively, not as failure.

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B. Toovey (✉)
Scientific Support Consultant, Easycap GmbH, Wörthsee, Germany

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

Ben: My name is Ben Toovey; I originally hail from a small village called Lindford in Hampshire, United Kingdom – which has one church, one pub, and a sixteenth century water mill. I studied Psychology in Bangor, North Wales for my Bachelor and Master courses, and I've lived and worked in Germany since 2018.

I now work as a scientific support consultant for a company called Easycap GmbH, which sits in a quiet town about 35 km west of Munich. We are a company specialised in manufacturing equipment for neuroscience research, predominantly research-grade electrodes or connectors, as well as hand-made and customisable caps for recording electroencephalography (EEG) from humans and animals. The brand and our products are well known in the sector, and we have recently had our equipment featured in Nobel Prize winning research, National Geographic articles, and even delivered to the International Space Station. In fact, during my PhD I was using many of the products I now work with, customise, and sell on a daily basis.

What was the focus of your PhD?

I completed my PhD at the University of Surrey in 2018 under the guidance of Prof. Annette Sterr and Dr. Ellen Seiss, in the Brain & Behaviour group. The focus of my PhD was in cognitive psychology. Over the course of my program, I conducted four experiments, three of which were purely behavioural. I instructed my participants to either imagine a foot or hand movement or prepare to make such a movement, prior to an instruction which told them to physically execute a specific movement. In this task, the physical movement count be the same or opposite to the hand which was first prepared or imagined. What I found was that the difference in response time for

the correct vs incorrect response times was larger in the imagery priming condition than the preparation condition. This is important because it was the first set of experiments which showed that, contrary to what the theory of neural simulation of action, which is still the prevailing theory of motor imagery, would predict.

In a final experiment, I used electroencephalography (EEG) to record the neural signals of another set of participants doing the same task. Due to my decision at the time to use foot motor imagery and action (whose responsible regions of neo-cortex are very close together) instead of hand motor imagery and action (whose regions are separated by several centimetres between the two hemispheres of the brain), although I found the same pattern of behavioural differences as I had observed in my behavioural experiments, I was unable to detect any differences in my neural data. Unfortunately, I had no longer the time or resources to make a second attempt, and that is where the line was drawn. While my behavioural studies were recently published successfully in a peer reviewed journal, my supervisors and I are discussing re-analysing the EEG data and attempting to publish it, but it takes a lot of motivation to open something like Matlab and all my protocols and documentation again!

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

Ever since the start of my PhD, I was motivated by the idea of moving to Europe for some sort of research position once I had finished. By the end of my PhD, I had secured a 5-month research internship in Germany at the University of Oldenburg, working with Prof. Stefan Debener. At this point in my studies, I had become a bit demotivated about my project, so this visit really reinvigorated me. The research group was cutting-edge, I was surrounded by enthusiasm and expertise, and I felt like this sort of environment was where I belonged long term.

How have your career plans changed as you’ve continued on to your current position?

A common theme which I have heard over and over in academia is that there isn’t really a work-life balance. Indeed I get the impression that many people need to either be very lucky or very motivated that they can allow their research work to not interfere with their home life, or vice versa. In my case, my short visit to Oldenburg allowed me the chance to meet a wonderful person who I am now lucky enough to call my wife. At the end of my PhD, she had started hers at the University of Leipzig, and I can say now rather confidently that such any long-term long-distance relationship probably wouldn’t have survived very long had I not managed to go out to Germany as well. In the end, I finished my PhD and secured my first and

only postdoctoral research position at a smaller university, nearby hers, in the psychology department.

My postdoc there, which lasted for about three years, was anything but easy. The relationship with my supervisor was strained, to the point that once my contract was drawing to a close I had barely any interest in pursuing any more academic positions. This was compounded upon by a rather unproductive adjustment period when the COVID-19 pandemic struck, which made the pursuit of novel cognitive psychology projects (despite my very best attempts) very difficult. This brief postdoc had the largest shaping influence on my current career trajectory.

Do you have any particular advice you can share related to why your post-doc didn't go so well?

This is an interesting question. One reason it didn't go so well is the language barrier, since when I moved over I didn't know a lick of German. This meant that I felt like I couldn't settle into my research group very quickly. The second and more significant reason is that my supervisor micromanaged my projects throughout the postdoc to the point where any decision that I made had to be the one that my supervisor insisted on (and hence, it was not really my decision). Obviously, the work I was hired to do needed to be done, and our successful publication is testament to that. However, many of my suggestions for improvements to experimental protocols were dismissed, and I wasted many hours formulating a series of experimental designs and rationales for a funding application according to my supervisor's requirements, only for the entire thing to be canned and rewritten at the last minute.

The most stressful thing was at the end of the contract. Despite being unenthusiastic about academia, I felt a bit trapped in the system and so needed to find additional funded positions to have a chance of continuing my work. I had enquired with a potential supervisor in a different university in Germany about putting together an application for a self-funded position through the German Research Foundation (DFG), instead of with my supervisor at the time. This was because I didn't have a guaranteed position after my current funding ran out, nor was the funding application we had written and planned to submit a surefire position, so I figured I needed to apply more broadly to give myself the best chance of staying employed. Once I announced my intention to look for a new position in a different group to my supervisor at the time, they threatened to terminate my remaining contract on the spot, unless I first made the application with them. This was, in my mind, sabotage. It was an act of external control over my future, which I found irreconcilable with the fact that my position as a non-Professor-level academic in Germany was short-term, time-limited and insecure, whereas my supervisor had the relative luxury of a tenured position. Hence, I politely informed both the current and potential supervisors about my intention to withdraw from any future applications and that was that. This soured the relationship for the remaining months of my contract and set me firmly on the path away from academia.

Can you tell us a bit about what day-to-day life is like in your current position?

Day to day is very sales-oriented, which was a bit of an adjustment for me, although this has been more regarding using the software we have for stock management, for generating quotes, for navigating documentation, and for general product knowledge. In my role as a scientific support consultant, I also deal with requests from customers, who are typically researchers, who need consultation for example on a new custom cap design or for which equipment to buy for their project. I work in close connection with colleagues in logistics and production, and with my fellow “supporters” (we are 3), who are all also former academics with a neuroscience or psychology background.

I also work on more behind-the-scenes projects, such as handling relationships and sales agreements with distributors who sell our products in foreign countries, or companies for whom we make customised solutions for their products.

Finally, I have some responsibilities for research and development tasks. For instance, I recently designed a connector adapter which should aid researchers to keep more of their data when using a special type of printed EEG grid. This is something I am quite proud of, since the project has the hallmarks of scientific work still – I found a gap in the literature, designed, and tested a solution, and this has now been built and sold a couple of times to interested groups.

What do you like most about your work?

My work-life balance has clearly separated boundaries. I don’t remember the last time I picked up my laptop to work after I clocked off to go home, and I don’t remember the last time I needed to rush to get any work done on the weekend. I also like – if I can pick two “mosts!” – that my career is no longer dependent on a continual competition for shrinking pools of funding and approval from multiple different interest groups.

And what do you like least about your work?

I like the least that I can no longer do cognitive psychology research! I feel like I left the field with a lot of unanswered questions and a lot of good project ideas still untested. I still read articles when I can, but it’s not the same. When I finished my post-doc and moved on, I initially considered starting an independent blog or video series aimed at undergraduate level students on how to conceive, implement, analyse, and write up simple psychology experiments with the help of open source software such as JASP or R for statistics and PsychoPy for experimental design.

This so far has yet to materialise, but watch this space....

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

My PhD gave me the knowledge of a certain ecosystem of products from the perspective of a user, which helps because I know what researchers need when they are looking for certain solutions to their problems. Besides that, I suppose obtaining the PhD has proved that my aptitudes are being a quick learner and good problem solver, both of which are fairly integral to my current job.

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 like to say that my particular career is sort of an inversion of the academic pathway. My job is fairly secure, and while I still use my skills that I learned during my PhD, I do it to a much lesser degree. That is, my intellectual and creative freedom has dropped substantially compared to my PhD and postdoc, but my compensation is in the form of better job security, an ability to plan my future with more long-term goals already in mind, and better pay.

I wouldn't say this is a zero-sum trade-off, but sometimes I reflect on it (like during this interview) and it seems like it is in my case. So ultimately, it falls on the PhD student to decide where they want to carve out their interests – whether they are ok with fewer intellectual freedoms but more stability, or vice versa.

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

It's difficult to suggest how to better prepare oneself, given I made a relatively last minute decision to leave academia based on my postdoc experience. There was no protracted job search or a vast number of failed job applications on which to draw lessons from. I first submitted an application to be a user experience researcher with a large video game development company based in Dusseldorf which I never heard back from, and then I applied for my current job, and that was a success.

As a concrete answer, I think researching your options is the most significant part of making a lateral transition out of academia into an academia-related industry. Simply knowing which companies exist that produce or consult in your field is a big advantage. In my case, I was familiar with the products my current company manufactures since I used them during my PhD, and this explicitly helped me during my interview stage (or so I was told afterwards).

Another piece of advice would be to learn how to create a good, clear, industry-oriented CV. Don't list all your publications and their minutia. Don't waffle about your summer school internship in Lanzarote. Get to the point and make your experiences directly relevant to the job you're applying to.

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?

In my current position, I periodically get an opportunity to work on projects with end-users for things that I am genuinely passionate about. For instance, I've recently worked on a project with a company that is developing EEG equipment for educational reasons, like teaching high school students or enthusiastic undergraduates about neurophysiological methods. I think widening access to science is a hugely important topic, so for me that has been quite rewarding.

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?

We're not a particularly large or complex company. We specialise in a few areas of scientific device manufacture and support, and our freedom to innovate further in these areas depends on whether there is an obvious need for certain devices. We most often detect this need based on whether there is an increasing volume of specific requests for a certain type of help or product. However, the connector adapter I developed (as I described above) was entirely self-identified and motivated. Although it became a successful product, this tends to be the exception rather than the norm.

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

Oof. Be realistic about your current trajectory. Academia is incredibly internally competitive – the number of available positions is growing slower than the number of your peers competing for those positions. On the other hand, you will find that

companies are often competing with each other for your expertise. While there are many great benefits to being in academia, there is still a certain degree of luck as to whether you'll still be employed which may not be tolerable after 5 years of working, and much less after 10. And I know some individuals still in academia who are in exactly that position.

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

Academia is not a bad choice! Many people thrive in its environment, and the pursuit of knowledge and all that it entails is still highly rewarding. My only plea is that people are realistic about it. I think the sooner people can make a decision about whether to stay or not, the better their mindset would be in the long term, whichever option they choose.

Likewise, leaving academia for a job in a company is not "giving up", and it is certainly not failure. I personally went through a small period of what I refer to as "grief" once I realised I was leaving academia. It was initially quite difficult for me to accept, and sometimes I wonder whether others have been through a similar transition. But on reflection, this was a totally normally emotional response. It was grief because it felt, to me, unforced, that I had little control over it, like I had failed in some way to chart my own course. But looking back, it gave me all the best opportunities I could ask for, and I'm absolutely certain this was not a mistake.

Thanks for sharing your journey with us, Ben!

“The Process of Doing a PhD Isn’t About the Outcome of the Research or Getting the Qualification – It’s About Developing Yourself”



Jade Pickering



Jade Pickering

Abstract In our interview with Jade Pickering, she shares her journey from studying impulsivity in Parkinson’s to heading the product team at an online experiment platform. Realising an academic position was not her lifelong passion; Jade explored alternative roles through networking. She values autonomy, trusting relationships, and promoting open science. Jade continues applying user experience (UX) knowledge, research skills, and analytical abilities honed during her PhD. Though sometimes still perfectionistic, she focuses on impact and productivity. Jade encourages getting involved in your field of interest and building an industry-focused network. Jade advises considering the PhD as a time to develop yourself.

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J. Pickering (✉)
Head of Product (UX Lead), Gorilla Experiment Builder, Cauldron Science Ltd,
Manchester, UK

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

Jade: I'm Jade and I'm currently Head of Product at Gorilla Experiment Builder (Cauldron Science Ltd). Gorilla is a platform for behavioural scientists to create surveys, reaction time tasks, gamified tasks, simulated shops, multiplayer social experiments, and more – all in the browser!

In reality my role is very fluid and I choose a lot of my own projects – we're a startup and so there's a lot of room for getting stuck into all aspects of the company! Ultimately my job involves talking to users (researchers both in and out of academia) and finding out where they get stuck with our platform. I then use those insights to make the platform easier for them to use.

I do a bit of work on our support desk (how many other support desks can say they're staffed entirely by behavioural scientists and engineers?). If a researcher is struggling to figure out how to make their vision happen on Gorilla, my colleagues and I will help them implement it. It's like collaborating on hundreds of different research projects, but much less stressful than doing it as an academic!

I also established our user experience (UX) research team. It's fun and exciting to use my research skills in a setting where I can create impact instantly. It's much more collaborative and fast paced than I was used to from academia, and I've learned a lot of new research methods.

I also do a variety of other things: data analysis, writing support documentation, and line management. I have my fingers in many pies at Gorilla, and I do whatever I feel needs doing. Every day is different!

What was the focus of your PhD?

I did my PhD in Psychology in the Division of Neuroscience and Experimental Psychology at the University of Manchester, starting in 2016 and finishing in 2020. My supervisors – Dr Ellen Poliakoff, Dr Jennifer McBride, and Dr Iracema

Leroi – were absolutely fantastic and really made me feel supported for the entire journey. I focused on impulsive behaviour and inhibitory control in people with Parkinson’s, particularly those who experienced “Impulse Control Behaviours” as a side effect of dopamine agonist medication. Impulsivity is such a broad and multi-faceted construct – I was breaking it down and looking at whether Parkinson’s itself or the dopamine agonists were affecting behaviour, or an interaction between the two.

The end goal was a mobile app where people with Parkinson’s could practise inhibitory motor control and see if any practice effects generalised to a reduction in their experiences of Impulse Control Behaviours. Covid-19 arrived near the end of the PhD, and so I didn’t quite get to do everything I’d wanted but that’s okay. My PhD in general was great and I’m grateful to have had such a positive experience.

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

I knew I would only go so far on the academic journey. There was no appeal for me in reaching any seniority beyond a postdoc or having the responsibility of starting and growing a lab group, applying for funding, teaching, or working within the current academic incentive system.

Importantly, I also struggled to find a line of enquiry to stick to in my research. I’m too interested in multiple topics to focus and drill down into a select few topics – I’m happier taking a step back and being more involved in the technical aspects of research such as planning, designing, coding, running experiments, and analysing the data.

I had a great first postdoc experience; there was a small bit of funding available at the beginning of the Covid-19 pandemic that came at a perfect time for me. I had a lot of fun working with my PI (Dr Aidan Horner, University of York) on a Registered Report looking at transfer effects in episodic memory retrieval and I’m proud of the work we managed to complete. I’m sure Aidan thought I was mad for trying to do a Registered Report in such a short space of time (4–5 months, I think!) but he trusted me to pull it off. I enjoyed the environment – the lab group was just so comfortable to be a part of.

When the funding ended, I moved on to a second postdoc but that’s when I started getting tired. Academia and research didn’t feel so fun anymore, and I wanted to do something that aligned my interests more closely with my skills. I wanted to spend more of my days doing work that I was good at and which I enjoyed. I wanted to be in the kind of environment I’d experienced before where I felt I was contributing value. So I ended up transitioning onto a new path earlier than I’d originally planned to.

I was keeping a casual eye on jobs as a psychology technician, in UX research, data analysis, etc. and keeping an open mind. When a job came up at Gorilla (I was

originally a Customer Success and Support Officer), I went for it. It seemed perfect! I'd used Gorilla in my own research, I believed in what they were trying to achieve, and (importantly for me!) I knew they aligned on my ongoing mission to make science open and reproducible. I jumped, and they hired me! It's been just over a year and a half and I can't imagine being anywhere else now.

How have your career plans changed as you've continued on to your current position?

They haven't changed much, really. I think it's more the case that I've solidified my plans in my head because I'm finally doing the work that I'd first read about before I even started my undergraduate degree. About 12 years ago, I first came across the role "User Experience Researcher" when looking at career options at games studios, thought it sounded really cool, and in this context, it blended two of my biggest interests: psychology and video games. The ability to shape a product through research so that it was based on the needs of the end users was a new concept to me at the time. I discovered that the role of UX research exists in many companies and many products, both physical and digital, and I never lost my interest in it.

I was definitely focusing on the idea of being a UX researcher in a games company for a long time during my degrees, but I decided against it because I didn't want to get spoilers for games while working on them! I slowly started to drift away from the idea of working in a games studio, and during my PhD, I started seeing parallels between the work I was already doing and the work I wanted to do. Part of my work with people with Parkinson's focused heavily on Patient and Public Involvement – I involved people with Parkinson's at every stage of my research, from shaping research questions to deciding methodology, to piloting my experiments, to the analysis, and to lay summaries. I was already shaping what I did to the needs of the end users and knew that I enjoyed that aspect of my work.

Funnily enough, my role at Gorilla didn't involve UX research originally, and there was no established UX research pipeline for product development. I mentioned my interest in UX research on my job application though and my now bosses had spotted it and, I think, saw potential for me to initiate this work at Gorilla. I wasn't hired as a UX researcher though – as we're a small start-up with flexibility in our work week, I used my initiative and started training myself up. Little by little I've established the UX team and incorporated new research methodology into the development of Gorilla. I'm really proud of that! It was something they had wanted to do for a while, and it was a great feeling to join the company and get it kick started. Now that I do UX research as part of my job, but with flexibility for being involved in lots of things in the company – I'm living my dream! My problem in academia was that I couldn't stick to one thing. Here I get to do the thing I've always wanted (UX research) *plus* a little bit of everything else!

So my plans haven't changed, I've just become extra committed to the work I love!

Can you tell us a bit about what day-to-day life is like in your current position?

I work from home, so I control my schedule. I’m an early riser so I often start work at about 7am and deal with any emails or anything that needs my attention first over my morning cup of tea! Sometimes there will be a support ticket that I need to reply to, or a really important string of cat gifs or something in our general company chat that I need to catch up on. Then, with those tasks out of my headspace and while things are quiet, I’ll get stuck into a project. My projects can vary but I usually have some of the following types of projects on the go: writing/editing support documentation, designing a new feature or tool, some data to analyse in R, some research planning or synthesis, training, etc. We tend to have a few meetings in the mornings, especially in the first half of the week so that we get dedicated project time later in the week, but I always make time for a break away from my PC around mid-morning.

At 11am, we have the daily team stand-up which is a chance to all be on a call together, see each other’s faces, have a chat, go over our current plans and goals, ask questions about anything we’re stuck on, etc. It’s really lovely to have this when you work remotely. We’re a close team, and it’s nice to just have the dedicated time to spend together each day. After that I’ll usually do a couple of smaller bits of work – by this time there’s usually team chatter that requires my attention (help with support tickets, getting each other unstuck with tasks, some new emails). After lunch, and sometimes an extended break if I fancy it because I start so early, I’ll then get stuck into another big piece of work. For example, currently my big piece of work is to go over all of our newest tooling (Questionnaire Builder 2, Task Builder 2) and turn the functionality from just powerful, to powerful *and* easier to use. So I’m looking at interview data, performing heuristic evaluations, and wireframing new designs to improve usability. Next I’ll spend more time talking to users about the changes and making further improvements based on that.

I finish my day when I feel I’m soon to lose concentration. I don’t really pay attention to the time or the hours – I’ve learned to listen to my body and make use of productive time (like starting early in the morning!) and to quit while I’m ahead. I find mid-afternoon is when I start to slow down, so I’ll usually finish the day wrapping up small tasks and writing down what I need to do the next day. I usually choose what I do when, and there’s a lot of flexibility to structure my day around what works best for me.

What do you like most about your work?

Pretty much everything! The overall goal is to make Gorilla the best it can be, and so I use my initiative to get that job done. It means I have a lot of flexibility and space to try out ideas that I think would work well towards that goal. Our brilliant

CEO Jo Evershed and CTO Nick Hodges put a lot of trust in me to see that through, and early on in my time working for Gorilla, they instilled the idea in me to “ask for forgiveness, not permission” and to just do what I think is best. I ran wild with that trust and ultimately it’s given me the space to really drive things forward. In academia I learned to be an independent researcher, and here they trust my independence to use my time wisely and to have the autonomy to dictate my own time and projects. I’ll check in with them on my ideas and I know they’ll tell me if I’m ever on the wrong track, but so far this has meant that I spend a lot of time with so much freedom. It feels great to have a shared vision with the team and always be working towards that goal in the best way we see fit. It’s awesome to feel valued and trusted.

I like working in the support team. One of the really unique things at Gorilla that we’re very proud of is our specialised support desk – most of the company is involved in the support desk in one way or another. Other software like ours have forums and community support – which is great – but often you can be waiting a while for a reply or it relies on a few external champions of that software giving up their free time to provide answers. While we do have community support, we also provide an avenue for researchers to get access to direct support from experts in behavioural science who know Gorilla like the back of their hand. The support team at Gorilla are a mix of psychology graduates, PhDs, ex-academics, and engineers. I love being part of that team! We get all sorts of requests from basic technical queries to advanced methodological queries, and the questions come from students all the way up to professors. All of us on the support desk love getting to put our education and experience into practice and solving our users’ issues within a matter of hours. We get overwhelmingly positive feedback about the level and speed of support we offer – and every week we review the praise we’ve gotten at a team meeting. We help so many people move their research forward, and it feels really good to do it and to hear from researchers how much we’ve helped. I get to be involved in research and I really believe in the value that we bring to universities all over the globe through the support desk.

I’m always using the knowledge I gained from my decade spent on my psychology degrees and working in academia. One of the biggest things I first became passionate about during the first year of my undergraduate degree was the issue of open science. A lot of my PhD time was spent working on issues and projects related to replicability, reproducibility, and transparency. I am extraordinarily lucky to now work in a company that values open science, and so I get to continue championing open science even now but from a different perspective! In academia, I was focused on improving the research landscape through methodology such as pre-registration and evidence synthesis and structurally in institutions in terms of thinking about incentives. While these things are still extremely important to me, I also now get to incorporate my passion for open science from an infrastructure perspective – making sure that Gorilla becomes a central part of supporting open science.

And what do you like least about your work?

There’s very little that I don’t like. I get to dictate what my job involves – we review our work and we make sure to keep a good balance of work that ranges from easy to difficult with most of the workload being in the middle category of “good use of my skills” so that we’re challenged in a way that feels satisfying. If we don’t enjoy something, we hand it over to someone that does. If we do enjoy something, we keep those tasks. In between those reviews, we work as a team so that the best person for the job is usually the one doing it anyway.

I do spend a lot more time in meetings than I used to as a postdoc, which can sometimes feel a bit frustrating when I want to sink my teeth into some “proper” work, but even that process we’ve worked to change and improve as a company. We’ve changed our working pattern so that we now have shorter meetings for concise check-ins and bigger meetings for collaborative working on projects. Basically, less time is spent talking about doing things and more time actually doing things! It’s what I love the most about this environment – we’re all working together towards the same goal which is to make Gorilla the best it can be, and so we’re all aligned on making our work life focused on that goal.

Sometimes it can be frustrating if a project doesn’t go according to plan, or takes longer than envisioned. But I think this is true of any project anywhere. One thing I’ve found difficult to let go of is my idea of perfection. In a business, it doesn’t make sense to do everything to perfection because you’re just wasting company time. Spending 80% of my time on the last 20% of a project isn’t the way to go! But I’m learning to let go, slowly but surely, so that I concentrate on productivity with impact rather than getting bogged down in the unnecessary finishing touches.

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

The process of doing a PhD isn’t about the outcome of the research or getting the qualification, it’s about developing yourself. The journey to being an independent researcher has taught me so much. I don’t think much of my PhD research per se is what made me the person I am today, it’s all the stuff that went on around it: the relationships I built, the Patient and Public Involvement work, championing the open science agenda, the networks and organisations (such as academic/open science Twitter, ReproducibiliTea, the UK Reproducibility Network, the Centre for Open Science, and the Society for the Improvement of Psychological Science), and much more.

Working with people with Parkinson’s was also so rewarding because it broadened my understanding of science and constantly reminded me that science is for the public and not for me. There are real stakeholders in my work, and they are the people I need to be constantly thinking about and working for. In UX research, we

have a concept called a persona, which is a description of an imaginary user that is supposed to represent your user-base or a subset of your user base that you're building a product or feature for. Without realising it, I was creating personas in my head during my PhD. I was working for people with Parkinson's and always making sure my experiments were suitable for an imaginary person with Parkinson's. So I was already starting to implement some of the principles of UX work in my everyday research.

Through my dedication to improving psychological research and science as a whole, I learned the skill to advocate for what I believe in. As a PhD researcher, I learned to be independent and to take the initiative to get things done. I learned management skills when supervising project students. I learned to listen when I worked with my Patient and Public Involvement team. I learned how to learn and figured out the best way to develop new skills to develop myself even further.

There's no end to the things I learned during my PhD that I now put into practice every single day.

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

Get involved in the field now and find out – don't wait. There are plenty of free online webinars, conferences, blogs, vlogs, Facebook groups, LinkedIn networking opportunities, etc. There are also organisations such as ADPList where you can access free mentors in your chosen field. These fields mostly operate on LinkedIn so make sure you have a presence there and read the resources posted by the people that are already working in that field. Do you enjoy reading them, and do you like the vibe? Then it might be a good fit!

Facebook groups are particularly good if you belong to a historically underserved group, e.g. there are UX groups specifically for women generally, Black women, caregivers, neurodivergent researchers, etc. You'll know if this position is something you want to do once you start to consume the information and get a sense of what the day to day involves and how that might fit into the way you live your life – or the way you *want* to live your life.

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

Just like in academia, there's a hidden curriculum. I still don't know how much I don't yet know, but there are a few things I've picked up. The first is that the way you market yourself is *really* important – you need to forget about all the metrics

that mattered in academia and start thinking in terms of transferable skills and your value. Look at your CV/resume and scrap the grants, the published papers, the modules you taught, and the conferences you went to – none of it matters for these types of job applications. Those in charge of hiring care that you’re independent, skilled, and can easily adapt to new environments and learn new skills. They want to know what you can do and what impact you’ve had – or could have – on the world around you. It’s really hard writing a non-academic CV after spending so long with the academic mindset, but a mentor can really help you here.

LinkedIn is really important – get a presence and start networking with people with similar job titles to the one that you want, particularly in fields that you’re interested in. Make sure that you add a message to say why you’d like to connect. Start absorbing the content that others provide and start tweaking your profile for the job you want and not the job you currently have.

Many jobs in UX research and design, especially in the larger companies, are influenced by internal referrals. Network at an organisation you want to join, find someone who already works in the department, and message them (yes, out of the blue!) to tell them briefly about yourself and ask if they do referrals and whether they would be willing to refer you. People are often happy to do this because if you’re hired they might get a bonus for bringing in good talent! It really depends on the organisation. Your application would likely be given more weight if you go this route.

For a lot of these jobs, you’ll need a portfolio of your previous work, and your PhD research does count. There’s loads of advice online about how to create them, but the most specific thing you’d need to learn is how to market your academic work. Focus on general methods (i.e. the skills) plus outcomes, insights, and impacts.

Finally, learn the lingo and gain new skills. Learn to talk in their terms, rather than the terms you’re used to. For example, a between-subjects study with participants randomised to two different groups is the equivalent of an A/B test in UX research. There are plenty of online courses in UX design and research and loads of YouTube tutorials. You can familiarise yourself with the industry standard software this way too.

There are loads of resources out there!

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?

Definitely! I work for a company who are experts in behavioural research methods so I’m already working really closely on a topic I care about. But the actual day-to-day work I do could equally be done in many other different companies. Essentially, finding the right fit is about looking at two aspects: (1) What are you passionate

about? and (2) Which of your skills do you enjoy using? Once you have those answers, you find the jobs at the intersection of those two things. For example, (1) I really care about animals. (2) I also like looking at and analysing data to answer research questions. Therefore, I could seek jobs in animal-related non-profits as a data analyst or researcher.

You're less likely to go into as much depth as you might in an academic research topic, but you'll definitely cover some breadth! I find that more rewarding, actually. I now do fast-paced projects that deliver something actionable, and it enables me to create change, which is something I never felt I could really achieve in academia. Right now in my current job we're a significant way in to a project that started 3 months ago and will result in a brand-new tool for our platform. We've done the initial user research, the UI and UX design work, and we're now in the final iterative prototyping stage and handing off to the development team ready for release in 3 more months.

I love seeing the outcomes of my work and knowing that I'll see real-world changes sooner rather than later. It's a huge bonus for me that it's all in the name of helping to improve science which is one of the things I care most about in this world.

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 used to feel like that! I thought academia would give me all the freedom I needed to pursue what I was really interested in, and I thought that in industry I'd just be a meaningless cog in a business that only cared about profit. I was wrong! Academia left me feeling like I had very little time to do the things I wanted to do, and it was hard to find those moments where what I was doing felt valuable. I could work on the same project for a long time and never feel like I was having any impact or contributing to the world.

Instead I've found a company that aligns with my goals and values with much easier access to budget to pursue my aims because they align with the company aims. I now have a lot more freedom than I had in academia. In academia there are so many extra things you have to do all the time even if you just want to do research – applying for grants, an ever-increasing amount of admin, teaching classes, supervising students, being on various committees, and preparing yourself to be assessed on various outdated metrics. I very rarely see research academics with *time* to do the things they enjoy. Research projects seem to end up being pushed forwards by their students while they compete for grants that they, sadly, struggle to get.

I have none of these concerns anymore. My time is precious, both to me and the business – so we're all invested in making the most of it. If I'm wasting my time on things that don't push my projects forward, then that's bad for me and bad for the

company. If I’m dragging my heels on a project that I am struggling to maintain an interest in, then that’s bad too – so someone better suited will take on the work instead. I’ll then take on things I enjoy that other people are struggling with. It’s a much better system. I can propose projects and have the project start within a day if it’s a good idea.

As I said, it has to be within the best interests of the company, but because the goals of the company aligns with my own beliefs and passions, this isn’t difficult to achieve! I can’t spend my work time doing unrelated projects, but because I have the freedom to work flexibly, I can still keep one foot (perhaps just a couple of toes) in the academic world and be involved with initiatives that I’m passionate about like the projects that arise from the Society for the Improvement of Psychological Science conference and other collaborative work. I ring-fence my work time and use some spare time for the other things I’m interested in.

Have you thought about returning to academia?

Yes, I’ve thought about it but I decided against it. I really enjoyed my PhD and some of my postdoc life and I wouldn’t trade those experiences, but that’s where my journey on the academic pathway ends. I enjoyed so many aspects of being an early career researcher, but I don’t want to be an academic going forward. I would only enjoy some aspects of the job, probably the minority of the job the longer I worked as an academic, and I want to enjoy all of my job or as much of it as I can. Being in academia was the right place for me at the time, but not forever. No one knows what the future holds, but as things stand, I wouldn’t go down that career pathway again. I’ll go or stay where my enjoyment of life takes me!

Having said that, talking of “returning” sounds as though I’ve left and closed the door. I haven’t – I’m still involved in communities and projects and I give as little or as much as I like to them. If I did want to return to an academic career in the future, there is very little stopping me.

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

Even though it might not feel like it right now, the thesis isn’t the end product of your PhD – *you are*. Don’t lose sight of developing yourself while you work to bring together the last few years of your research. Your research may not have been perfect – in fact, I’d wager it wasn’t perfect at all – but that’s okay because you don’t need to be perfect. You just need to have learned and to have gained faith in your

skills and to believe in what you can achieve. If you're finishing your PhD right now, you've already won.

The thesis and the viva (or defence, depending on which country you're from!) is a milestone you need to reach before you can finish, of course, but you have already got the value from your PhD. You are already valuable.

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

When you're doing a PhD, it can be really easy to feel that you don't have any special skills because everyone around you is also ridiculously talented and super smart. But the real world is much more varied than the academic world, and your skills are actually quite rare – most of the population don't have what you have or think the way you do. We normalise the level of talent that we have until we no longer believe we're exceptional. But people with PhDs have a lot of value on the job market – we've proven that we can do a huge and solid piece of work independently, and there are so many skills that come alongside it, for example technical, methodical, interpersonal, and thinking skills.

Thank you for sharing your advice with us, Jade!

“I Love Helping People Communicate Their Ideas and Maximize the Impact of Their Work”



Sarah Treit



Sarah Treit

Abstract In our interview with Sarah Treit, she shares her journey from completing a PhD in neuroimaging to becoming an entrepreneur and consultant. Initially planning for a research career, Sarah became interested in science communication, realizing her passion for making figures and writing grants. She started her own company, Figures First Consulting, through which she provides services editing manuscripts and grants, making figures, and teaching workshops on effective visual communication. Sarah highlights the importance of networking with peers and exploring interests outside your PhD. She advises those considering consulting to be self-motivated yet adaptable, gain experience publishing and reviewing grants, and learn business skills. Though no longer doing her own research, Sarah finds meaning assisting others and exploring diverse topics. She values the autonomy consulting provides to pursue interesting projects.

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

Sarah: My name is Sarah Treit and I am the founder of a company called Figures First Consulting. Through this company, I offer consulting services to PIs who are writing manuscripts and grants by helping with grant development, writing, editing, and creation of figures. I also offer educational workshops and online courses to help graduate students and other trainees learn how to create more effective scientific figures, graphical abstracts, posters, and more. Scientific figures are a critical aspect of science communication and can have a huge impact on how results are interpreted, remembered, and shared. I love helping people communicate their ideas to maximize the impact of their work.

What was the focus of your PhD?

I received my PhD in 2015 from the University of Alberta. My area of research was neuroimaging (structural MRI) of brain development in children with fetal alcohol spectrum disorders. My project was very interdisciplinary (one of my supervisors was in Biomedical Engineering and the other was in Pediatrics), which provided me with lots of unique experiences and opened my eyes to the importance of effective communication between disciplines.

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

When I finished my PhD, for personal reasons I had to stay in Edmonton, so I knew doing a postdoc was not really in the cards. I had never planned on pursuing a tenure-track position, but also knew I wanted to stay in research so I struggled to figure out what that might look like career wise. I worked for several years as a Research Associate in Biomedical Engineering at the University of Alberta, which allowed me to continue publishing and build some research experience in other areas (mostly within Neurology). Eventually, I decided I wanted the autonomy of working for myself and was excited by the prospects of entrepreneurship, so decided to start my own company.

How did you decide what would be the focus of your company?

I have always had a passion for communicating science. My favorite part of every project is sitting down with the results, visualizing my findings, and writing the paper. I have always loved making figures and coming up with new and creative ways to display data. At the same time, I have noticed that this is an area that many students struggle with, in part because most students learn how to make effective visuals through trial and error. This led very naturally to the motivation to create an online course to help teach students some of the fundamentals of effective scientific figure design and, in doing so, hopefully make this process easier for everyone (including their PIs). Beyond this fundamentals course, I also now teach workshops on creating effective figures for grant applications, crafting a compelling graphical abstract, and designing scientific posters. On the consulting side, I have also always loved writing and editing and in particular, helping with grant applications. So this was natural for me to want to build out part of my business to do these things on a regular basis. Grant applications are still my favorite type of consulting project. I love getting to learn about new research areas, problems I often didn't know much about, and the novel ideas and innovations scientists have created to solve them, all while helping make sure their ideas are being communicated in a concise and compelling way.

How have your career plans changed as you've continued on to your current position?

I wouldn't say my career plans have changed, but I have definitely been led in directions that I didn't anticipate. For example, one thing I'm currently really interested in is trying to work directly with Journals to improve the quality control process

they implement when reviewing figures, without just passing this onto reviewers. The peer review system has many flaws, and inconsistent quality of review is a real challenge created in part by the fact that it's an unpaid task that many academics don't have enough time for. Evaluation of the science will always need to be external, but I think the editorial team can do more to evaluate other aspects of the manuscript quality (including certain aspects of the statistical analysis, methods, and figures) to make it easier for reviewers to do a good job in less time.

I have also really enjoyed running my Instagram page (@figures.first) and coming up with fun ways to convey small concepts to a wide audience. This has led to many connections and some opportunities that I look forward to pursuing and has also piqued an interest in science communication with the public.

Can you tell us a bit about what day-to-day life is like in your current position?

My day to day varies a lot depending on what projects I'm working on. Typically, it includes several hours of consulting work, mixed with time spent on "marketing" (content creation for social media, networking to set up workshops, etc.) and some time on the creation of my next course. Some projects are very time sensitive and demanding so those obviously shift my focus. I also try to deliver workshops in person (rather than virtually) whenever possible, so I spend some time traveling as well.

What do you like most about your work?

I love learning about so many different research areas and having complete autonomy over what I do. I also enjoy teaching and working with students when running workshops, and remaining part of the academic world, without being fully entrenched in it.

And what do you like least about your work?

I miss being part of a team and having coworkers to bounce ideas off of, brainstorm, and get feedback from. Working on my own is great in many ways, but I miss the team atmosphere and the inspiration that comes from working with others. This is one of the reasons I love working on grants, because I get to temporarily join someone else's team and help achieve something big.

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

The work I do requires experience in academia (e.g. publishing in peer-reviewed journals, writing grant applications) that is generally not possible without a PhD. So I think a PhD is essential for the work that I do, in addition to providing credibility to the clients who hire me.

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

To become a consultant you need to be very self-motivated (true of most aspects of academia) and capable of working alone, while also being able to work well with a huge range of working styles given the range in clientele you will come across. You also need to love academia. Although I consider this to be an "academia-adjacent" career path that avoids certain aspects (e.g. university administration), you are still very much working in an academic environment and need to enjoy the academic process and working style.

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

During your PhD I would attempt to get as much experience with the granting process as possible by offering to proofread, edit, or otherwise contribute to the grants of your PI and collaborators. I would also take opportunities to sit on review panels as a trainee (some funding bodies have training programs) even for smaller opportunities. I would also of course suggest trying to get as much experience publishing as you can and assisting with peer review if possible. If I could go back in time, I would have liked to gain some business or marketing experience, even if it was just a crash course or two.

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?

This is one thing I may eventually miss about academia, as I'm no longer doing my own research and instead playing a part in other people's work. That said, I get to take part in learning about many different research areas that I find both exciting and

interesting, but would never have ended up in on my own. I am also still in the health research sphere, which has no shortage of topics to feel passionate about and which as a whole is also of great importance.

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 definitely have a lot of freedom in my current position, and deciding what to work on is part of that. Given that I'm just starting out, I try not to say no to new consulting projects unless I really can't make the timing work, but already that is becoming more common and I think eventually I will be able to be quite choosy with what I take. The other freedom I have is to pursue interesting avenues in my business, not just with respect to the type of work I take but how I get that work, creating content on social media, making connections with new researchers and institutions, and thinking strategically about how to network and grow as a company.

Have you thought about returning to academia?

No, I can't say I have!

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

I think it's wise to think broadly about your interests and what you enjoy doing within and outside of your PhD. The vast majority of PhD students end up in careers outside of the tenure-track, so even if that is your goal (which is great!) it can still be good to think about non-tenure-track positions that might interest you, or where else you could see yourself. Try to gain experience in other areas (sometimes even through internships), take side projects that interest you and give you a new skill, and network with your peers. During your PhD networking is often focused on making connections with people ahead of you (professors, industry and government employees, etc). While those connections are of course very valuable, don't underestimate the value of making solid connections with the people around you at the same level, some of the places they end up may surprise you!

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

If you want to learn more about what I do, feel free to check out my website (www.figuresfirst.ca) or reach out through email (sarah@figuresfirst.ca) or LinkedIn: <https://www.linkedin.com/in/sarah-treit-phd/>

Thank you for sharing your journey with us, Sarah!

“Working in Academia Was Great But I Missed the Work-Life Balance”



Chinmaya Sadangi



Chinmaya Sadangi

Abstract In our interview with Dr. Chinmaya Sadangi, he shares his journey from epilepsy research to a digital marketing specialist in biotech. Initially planning an academic career, Chinmaya realised the need for better work-life balance with a newborn. He values the creativity, problem-solving, and collaboration in marketing. Chinmaya continues applying analytical abilities and communication skills from his PhD. Though sometimes fast-paced, he notes freedom to explore interests and making an impact. Chinmaya encourages building a portfolio showcasing skills through guest blogs or social media management. Chinmaya advises planning ahead, seeking support, and considering alternative careers before thesis submission.

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

Chinmaya: I moved to Sweden in 2011 to do my Master's from Uppsala University in Cell and Molecular Biology and Neuroscience. Post that I did two research assistant positions at the Charite University, Berlin, and Innsbruck Medical University, Austria. After gaining these experiences, I moved to Phillips University, Marburg, Germany, to complete my PhD.

After that I moved to Canada to start my first postdoc position at the University of Toronto for 2 years followed by 1 year of postdoc at the University of Manitoba. Both these positions gave me an insight to the Canadian education system and the Canadian job market. After completing my second postdoc, I decided to move to the industry and I joined Benchsci as a part-time Biomedical data analyst. My biggest breakthrough came when I joined Cyclica as a Marketing and Communications specialist. I am currently working at PSC Biotech, where I am the Marketing Specialist – Biopharmaceuticals. My role involves multiple work related to communication, public relations, website design, SEO, social media, and so on.

What was the focus of your PhD?

I did my PhD from Phillips University, Marburg from Germany and I completed my PhD in September 2017. My PhD focused on studying the role of endosomal toll-like receptors (eTLRs) in epilepsy. Epilepsy is a neurological disorder that affects the brain and causes seizures. Seizures occur when there is a sudden surge of electrical activity in the brain, which can cause changes in behaviour, movements, sensations, or consciousness. On the other hand, TLRs are a type of protein that play an important role in the immune system by recognizing and responding to foreign substances like bacteria, viruses, and other pathogens. eTLRs are a specific group of TLRs that are located within the endosome, a specialized compartment within cells.

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

During my PhD, I always thought of going the traditional academic career path, i.e. following the tenure-track pathway. I saw the efforts PI's were making, the changes they were bringing to the scientific world as they progressed in the field of science.

How have your career plans changed as you've continued on to your current position?

My career plan changed when I was towards the end of my PhD. My academic journey gave me an insight into the tenure-track position. As mentioned previously, I always wanted to follow this path and wanted to become a PI and have my own lab and funding to conduct research on neurodegenerative and neuropsychiatric disorders.

What made you change from wanting to take the academic career path?

Working in academia was great, but I missed the work-life balance which I needed as I had a newborn. I tried my best to do that in an academic setting but failed to achieve it because of reasons like changing the media for the cells, animal breeding, and so on. Apart from finding a work-life balance, some other reasons were:

- *Shift in Interests:* I discovered new interests and passions outside of academia that I found more fulfilling or aligned with my personal goals. I realized that my interests lie in a different field that offers different opportunities for growth and impact.
- *Work-Life Balance:* Pursuing an academic career often involves long hours, extensive research, and a heavy workload. I prioritized a better work-life balance and seek career paths that offer more flexibility, stability, or time for personal commitments and relationships.
- *Job Market Challenges:* The academic job market is highly competitive, with limited positions available and a lengthy path to tenure. I choose to explore other career options that offer more immediate employment prospects or better financial stability.
- *Desire for a Broader Impact:* While academia allows for in-depth research and scholarly contributions, I had a desire to make a more immediate and tangible impact on a larger scale. I opted for marketing, where I can apply my knowledge and skills to address real-world challenges.

- *Personal Growth and Variety:* Academic careers can be highly focused on a specific research area, which may not provide individuals with the variety and diversity of experiences I desired. I seek career paths that offer opportunities to explore multiple interests, work on different projects, collaborate with diverse teams, or take on leadership roles.

Can you tell us a bit about what day-to-day life is like in your current position?

My work is completely digital. My work involves a lot of analytical skills and strategy building skills which I acquired during my PhD. As a digital marketing specialist, I start my day by going through the social media channels to see how the posts are doing (that I posted the previous day or during the week). I check for analytics and if any comment needs my attention. Post that, I move to make my post for the day and cross post it to different social media platforms. I also have a look at the web analytics to see where the website traffic, to see if there are any interesting visits from countries, and to see if we have any leads on our forms. I also write blog posts and whitepapers so that's where I spend sometime. Apart from that, I am responsible for ad management, some graphic designs, and addressing the management queries (if they have any queries related to digital marketing). Our team is also responsible for event management, so we plan for events which include everything from registration of attendees, to managing the booth and logistics.

What do you like most about your work?

The opportunity to learn new things, the creativity and innovation involved, the satisfaction of solving problems and helping others, and the diversity and collaboration of my team are somethings that I enjoy a lot about my work. Some other aspects include the following:

- *Creativity:* Digital marketing allows professionals to exercise their creativity in designing campaigns, developing content strategies, and crafting engaging messages that resonate with the target audience. This creative aspect of the work can be fulfilling and exciting.
- *Continuous Learning:* The digital marketing landscape is constantly evolving, with new technologies, platforms, and strategies emerging regularly. This dynamic nature of the field offers opportunities for learning and growth, keeping digital marketing specialists engaged and motivated.
- *Impact and Results:* A successful digital marketing campaign can have a significant impact on a business or organization. Seeing the results of their efforts, such as increased website traffic, improved conversion rates, or higher brand awareness, can be rewarding for digital marketing specialists.

- *Collaboration and Networking:* Digital marketing often involves working with cross-functional teams, such as designers, developers, content creators, and social media managers. Collaborating with diverse professionals can be enjoyable, and networking opportunities can arise through interactions with clients, industry experts, and fellow marketers.

And what do you like least about your work?

If I say I thoroughly enjoy my work and I don't have anything that I dislike, then it would be a lie. Digital marketing, biotechnology, and pharmaceuticals are a constantly evolving field, and they change everyday and we have to keep up with it.

- *Rapidly Changing Landscape:* The digital marketing field is constantly evolving, with new technologies, algorithms, and trends emerging regularly. Keeping up with these changes and staying ahead of the curve can be a challenge and require continuous learning and adaptation.
- *High Expectations and Pressure:* Digital marketing often involves setting and achieving ambitious goals and targets. There can be pressure to deliver measurable results within tight deadlines, which can sometimes be stressful.
- *Data Overload:* While data is a valuable asset in digital marketing, it can also be overwhelming. Collecting, analyzing, and interpreting large amounts of data can be time-consuming and complex. Making sense of the data and deriving actionable insights can be a challenge.
- *Balancing Creativity and Strategy:* Digital marketing requires both creativity and strategic thinking. Finding the right balance between creative ideas and data-driven strategies can sometimes be a delicate process, and reconciling conflicting priorities can be a challenge.
- *Technical Challenges:* Digital marketing often involves working with various tools, platforms, and technologies. Technical issues or limitations can arise, such as website glitches, ad platform changes, or compatibility issues, which can be frustrating and time-consuming to address.

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

A PhD can offer a unique perspective and skill set. But, success in digital marketing also requires proficiency in other areas, such as strategic thinking, creativity, data analysis, communication, and adaptability to evolving trends in the digital landscape. My PhD helped me better understand some aspect of marketing like the following:

- *Understanding (Consumer) Behaviour*: Neuroscience involves studying the brain and behaviour, which can provide valuable insights into consumer psychology. A deeper understanding of how individuals perceive, process, and respond to marketing stimuli can help in creating more effective and targeted marketing campaigns.
- *Data Analysis and Research Skills*: PhD research often involves rigorous data analysis and research methodologies. These skills can be valuable in digital marketing, where data-driven decision-making and conducting research experiments to optimize campaigns are essential.
- *Cognitive Science and User Experience*: A background in neuroscience can contribute to a better understanding of human cognition, attention, and memory. This knowledge can be applied to improve user experience (UX) in digital marketing by designing websites, apps, and advertisements that align with users' cognitive processes and enhance engagement.

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

If you have an interest in writing, social media, and designing, then moving into digital marketing might be a good fit for you. However, you should remember to adapt to changes. When I say interest in writing, it doesn't mean academic writing. It is more of corporate writing and writing blogs which you can learn by reading press releases blog posts, and whitepapers published by companies. Keeping up with the social media platforms and the algorithm changes is also important.

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

Start by building a portfolio. When you apply for positions in a similar field, one thing they would like to look is into your portfolio. And building a portfolio can take a lot of time. Digital marketing is an umbrella term which covers many aspects of marketing. Find areas that you are interested in and build your portfolio around that. For example, if you are interested in writing, approach companies like Hello Bio, CCRM, AbCellera, etc. to write guest blogs for them. Start a blogging website where you can write and showcase your skills. If you are interested in social media, you can approach small companies to manage their social media by creating posts, posting them, and helping the company keeping up with the latest social media trends and their social media analytics. You can also start your own social media channel by creating posts. For example, I started The Addictive Brain, a science communication platform to do science communication. This helped me understand Instagram,

Facebook, TikTok, LinkedIn, and Twitter which further helped me land up clients in managing their social media platforms.

Can you tell us more about why you decided to start The Addictive Brain?

I started The Addictive Brain (TAB) in 2017. In parallel, I started my first postdoc too. The reason for starting TAB was because I saw a lot of communication gap between scientists, science, and the public. When I mentioned that I am a neuroscientist, they would ask me questions about medication, but I had to clarify that I am not a doctor but a scientist. TAB bridged this gap between scientist and the common man by telling science stories in a simple manner so that everyone can understand. For example, if I had to explain qPCR to a scientific audience, I can use complex jargons to explain but the same is not applicable for common man. We need to explain it in such a way that they can understand the basics of qPCR, how it works, and why do scientists use this. TAB not only helped me bridge this gap but also helped me hone my marketing skills as I used social media, web design, interviewing skills, SEO, and much more.

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?

I was very passionate about my research topic and I enjoyed working on it. I think academia gave me the opportunity to explore new ideas, discover new knowledge, and contribute to the advancement of science and society. I also liked the intellectual stimulation and challenge that academia provides, as well as the freedom and autonomy to pursue my own interests and goals. Of course, there are also some drawbacks and difficulties in academia, such as the pressure to publish, the competition for funding, the uncertainty of the job market, and the work-life balance issues. But overall, I think academia is a rewarding and fulfilling career choice for me.

On the other hand, I find my current position interesting – I find it meaningful and satisfying. I think this job gives me the opportunity to apply my skills and knowledge to solve real-world problems, create innovative products and services, and make a positive impact on the customers and the society. I also like the practical and collaborative nature, as well as the clear and measurable goals and outcomes. Of course, there are also some challenges and trade-offs, such as the fast pace and changing demands, the limited scope and depth of research, the intellectual property, and the confidentiality issues. But overall, I think a job in the industry is a rewarding and enjoyable career choice for me.

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?

That's an interesting question. I think freedom is a relative term that depends on many factors, such as the field of study, the funding sources, the expectations of the institution, the collaborators, and the personal goals and preferences of the researcher. In general, I would say that academia provides more freedom to choose the topics and methods of research than other positions, but it also comes with more responsibilities and challenges, such as securing grants, publishing papers, teaching students, reviewing manuscripts, and serving the academic community. So, the amount of freedom that one feels in academia is a balance between the opportunities and the constraints that one faces in their career. Some people may find this balance rewarding and stimulating, while others may find it stressful and limiting.

Have you thought about returning to academia?

I have thought about returning to academia, and I still have some academic interests and connections that I would like to pursue or maintain, and I also miss some aspects of academic life, such as the freedom to choose my own research topics and methods, the intellectual diversity and exchange of ideas, and the opportunity to teach and mentor students.

However, I enjoy my current job and I appreciate the benefits and advantages that it offers, such as the practical and relevant impact of my work, the collaborative and supportive work environment, the clear and achievable goals and rewards, and the stability and security of my career. So, I think returning to academia would be a difficult and complex decision for me, and I would have to weigh the pros and cons carefully before making any changes.

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

I think finishing a PhD is a challenging but rewarding process that requires a lot of dedication, perseverance, and creativity. Some of the advice or suggestions that I would like to pass on to someone who's currently finishing their PhD are the following:

Plan ahead and set realistic goals and deadlines for yourself. Finishing a PhD involves many tasks, such as writing your dissertation, preparing for your defence, applying for jobs or postdocs, and wrapping up your projects. It can be overwhelming and stressful if you don’t have a clear plan and timeline for each task. Try to break down your work into manageable chunks and prioritize the most important and urgent ones. Also, be flexible and adaptable to any changes or challenges that may arise along the way.

- Seek feedback and support from your supervisor, committee members, peers, and mentors. Finishing a PhD is not something that you can do alone. You need to communicate regularly with your supervisor and committee members about your progress, challenges, and expectations. They can provide you with valuable guidance, feedback, and resources to help you improve your work and overcome any difficulties. You also need to network and collaborate with your peers and mentors, who can offer you different perspectives, insights, and opportunities for your research and career development. Don’t be afraid to ask for help or advice when you need it.
- Celebrate your achievements and take care of yourself. Finishing a PhD is a huge accomplishment that deserves recognition and celebration. You should be proud of yourself for all the hard work and contributions that you have made to your field of study. You should also reward yourself for reaching each milestone and completing each task. Moreover, you should take care of yourself physically, mentally, and emotionally. Finishing a PhD can be exhausting and stressful, so you need to find ways to relax and recharge your energy. You can do this by engaging in hobbies, activities, or hobbies that you enjoy, spending time with your friends and family, or seeking professional help if needed.
- Look for alternative career path or postdoc positions before submitting your thesis. It is advisable to start exploring your possibilities before you finish your thesis, so that you have more time and flexibility to make informed decisions. One way to do this is to conduct informational interviews with people who have followed different paths after their PhD. You can ask them about their experiences, challenges, and advice and learn more about the opportunities and expectations in various fields and sectors. You can also use online platforms such as LinkedIn, ResearchGate, or Twitter to network with potential employers, mentors, or collaborators. Another way to explore your options is to attend career fairs, workshops, or webinars that are relevant to your interests and skills. You can learn about the latest trends, developments, and demands in different industries and domains and get a sense of the skills and qualifications that are required or valued. You can also use these events to showcase your work, get feedback, and make connections.

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

I would like to tell anyone reading this interview that pursuing an alternative career after a PhD is not a failure or a betrayal of your academic training. It is a valid and valuable choice that can open up many doors and possibilities for you. You have many skills and experiences that are transferable and applicable to different contexts and domains. You also have the curiosity, creativity, and resilience that are essential for any career path.

Don't be afraid to explore your options and interests and to seek out mentors, peers, and resources that can support you along the way. Don't be discouraged by the challenges or uncertainties that you may face, but see them as opportunities to learn and grow. And don't forget to celebrate your achievements and contributions, no matter how big or small they may seem.

You have a lot to offer to the world, and the world has a lot to offer to you. I wish you all the best in your journey!

Thank you for sharing your journey with us, Chinmaya!

“A PhD Is a Substantial Training Opportunity, Not Just a Sprint to the Finish”



Katie Riddoch



Katie Riddoch

Abstract In our interview, Katie Riddoch shares their journey from their doctoral studies (exploring human-robot attachment) to a role as a User Experience Designer at an aerospace company. Realising in their second PhD year that they loved qualitative research and creativity, Katie explored user research roles through internships. Though not in her dream sector, Katie notes that her industry role allows her greater flexibility of working, improved financial stability, and greater potential for impact in the real world – all things they value highly. To those considering a role outside of academia, Katie encourages others to undertake informal interviews with people already working in the career, and trying out roles through internships. First and foremost however, they advise taking time to reflect on personal “must haves”, before leaping into a new role/sector.

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K. Riddoch (✉)
User Centered Designer, Human Factors Centre of Expertise, Preston, UK

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

Katie: Sure! My name is Katie Riddoch – a 29 year old living in Preston (North West England). I'm currently employed as a User-Centred Designer at a large aerospace company. In a nutshell, my role involves conducting research to understand the needs of product users – for example, interviewing pilots to determine what they need from a new cockpit display... or administering a survey to understand what finance managers need from a new website portal! After collecting and analysing the data, it's then my job to relay the results to the wider development team (e.g., software developers, business analysts, and the project manager) in an accessible and compelling way. From there, we all work together to develop an service or product (e.g. app, website, or dashboard) which meets the needs of the end users and the business.

The relationship with my employer feels mutually beneficial – they benefit from my enthusiasm and transferable PhD skills (research, communication, organisation, writing...), and I get to carry on learning – specifically, developing my design and business skills. That is one great thing about working for a large business; there is funding to support continued professional development such as training courses and professional accreditation. Don't get me wrong though – finding time for training and learning can be tough, as 'time is money' in the business world. I love working as part of an interdisciplinary team though, and learning from their different perspectives.

What was the focus of your PhD?

My PhD (Psychology with Social Robotics) focussed on exploring human-robot companionship – whether it's possible to get attached to a robot, whether that's something we want to encourage in the future, and the associated ethical

implications. Some of the work was done in a lab (e.g. experiments which attempted to measure and manipulate attachment and empathy for a robot), but when COVID hit, we* had to change tact. Specifically, we moved from lab-based experiments to online studies, and adapted the topic accordingly.

**As an aside – to this day, I instinctively still use “we” when referring to my PhD work. It was a habit built during the PhD, but I think it is lovely that the tendency remains – recognising the effort and support that my supervisor and collaborators offered during that time.*

My masters and doctoral studies were originally intended to take place at Bangor University (as part of a 1+3 Doctoral Studentship) however my lab moved to Glasgow (Scotland) at just prior to my PhD starting. In terms of the collaborators I met, and the training opportunities that opened up, I am grateful for my time at the University of Glasgow. I must admit though, I found the transition to a larger university and city difficult. The experience taught me a lot about myself though – first and foremost, that in the near future I don’t want to live in a built-up and hectic place!

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

During my PhD I realised that I loved speaking to people, being creative, and doing qualitative research. In Academia however, I didn’t have a huge amount of time to spend on those things. Instead, a lot of my time was spent trying to churn out publications – preparing manuscripts, responding to reviewer comments, etc.

I was lucky* that I realised my passions relatively early in the process – in the second year of the PhD – and I started googling “researcher” “qualitative” “design”. I came across the “User Researcher” “UX Researcher” and “UCD Design Roles” pretty quickly, and I realised that the salary was feasible. (Bonus!)

**I say I was lucky... but it was probably the result of a lot of self reflection – fuelled by worry about my future, and the impending feeling that I wasn’t doing what made me really happy.*

Rapidly, I started asking around local companies and colleagues if they needed “user research” help, and I racked up experience through paid internships. For me, it was important that I tried the role out before I went down the career route... and for the companies, it was relatively cheap labour. Win-win all round.

What kind of activities did you do in these early stages? How similar was it to what you were doing in your PhD?

During my internship, I was surprised to find how similar the work was to that of my PhD. I was planning research, doing interviews, gathering facts online, and reading around journals for information. There were major differences compared to my PhD work however – people didn't want lengthy reports about what I had found. Instead, they wanted to know the most important information only – and they wanted it in a quick and easy-to-digest way. In a way it was refreshing – to have people really listening to your insights – but on the other hand, it was sometimes difficult to capture the complexity of the topic in these very concise outputs! Another difference was that everything had to be real – considered carefully in the context of the real world. As a result, my internship work involved speaking to everyday people, opposed to reading the words of scientists. This was a very refreshing and interesting part of the experience – as you experience a wealth of personalities that you wouldn't be exposed to in a journal!

Was it hard to manage doing the internship at the same time as your PhD? Did you discuss this with your supervisor?

As my PhD was funded by a UK Research Council (ESRC), there were restrictions around the hours I could work outside of the PhD. As a result, when I wanted to do my internship, I had to run my internship ideas by my supervisor and my funding body. I was surprised to find that both were very supportive, and excited about the prospect of me undertaking an internship. My supervisor and funding body emphasised that a PhD is a substantial training opportunity, not just a sprint to the finish, and they were supportive throughout the paperwork process. Collectively, we decided that the best thing all round (for me, the company, and the PhD research) to pause the PhD for 3 months while I undertook a substantial full-time internship. So, in answer to your original question, it was very easy to manage the internship and PhD at the same time – because my PhD was “paused” at the time! With regard to finances, I was also really fortunate – my PhD funder and the company funded the internship, and my PhD extension was funded too. That is something I do miss about academia – the funding pots that you can apply for and the opportunities you can access as a result! (e.g. internships, lab visits, summer schools, training workshops...). I know peers also enjoyed similar opportunities, and found the experiences valuable (for their PhD, and their understanding of wider careers!).

Can you tell us a bit about what day-to-day life is like in your current position?

With regard to my day-to-day User-Centred Design work, I’m juggling a few pieces of work. The first is to design some questionnaires, to assess user thoughts about a new product. The second is to elevate the design of a newsletter – because it’s a bit overcrowded at the moment (not great from an engagement or accessibility point of view!). The final piece of work is to assist with the design of a new website. As part of all these pieces of work, I’m speaking to people who will eventually use the products/resources. I’ll gather their thoughts (e.g. via interview online) and try to figure out what people need (opposed to want). In addition to speaking to end users, I also have lots of meetings with different members of staff (e.g. people who will build the website, people funding the website creation) to check if there are requirements/restrictions I need to be aware of. It’s not so simple as designing to suit user’s needs – you have to balance their needs with the technical restrictions and the business’ requirements.

As I have just started working for a large organisation, a lot of my time is also spent introducing myself to people within the company and speaking to people about the scope of my work (so they know what they can expect from me, and what is out of my remit!). These interactions tend to be through virtual meetings, as lots of people work from home over the summer holidays (so they can look after their kids). On the day to day, I’m also learning the company-specific etiquette – e.g. when to schedule meetings to improve engagement, what to wear in the office, the importance of small talk, etc.! I’m really keen to make a good first impression, and I think it’ll help to nail these little touches. Perhaps I’m overthinking it though! (Classic academic!)

What do you like most about your work?

There are a lot of things that I like about my role (e.g. independence of working, freedom to propose new ways of working, the opportunities to be creative...), but really, what I love are aspects of the work more broadly. Specifically, that it’s super flexible hours, the office is a tiny commute away, and that I can choose to work from home a few days a week. The cherry on top of the job is that my colleagues and manager are extremely supportive.

Those might seem like very dull reasons, but having flexible working, and kind colleagues, makes me happy!

And what do you like least about your work?

Ideally, I'd love to be using my skills to help causes closer to my heart (e.g. animal rights, climate change, healthcare), but I haven't found the right position for me in that sector. The good thing is, however, that I can satisfy that need in my spare time – by volunteering for a local homeless charity and organising vegan gatherings!

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

By really getting stuck into the PhD (picking my supervisor's brain, managing multiple responsibilities, assisting friends with their projects...), I gained so many transferable skills: how to manage my time, juggle multiple projects, and think critically, to name a few. Recently, my boss mentioned that they appreciate these skills, because they can trust me to work independently on a few things at once. They're definitely getting their money's worth out of me! Haha.

Also by throwing myself into networking opportunities (e.g. summer schools, conferences, and attending additional training), I developed the ability to hold my own in social settings. This skill really helped me during interviews (as I wasn't a complete anxious mess) and helps me to generally thrive in work. For example, as a user researcher I need participants to quickly open up and be honest... and that happens much faster now that I'm more socially comfortable. Don't get me wrong though, feeling comfortable in such artificial social settings wasn't a quick or easy process – during my PhD days I was incredibly nervous in the lead-up to networking events... to the point where I felt grey and sick. I had to literally drag myself to those events, give myself lots of breaks, and occasionally leave early (if the social battery had completely ran out). By pushing myself to dip in and out of networking though, it did get easier over time. So to those who are worried about the social side of moving into industry, I would say "sign up for the opportunity, try your best, and go for it!". You'll probably surprise yourself with how much you can achieve, and you might even meet an interesting or life-changing person along the way.

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

My advice to those considering a similar position would be (1) speak to people who have the position that you're considering and (2) enquire with your university and funder, as to whether you can take a break from the PhD to get some internship experience.

The former is incredibly important, as it can give you honest insights about what the job is like (opposed to the glamorised version on a job advert). Reaching out to people and asking questions is also something that you’d be doing a lot as a User Researcher/User-Centred Designer... so it’s good experience – to see if you are able to build rapport and ask the right questions.

The latter advice (undertaking an internship) is another way to gauge if the position seems a good fit for you. It may seem daunting, to pause the PhD, but it’s an amazing opportunity to learn about yourself and potentially gain contacts which lead to employment post-PhD. I was surprised how open and supportive my university and funders were, when I suggested I wanted to do an internship... although I appreciate that all universities, supervisors, and funders, are different!

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

On top of speaking to professionals and trying to get some experience, a good way to prepare yourself for a job is to consider learning some relevant skills in your spare time. There are a ton of free courses out there – so see what resonates with you! Within the user research/user-focussed design space, you could consider courses/YouTube tutorials in creative software (Adobe XD, Figma...), time management tools (Trello, Jira...), or Microsoft products (Excel, Teams...).

In the various positions I’ve been in, those tools have come in handy... and it impressed my interviewers that I had a genuine interest in learning and my development!

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?

In my current position, I’m not working on something that I DEEPLY care about... but it *is* work that I find very interesting. That was a conscious choice though, on my part – to sacrifice “the dream topic” for other elements which would make me happy.

I could probably find my burning passion somewhere else (academia or industry) but right now I love having job security, a short commute, a wonderful team, and flexibility of working. All those things (perhaps even more than working on my deep passion) are so good for mind, body, and relationships!

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 remember when I first started at the company I found myself on a project which was very challenging and frustrating at times. I felt trapped and worried I would be stuck on a piece of work that I didn't find interesting. However, upon speaking to my manager, I realised that I had more freedom than I thought. As I work for a large company, she explained, there is the opportunity to move around, explore new areas, and even try new roles.

Of course there are limits, as the business is within a specific sector and needs to make money; however, I was pleasantly surprised by the variety of aspects I could become involved in (accessibility, sustainability, ergonomics...). The perks of working for a large organisation, I suppose!

In some ways, I find my current role gives me more freedom than academia did. In academia I was funded to explore a certain topic (a "hot topics" at the time), and I had to spend a lot of time preparing publications. That pressure and restriction isn't present in my current role.

Have you thought about returning to academia?

In the first year after leaving, I thought about it quite a few times! Unsurprising really – as Academia was my comfort zone. It was a system that I knew extremely well and that I excelled in. However, when I sat down and really thought about it (with my logical hat on), I knew that I shouldn't go back. In its current state, academia can't offer me the job security and flexibility that I can get in my current role – both of which are important for my mental health.

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

My main piece of advice would be something that was said to me, as I was finishing my PhD. I was told that I should sit and write down a list of what I would love from a job... and what I really need.

Refreshingly, the person told me that it is okay to be selfish – prioritising what I need for me and my family (e.g. money, stability, flexibility). The advice closed with the comment that when looking for a job, there will be lots of possibilities...

but, to be satisfied, I should focus my attention on those which hit the priorities on my list.

This advice has served me well over the years, and I enjoy making my lists and re-prioritising as time goes by.

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

In the final year of my PhD, I pursued therapy and medication to support my mental health, and it was such a game changer. I could actually enjoy the experience of the PhD and had a wonderful examination experience.

My parting words would be – if you’re struggling with your mental health (as SO MANY academics do), please reach out to your GP or a charity like MindsMatter. In doing so, you may be able to massively reduce the suffering that you’re experiencing... and make the most of what is an incredible opportunity.

Thank you so much for your advice, Katie!

“My PhD Shaped the Way I Think and Solve Problems”



Joshua Henk Balsters



Joshua Henk Balsters

Abstract In our interview with Joshua Balsters, he shares his journey from studying the cerebellum to leading neuroscience research for a market research company. Initially planning an academic career, Joshua realised his interests were more applied and aimed to have tangible impact. He values seeing his work influence real-world products and the faster project time-lines. Joshua continues leveraging skills in experiment design, analysis, and communication honed during his PhD. Though sometimes constrained by business priorities, he cares about his consultancy role. Joshua encourages informational interviews to understand industry careers. He notes similarities in freedoms and obstacles between academia and industry. Joshua advises focusing on transferable abilities from PhD training beyond specific research areas.

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

Josh: I'm Dr. Joshua Balsters and I'm Neuroscience Director for NIQ. To explain what I do, I want to start with this quote I really love. It's from a famous marketer named David Ogilvy:

Consumers don't think how they feel. They don't say what they think and they don't do what they say.

I love this quote because it also applies to a lot of psychology and neuroscience. The key point here is that explicit market research (i.e. asking people what they think) isn't entirely reliable. Not only do consumers consciously lie but in some cases they're not even aware of what they feel or how to articulate it. The latter fits with the current boom in research on alexithymia and interception, but it's worth noting that David Ogilvy pointed this out in the 1970s. This idea has been around for a long time.

How does this relate to what I do? Companies are growing more aware of the issues surrounding traditional market research. If they're about to spend hundreds of thousands of dollars on a new product, ad campaign, or pack redesign, then they want to know what people really think about it. This means embracing new methods and working with people trained in studying human behaviour using the scientific method rather than marketers that usually come from business and economics. Hence, there are a growing number of positions for scientists to apply their skills in a commercial context. I use a combination of psychology and neuroscience techniques to get both implicit and explicit responses to ads, packaging, branding, and positioning, and in doing so I can more reliably tell companies what people think and feel about their products.

What was the focus of your PhD?

My PhD was pretty far removed from where I am now. I was Prof Ramnani’s first PhD student at Royal Holloway University of London (2005–2009). My thesis was called “Cerebellar Contributions to Cognition: Anatomy and Function”. Even now, the cerebellum is still considered to be a motor control structure. This is despite the mountain of studies – both fMRI and electrophysiology/lesion studies – that suggest otherwise. Countless anatomical studies have shown that the cerebellum is connected to the prefrontal cortex, and therefore the cerebellum must also process non-motor signals from the prefrontal cortex. My PhD showed that the parts of the cerebellum connected to the prefrontal cortex have grown more rapidly in humans compared to nonhuman primates using structural MRI. Plus, using fMRI, I showed in four separate studies that the cerebellum has an important role in accessing and automating cognitive processes. What I loved about my thesis (and most of the work I published) was the reproducibility of the findings. I really believe in this work because it was based on strong neuroanatomical principles and that meant I got the same results again and again.

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

I loved my PhD and I still love coming up with experiments and analysing data. But at the end of my PhD I realised two things: (1) the limitations in fMRI as a method (the questions I had about cerebellar function required another brain imaging method like simultaneous EEG or electrophysiology) and (2) I wanted my work to be more applied and hopefully contribute to clinical or real-world settings. That’s why my first postdoc position at GlaxoSmithKline (GSK) was perfect as I got to learn about simultaneous EEG/fMRI plus I got to use it for biomarker development in aging and pharmaceutical research. But like all my career plans things changed with each experience.

I recently heard the expression “career sleepwalking”. I think this is the case for so many academics because they think there’s only 1 career path, i.e. PhD, Postdoc, Lecturer, and Prof. I had a lightbulb moment when I saw senior lecturers leaving academia for jobs in tech companies and charities. I just never thought of it as an option, especially as a lecturer when I was quite deep into the academic system. This broke me out of my sleep walking and got me to actively think about what I wanted to do.

About a year into my lectureship I knew I wasn’t happy and decided to do a self-audit: What did I like about my job and what would I give up. I knew I hated marking and would give it up if I could. I loved talking about science (public speaking) and coming up with experiments to solve problems. So I started looking for jobs like this. There are so many opportunities for scientists in commercial settings,

whether it's data scientists or user experience (UX) researchers. It's fun taking science outside of the lab and seeing what holds in the "real world". You have to accept that you can't build perfect experiments and things are less controlled than you might like, but I've already seen so much replication and so many examples of quite dry psychological theories employed to explain marketing findings. I'm confident that you can do good science in an applied setting.

Do you have any advice on how students can find what type of jobs match with the parts they like about academia?

I'm hoping that psychology departments will update what they teach about careers to include careers in growing fields like data science, user experience (UX) and user design, behavioural science, and public policy. For PhD students, there are great opportunities to do internships with companies that will show them how to apply their skills. You can also do internships in government to see how science informs policy. These are great opportunities because most PhD students are still figuring out what they do and don't like. Having this practical experience adds another level to their development so when they're submitting their thesis they know about all the options rather than having to take a risk in a difficult job market. It does get more difficult for postdocs and above, but it's not impossible. Academic staff are going to see more and more of their colleagues leaving for industry or charity positions. Try to keep in contact with them (I recommend LinkedIn) and after 6 months get back in touch. You'll get an honest appraisal of what they're up to and how they use their PhD skills throughout the job. Academics are moving into a range of different careers so just stay in touch with people and compare notes down the line. This can also help you get an industry job as having an industry champion is a great way to prove that you're serious and suitable for a job in industry. The longer you're in academia, the harder it is to prove to businesses that you can adapt to their way of thinking. Having someone on the inside really helps getting shortlisted!

Where did you end up working for your first industry job and what did you do there?

My first industry job was my first postdoc with GSK. Although I worked for GSK, I was seconded to Trinity College Dublin so it felt more like a traditional postdoc position. The project was huge and involved lots of people working on the same problem from different angles. There was a molecular group and an animal behaviour group, and I was in the human clinical group. I was part of a team of around 20 people (not including the medical staff at the hospital) working on different projects but with the same end goal – to develop early markers of cognitive decline in aging. My job was to get simultaneous EEG/fMRI working. We ran lots of experiments

and collected datasets from young and older people looking at attention, working memory, resting state, emotion processing, and the effects of medication. Compared to a PhD where the work is very much your own, this was much more of a team effort and we had lots of meetings with GSK scientists and statisticians.

Looking back on it now, some of the practices from GSK were ahead of their time. Back in 2008 (before Open Science was as prominent), I was learning about pre-registration for clinical trials with clear action standards/endpoints. So even though we were running lots of experiments, we were writing down specific hypotheses of what we expected to see. At the same time, we had GSK statisticians telling us about the dangers of p-values (they only cared about effect sizes). Companies seemed to be a bit ahead of academia on these issues.

That sounds great that you were trained in more rigorous research methods here! Were there any other practices that they had that you think academia should also adopt?

I think academia has really caught up thanks to things like the open science movement. One of the things we do at NIQ that I love is having an independent data processing team. I'm the one who designs the study and I know what the client wants to see. No matter how hard I try, and even taking into account current open science practises on data analysis, I might influence the results if I was working with the data. To avoid this, we have a separate data analysis team who don't know anything about the project and just send us back the results. I have no influence on how the data is analysed or who is included in the final dataset. I wonder if such a model would work in academia as there are people I know that love working with data but don't necessarily care about a topic or writing up the results. Similarly, there are professors that would be very happy to never see raw data again.

Why did you leave this GSK position and where did you go next?

So the danger of working in industry is job security. In the case of GSK, we knew for quite some time that they were planning to stop the project. This was partly because of the results but also larger corporate restructuring that saw a change in priorities. The academics were all fine as they were already in tenured positions or managed to get lectureships, fellowships, and positions in other institutes. I saw a lot of loyal GSK staff being let go. Offices were closed. It was my first experience of the brutal side of business.

After Trinity College Dublin, I got offered a postdoc position at the ETH in Zürich. It was a great example of “who you know not what you know”. Trinity College Dublin was hiring a new head of MRI and I was giving the candidates lab

tours. I got on really well with one candidate (Prof Wenderoth) and mentioned I was going to be out of contract soon so I would be looking for postdoc positions. In the end, Prof Wenderoth accepted a position in Switzerland rather than Dublin, but she reached out and offered me a job in Zürich setting up her new lab. During my time at Trinity College Dublin, I worked a lot on methods and was quite proficient with MRI, EEG, Eye Tracking, and putting them all together. I'd learned firsthand what did and didn't work in the labs and used this experience to advise what to buy, how to set it up, and also to supervise student projects. In return I had the freedom to explore topics that caught my interest. At that time, it was decision-making/neuro-economic approaches to understanding Autism Spectrum Conditions.

Can you tell us a bit about what day-to-day life is like in your current position?

The pandemic changed the way lots of jobs operate. Academics have always done work from home to some extent, but now industry has followed suit. Prior to the pandemic, I would have been in the London office 2–3 days a week and done a lot more travelling to see clients face to face. Now it's work from home and almost all my interactions are video calls. I'm part of a global team which means my hours tend to shift depending on whether I'm on Asian, European, or American projects. I always enjoyed flexible working in academia so this suits me really well and my boss is very supportive and makes sure I don't end up working all these time zones at once. One of the reasons I left academia was the expectation that you work outside your hours on your research, so I really appreciate my boss looking out for me like this. Most people I've spoken to that left academia say that they have a better work-life balance in industry.

When I was thinking of leaving academia I thought "what are the parts of my job I really like". It was designing experiments and giving talks. In that sense, my job now is quite similar to what I did in academia. Most of my time is spent explaining what we do, working with clients to design a study, looking through data, or reporting results back to clients. The work is really varied and the timelines are really quick (projects are typically wrapped up in 2 months). This speed suits me really well as I tend to get bored of academic projects after ~2 years. I also get to see my work in the real world when I go to the shops or turn on TV, which is really rewarding. I still get to lecture at universities and other events, only now it's about consumer neuroscience. I always loved lecturing (it's the marking I hated!) so it's nice to still stand up and speak from time to time.

What do you like most about your work?

I like seeing my work out in the world. Academics talk a lot about impact, but it's very rare to see the direct impact of your work in the real world. I know I'm not curing diseases, but I still get a kick out of seeing a product on the shelves I helped to design, or an ad on TV I helped optimise.

The speed of projects suits me so much better than academia. It typically takes years just to win funding, and then there's hiring, training etc. It's years before you get to see if your hypotheses were correct. By that time, I'm usually over it. In my new job, the timeline is typically 2 months so I'm still excited about the project when I'm wrapping everything up. I think it's very common in academia to see lab leaders getting excited about new projects before they've finished their current ones, which can sometimes mean PhD students and postdocs get put on the back burner.

I realised in my last job that I like psychology but I'm a neuroscientist at heart. I missed brains! At the end of my academic career, I was doing less and less brain imaging because I don't think it's going to help develop practical clinical tools. In my opinion, computer-based behavioural tools are going to help with diagnostics and assessing patient outcomes, not brain imaging. I'd abandoned brains because they weren't the answer to improving clinical outcomes, but strangely enough, brains are the best way to answer business questions about how consumers feel. My current job actually requires neuroscience because people struggle to explain what they might be feeling. It also requires that I have a broad understanding of neuroscience. I have to know about perception, attention, memory, and decision-making so I can talk to clients about any questions they might have. Academia tends to force you to be an expert in a very specific area, but I was a jack of all trades and preferred to know a little about a lot of projects.

And what do you like least about your work?

I don't like that the field (consumer insights) is full of snake oil. I was very happy to join NIQ because I saw the science and feel confident in our data quality. I can't say the same about a lot of our competitors who are selling tools based on bad science. There's a lot of BS out there (and I don't mean behavioural science). There are some big name academics that have built a platform on ideas that just aren't true, and it's so difficult to change the mindsets of people when these ideas are seen as foundational by marketers. More annoyingly, some clients acknowledge that a competitor is not as good as us but still go with them because they're cheaper and faster than us. That's sometimes difficult to swallow.

Working in applied science means that you can't be as controlled as you would be in the lab and you have to accept that. Sometimes the perfect answer to a client's question would cost half a million dollars and take us 6 months which just isn't realistic. So I have to propose a smaller scale study with fewer cells that's still ok

but isn't exactly right. The ideal solution sometimes isn't feasible so we have to offer something different in order to make the project sellable. Also, we sometimes can't do projects because of a business/client conflict even though it would be a fascinating and important project for consumers. At the end of the day, it's a business and sometimes we have to put that before the science.

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

You often think that the most important thing you learn in a PhD is your topic area (i.e. becoming a cerebellar or brain imaging expert), but actually there are so many transferable skills you pick up to do with presentation and writing skills. These skills are crucial to every job I've had, especially presentation skills that you develop by giving posters and talks. Being able to craft a clear story about complex data is what I do every day and I love it.

I'd go so far as to say that my PhD shaped the way I think and solve problems. Regardless of the topic you go on to study for your PhD, you're really developing problem-solving skills. You're learning how to pose clear questions and answer them in the best way possible. Writing papers taught me to think about story structure. How to make sure that someone coming to my work with fresh eyes understood how I did it and why it mattered.

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 think the best thing to do is to talk to someone in the behavioural science field. They'll give you an insight into what the job is really like. It's also helpful to decide what parts of academia you find most interesting. For me that was designing experiments and giving presentations. If you don't like public speaking, then this type of work isn't for you.

The other crucial thing in this line of work is that you're a consultant, you work for the client. This means you have to focus on what the client wants, and that's sometimes different to what you might be interested in or what you think is best. Academics are typically very independent and autonomous, creating their own research tracks and focusing on what interests them. Academics can sometimes struggle to get out of that mindset and focus on someone else's question instead of their own. You also won't be able to dig into problems as deeply as you might like so be prepared to leave projects with questions unanswered.

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

When I started, I wanted to do a deep dive into marketing and business. I think most academics will have that mentality of researching and studying up on a new topic to get good at it. However, all the people on my team told me that I wasn't hired to talk about marketing and business, but I was hired to be a scientist and to provide expertise in psychology and neuroscience. So don't worry too much about getting up to speed on these other areas, it's better to refresh yourself on other aspects of psychology that you're less familiar with. I spend a lot of time talking about attention and the visual system so I had to refresh myself on these areas.

I'd also start reading up on behavioural science so you've got the basics under your belt. Marketers will talk about concepts like System 1 and System 2, which comes from Kahneman's *Thinking Fast and Slow*. The basic idea has been around in psychology for decades – a fast automatic system and slow controlled process system (see Schneider & Schifferin 1977 for example). There are lots of online resources to get you up to speed on behavioural science, and it will largely make sense to someone with a psychology/neuroscience background (different names for ideas you're probably already familiar with). This will also start to give you insights into how academic theory moves into practice and application.

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?

As I often say to my clients, it depends! Working as a consultant means you don't have control of what you study but that doesn't necessarily mean you won't care deeply about what you're doing. All of my clients and colleagues care about their work, whether it's advertising or pack design (you'd be surprised how excited people can get about supermarket shelves!). We've just had the Super Bowl, which is an important time for advertising as lots of companies spend a lot of money creating content just for this event. The next day we talked more about the ads than the game! We're also able to talk about really important issues such as the role of advertising in promoting positive values. My boss (Dr Temple) gives an amazing talk on effective prosocial messaging in advertising. So even though you may not be able to pursue exactly what you want, I believe you can still deeply care about what you're doing.

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 actually think there are similar levels of freedom but for different reasons. In academia, I had the freedom to study whatever I wanted, but I didn't always have the resources to do so. Equipment or time on equipment, participant costs, and journal fees, all these things cost money; hence, we apply for grants. But grants have priority areas, so academics often have to adapt their ideas to match the criteria of the funding agency. While academics have the freedom to study whatever they want, in reality there are practical obstacles that can limit that freedom. Where I am now I have access to resources but I'm constrained by the client and what they want to do. I can propose what I think is the perfect research plan to answer their question, but if it's going to take too long or too much budget, then I have to scale back. Sometimes we get to explore areas of interest through R&D. Similar to what I said about grants, our R&D questions have to tie into priority areas for the business. I think there's actually greater similarity than people might think. Constraints on funding mean that academia isn't as free as it used to be.

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

First, well done! A PhD is not easy so you've already achieved a lot by completing your thesis. My main message is that you're not on a set path, you have options. Every PhD has ups and downs, but for some people the PhD process may not have been a good one. You shouldn't feel that because you've started down the academic road, that's where you have to continue. Even worse, some people feel guilty about leaving academia. That they'll be seen as a failure for leaving academia or they're letting down their supervisor. These stigmas are horrible and not true. The greatest strength of your PhD isn't your knowledge of a very specific topic area, it's your ability to ask and test questions, work with data, and create a narrative to explain to people what you did and what it means.

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

I hope I haven’t come across as anti-academia. I loved academia and I wouldn’t be where I am now without it. I got to travel the world and make amazing life-long friends, and I’m very proud of the work I did. Academia shaped me as a person and I’m grateful for that. However, I don’t think academia is right for everyone. It wasn’t for me and I’m ok with that. I don’t want academics to feel ashamed about leaving academia. Academics shouldn’t feel like they’re sell-outs or greedy because they want to be paid more for their time. You haven’t failed or disappointed anyone if you choose to leave academia. Commercial work can be just as rewarding as academic work. Hopefully you’ll still be able to travel the world, make amazing life-long friends, and do work that you’re proud of.

Thank you for sharing your journey with us, Joshua!

“Leaving Academia Doesn’t Permanently Close Doors”



Ashleigh Johnstone



Abstract In our interview with Ashleigh Johnstone, she shares her journey from a PhD on martial arts and cognition through to an industry role, and then back to academia. Exploring options during the pandemic, Ashleigh worked in sales at an online research platform before returning to academia for university teaching. She values direct student interactions and university access initiatives. Ashleigh notes the openness needed adjusting to business discussions. Ashleigh encourages informational interviews and mental flexibility between sectors. She advises focusing on enjoyment not the “perfect” first job.

Ashleigh Johnstone

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

Ashleigh: Hello! I'm currently a lecturer in the School of Psychology at Arden University. Arden provides students with the opportunity to study through distance (or blended) learning and has the aim of opening higher education up to everyone. This is particularly important to me, as I wasn't well during my teenage years so I did my GCSEs (General Certificate of Secondary Education exams) through online distance learning – without the opportunity to study in that way, I probably wouldn't be sitting here with a PhD teaching students. I get so much joy out of working with students from a range of backgrounds and seeing how we can best support them. Aside from teaching cognitive psychology modules, the other main part of my role is focused on employability initiatives, finding ways to encourage students to think about their employability and future career paths.

My main research area is looking at whether we can train cognitive functions, and I particularly enjoy the dissemination and public engagement side of research. I'm a huge believer that there's no point in doing cool research if we don't get to share it with other people!

What was the focus of your PhD?

I had 1 + 3 funding from the Economic and Social Research Council (ESRC), which meant I was given funding to cover my course fees for a 1-year masters and a 3-year PhD, as well as a stipend to cover living costs. This meant my masters and PhD were both on the same topic – cognitive changes associated with martial arts practice. I started my PhD in October 2016 and submitted it in September 2020, with my

viva taking place in November 2020. I studied at Bangor University under the supervision of Dr. Paloma Mari-Beffa.

I’ve always had an interest in cognitive training, perhaps influenced by my love of Dr. Kawashima’s Brain Training game for the Nintendo DS as a kid! When I saw a PhD position being advertised to look at cognitive changes related to martial arts practice, I was really intrigued. Discussions with Paloma were focused on the idea that we know that physical activity and mindfulness have both been associated with improved cognition (attention in particular), and martial arts essentially combines exercise with meditation. We ended up being a great team – Paloma’s a black belt in Karate and I’ve never done martial arts which helped us to get an interesting perspective on the topic!

Over the course of my PhD, I looked at attentional networks, task-switching, and response inhibition. Our main finding was that our martial arts participants showed higher levels of vigilance than our non-martial artists. So our martial artists were better able to respond to unexpected events! This actually makes a lot of sense. Imagine if you’re sparring during training. You need to learn to respond quickly and accurately, even if you don’t know when the hit is coming.

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

The write-up phase of my PhD was far different than I’d ever expected. I was getting stuck into writing properly in early 2020 and then the pandemic hit. I had to quickly pack up my office with everything I may need to finish my PhD at home, with no idea when I’d be allowed back in. Writing a PhD in the middle of a pandemic was tough – there was a lot of stress and concern about what was going to happen with the wider world, and writing a thesis suddenly felt like it wasn’t quite so important. I also had no idea what state the job market would be in by the time I submitted; would there even be a job anywhere for me to go to?

I always imagined submitting my thesis and going into a permanent teaching role – perhaps optimistic thinking! I’d had zero-hour contracts for teaching throughout my PhD but I’d been looking for something permanent. During the pandemic this suddenly felt like an impossible goal – there were hiring freezes and a complete lack of certainty about what the ‘new normal’ would be for universities and teaching. I felt like I was tiring of academia – although to be honest, now when I look back I think it was a general tiredness and anxiety about the state of the world – so I started widening my job search and looking at industry roles as well. At that point, my main criterion for a job was something that would allow me to work from home and would let me use my research knowledge.

What did you end up doing next?

When I first started looking at industry jobs, I didn't really know where to begin. During my time at university, there was a lot of focus on how to look for postdocs or teaching roles, but we never really spoke about alternative roles. Because it was never really spoken about, it felt a little bit like I was sneaking around in the background doing something 'naughty' by looking at jobs outside of academia.

I found myself going to general job sites and searching terms like 'research', 'data', 'psychology', 'behavioural science', and 'science communication' just to see what's out there. This ended up being a really helpful exercise; it allowed me to get a better idea of job titles and roles that would be relevant to my skill set. I also spent some time looking at companies that create tools used throughout the research process, as I thought it might be cool to work in a role that still had ties to academic research.

I took on a role at Gorilla, an online experiment builder. It was primarily a sales role, but I also got to talk with researchers most days to find out more about the cool research they were doing. My role evolved over time and it became more about building relationships with researchers across the world to find out how they were using online research and what we could do to help support them. I particularly enjoyed interviewing researchers who had published papers using Gorilla to find out more about their research and help them promote it across our social networks.

How did you come to return to academia?

I think that when I took an industry role, I had a naive 'grass is always greener' view that there would be no burnout in industry and that a solid work/life balance was a given. Whilst I was enjoying the majority of my work in the new role, I was starting to realise that there would always be pressures in any work environment. This was around the same time I was starting to miss teaching and working with students.

In early 2022 I was asked 'what puts a fire in your belly?' When I said it was 'teaching', I realised that I was in the wrong job. My passion has always been working with students to help them achieve their goals and it's really important to me that students feel supported and welcome in education. It's this that made me want to return to academia and teaching.

Making the decision was step one to returning; step two was getting past mental blocks. I remember feeling worried that academia wouldn't want me back, as if I had closed doors that wouldn't re-open for me. I also had a bit of fear that people would think I was a hypocrite. I'd made a big fuss of moving into industry and here I was a year and a half later thinking about going back to teaching. But I set those feelings aside and put in an application for Arden University, and here I am!

What advice do you have for someone deciding between academic and alternative roles for their next position?

I'd suggest reaching out to people who have moved into industry or alternative careers! An informational interview is a great way to find out about different careers, including what they involve day to day and their entry routes. Most people who have left academia are more than happy to share their experiences with academics thinking about making the move, so don't be afraid to reach out! I know that I've personally had informal chats with several people wanting to find out about industry roles.

My other piece of advice would be a reminder that leaving academia doesn't permanently close doors. I would love to see more fluidity between academia and industry, with more movement back and forth, and I think it's going to become increasingly common for movement in both directions. If you try an alternative career, then decide it's not for you, you'll have picked up great extra skills and knowledge to come back to academia with! Alternatively, you may decide that you love it and you're happy in your new career. Win win!

Can you tell us a bit about what day-to-day life was like when you worked at Gorilla?

There was a lot of collaborative work even though it was remote working. Rarely did I have a day where I wasn't catching up with various members of the team about different projects. We also had daily team meetings which allowed us to stay up to date with what everyone else was working on. As for the work itself, it differed day to day but most days involved talking to researchers who use Gorilla either on calls or via email. I was always particularly interested in how universities were using online research methods to give students practical research experiences, particularly given the pandemic. Other days were more focused on creating content such as social media posts and email newsletters about the research being conducted on Gorilla.

How do you think having a PhD has helped you succeed at Gorilla?

I think there are two strands to this. First, having the experience of working in a university setting was helping with some of the more boring and practical aspects of the job, like dealing with purchase orders and navigating procurement and finance hurdles. But I think the bigger thing was the idea that conducting my own research and doing my PhD has given me a strong sense of empathy for other researchers. I know what the pain points can be; I know what it's like to be an early career

researcher who just wants to get their research up and running as painlessly as possible. I think this made a big difference in how I felt able to build relationships with Gorilla users! I've been in their position and I think that's a level of authenticity and empathy that it'd be hard to get without my PhD experience.

It often felt nice when I could make direct connections between work I was doing at Gorilla and my PhD training. I know that it's common for people who leave academia to feel an element of guilt when they first leave. I felt like this for a while. I was worried that people would think I had 'wasted' my training by not following the academic path. I knew how competitive PhD places were and I was worried that people would think that I didn't deserve that opportunity if I was doing something different. Luckily my PhD supervisor set me straight on that very quickly! She told me that any good PhD supervisor will just want to know that their former student is happy and enjoys what they're doing.

How does that day-to-day life differ relative to your current position?

Well one thing that hasn't changed is my inbox; it still feels like I could spend all day catching up with emails! I think one of the main differences is that at Gorilla I had meetings every day to see how different projects were progressing. In my current role it feels like there's a bit more freedom and trust for me to just be able to crack on without daily check-ins.

What do you like most about work in your current role?

The actual teaching! As I've said, it's one of the main reasons I returned to academia and it's definitely been worth it. I've had some really enjoyable sessions lately talking with students about applied cognitive psychology and it's been so much fun to know they'll be leaving with a new appreciation for cognition work!

I'm also really enjoying being an academic again. I genuinely love being able to work directly with students, finding new collaborators to talk about pedagogy with, and working in a university setting. It just feels like the right place for me to be.

And what do you like least about work in your current role?

Honestly, at this point nothing comes to mind, I'm really enjoying doing what I'm doing and working with my team! I'm not sure whether this is because of my time out of academia and the fact that I thought carefully about where I'd make the return, but for now I'm just happy.

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

My current role is very teaching focused and so I’d suggest thinking about whether teaching is something you are particularly passionate about. If you’ve decided that you really enjoy teaching, then a role like mine could be a good fit. If you’d prefer more of a teaching/research balance, then a teaching and research lectureship role may be better suited. I don’t think it’s always made clear to PhD students that there are different types of lectureship roles available in academia!

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

Try to let go of any preconceptions you may have about academia and industry and make sure that you’re going in with an open mind. If you go into an industry role for the first time, you may find that there’s an adjustment process as you settle into a new way of doing things. Within academia there’s often the idea that we’re working towards ‘the greater good’ and it can feel a little jarring to go into a role where there are open discussions about the financial and commercial side of things, particularly if you’ve gone into something like a sales-focused role. Being able to go in with an open and curious mind can make a big difference to the adjustment time!

Do you think there are some aspects of being an academic that someone just finishing a PhD might not realize are part of the job?

I think there’s always going to be a lot of paperwork that appears seemingly out of nowhere! But there are also a lot of positive hidden aspects of the job that may not immediately be apparent. For example, one of my favourite parts of being an academic (other than the direct teaching) is about widening access and participation. As I’ve mentioned, I had setbacks during high school and so I had to fight to be able to stay in education, and so I find it really important that I am open about that and can show people in similar positions that there’s a place in education and academia for them. I find it really inspiring when I see academics sharing their background and experiences with the aim of reducing barriers and encouraging others. I don’t think I had ever considered that this may be part of the job as an academic until I found myself getting involved with widening participation initiatives.

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

I think a lot of pressure can be put on people nearing the end of their PhD. It's such a big milestone and it can feel hard working towards that while also thinking 'what next?' My advice would be not to put too much pressure on yourself for your first post-PhD job to be 'the one'. It's okay to try different things and work out what you enjoy doing! You may find that some people will give you suggestions about what path they think you should take, but you should do what feels right for you.

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

There are so many different roles available to people with a PhD – remember that you are highly skilled with a wide range of talents! There will be so many options open and available to you once you've got the confidence in your skills and know how to sell them in a job application. Feel free to connect with people in similar roles on LinkedIn or follow them on Twitter (or Mastodon, or Bluesky!) to learn more about them, and don't be afraid to reach out to them for a chat or informational interview!

Thank you for your advice and insights, Ashleigh!

“Looking Back Now, I Wish I’d Been More Honest with Myself at the Time and Looked at Alternative Careers”



Katharine Askew



Katharine Askew

Abstract In this interview with Katie Askew, she shares her transition from academia to working as a research officer in a charity. She highlights the aspects of the academic environment that didn’t fit her professional aspirations and lifestyle, and the factors that led her to change her career trajectory. Katie’s insights offer a new perspective on how the skills gained during academic research can be leveraged in other sectors such as charity funder, and how these positions can provide a fulfilling and rewarding career path. Her advice for individuals contemplating their career paths post-PhD centres around being open to non-traditional academic roles and exploring broader initiatives, like DORA, or going beyond public engagement to patient and public involvement. Katie ends discussing the work-life balance she has achieved in her current role and being honest with yourself about what motivates you.

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K. Askew (✉)
UK MS Society, London, UK

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

Katie: Sure! I'm a neuroimmunologist by training, which means I really like the brain and its specialised immune system. I'm currently working as a research officer for the UK Multiple Sclerosis (MS) Society. The bread-and-butter of my role is research grants management. I help to manage our active funding portfolio, monitoring the progress of research projects that we fund. I also help manage our response-mode funding opportunities, setting up grant rounds, helping researchers with pre-application enquiries, coordinating peer and lay review, organising panel meetings and then working on contracting and award documentation. Alongside this, I also lead on our Early Career Researcher Network, looking to provide additional support and opportunities for UK-based ECRs working in multiple sclerosis research, and our Open Access program, making sure our open access policy and procedures are in line with the international landscape. And if all that wasn't enough, I also support our Assistant Director of Research in running our Research Strategy Committee, who advise us on the development and implementation of our Research Strategy. I get to work with researchers, but also people affected by MS which is a real privilege. Every day is different and I absolutely love my job!

What was the focus of your PhD?

I started my PhD in 2015 at the School of Biological Sciences at the University of Southampton. I'd done some undergraduate summer research placements with my supervisor, who offered me the position once I'd finished my master's. My project was looking at how microglia, the brain's specialised immune cells, are maintained throughout our lives and as we age. For a long time, it was thought that these cells were replaced by other types of immune cell from outside the brain, but we found

that they ‘self-renew’ – when one microglial cell dies, another nearby would ‘proliferate’ creating two new cells. This happens at a reasonably steady rate from birth through to ageing. I used mouse models for most of this work, but we also confirmed a similar thing happening in human brain tissue which was really exciting! I submitted in November 2018 and moved straight up to Edinburgh to start my post-doctoral research.

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

I wasn’t really sure if I wanted to be in academia forever, but I figured that if I didn’t try at least one postdoc I’d always be wondering. I also had no idea what I would do if I didn’t stay in research! I think if I’d had a better idea of what other options were out there, I might not have done a postdoc, but it definitely helped me develop skills and knowledge I use regularly in my job now. Getting my postdoc position was somewhat serendipitous – I decided to look at jobs.ac.uk one evening to see what was out there and found the ‘perfect’ project. It was based in Edinburgh, where I’d always considered going for a postdoc, and looking at how microglia respond in a mouse model of vascular dementia. I applied and interviewed 6 months before I was due to submit my thesis and was lucky that they were willing to delay the start date for me!

How have your career plans changed as you’ve continued on to your current position?

Before I started this job, I had applied for a few different roles because I wasn’t sure what I wanted to do. One of the first roles I looked at was a Research Themes Project Manager at the UK Dementia Research Institute (UKDRI). I’d worked alongside researchers from the UKDRI at Edinburgh so I had relevant research expertise and knowledge of the organisation but I didn’t have the ‘research management’ experience the role required. So, I set about looking for roles where I could gain research management experience with the aim to go back to the UKDRI if other positions came up in future. I applied for and interviewed for a Research Grants Officer position at the Alzheimer’s Society which I was unsuccessful for. But the interviewing manager gave me some really helpful feedback about how to pitch myself and my expertise for next time. Luckily for me, the next time was a Research Officer at the MS Society and I’ve never looked back! My current career plan is to stay here for a while – I can’t speak highly enough of the MSS Research Team. My managers are so supportive and I’m looking to work my way up within the organisation. We had an internal position come up for a Research Programme Manager,

which would have been similar to the Research Themes Project Manager role at the UKDRI. But now that I've worked in research management for a few years, I've decided that working on the response-mode funding management, rather than managing large programme grants, is something I really enjoy. If I want to stay at the MS Society, that does mean waiting for my line manager to move on for a Research Manager position to come up, but I have enough variety and responsibility in my officer role that I don't mind that too much right now!

Can you tell us a bit about what day-to-day life is like in your current position?

No two days are the same really! The one thing I will do every day is log on to Grant Tracker, our online grants management software. We use this for pretty much every aspect of managing our grants programme. We have an annual funding round cycle so that determines my business-as-usual work each day. Setting up new funding rounds takes a fair bit of time as we like to make sure we've tested all aspects of our application forms, review processes and panel meeting admin. When applications are open, we support prospective applicants with any queries – ranging from whether a project is eligible for a particular round to technical questions if Grant Tracker is playing up. We also support our funded researchers with any questions relating to active grants; these could be about grant finance, or scientific progress, or if a project needs an extension due to reasons outside the researcher's control. If we've just closed a funding round, the other Research Officer and I will read all the applications we've received to make sure they fit the remit of the funding round. We'll then send these out for peer review, by other researchers and clinicians, and lay review, by people affected by MS from our research network. Finding peer reviewers and monitoring reviews is usually a daily activity for a few months and takes up quite a lot of time! Around these, I organise and administer meetings for various committees and panels – our research funding panels meet four times a year once the review period for each round is over and our Research Strategy Committee meet three times a year, so we have at least one 'big' meeting every couple of months. Organising these involves coordinating our panel members – checking availability, making sure everyone has access to relevant documents – and other members of the research team, collating slide decks and written papers, testing any online tools we'll be using for meetings (I consider myself a Zoom Pro these days) and hoping there aren't any last-minute changes! Outside of this, I may also be working on some career development activities for our ECR Network or collating data about our active grants portfolio, like how many papers have been published by our funded researchers. There's a fair bit of tea-drinking sprinkled about in there too!

What do you like most about your work?

I really thrive on routine so I like knowing what my next few months are going to look like and having broad outlines of what needs to be done and when. But I also really enjoy that if I'm not enjoying working on a certain thing at a certain time, I can pick something else from my to-do list and get stuck into that instead. I tend to plan out my week but shuffle around what I'm doing when depending on how I'm feeling. I work much more effectively that way, rather than forcing myself to work on something if my brain just isn't in it! There's also a lot of autonomy, I'm trusted to get on with what I need to do and report back when it's done or if I have questions. I also work with a great team of people who bring so much joy to every day!

And what do you like least about your work?

I think I say 'I love my job' at least once a week so this is a hard one! The thing I miss most about being in the lab is that I didn't spend a lot of time at my desk. I was usually running round doing various experiments. I still have the variety of things I can dip in and out of, but working a purely desk-based job isn't something I saw myself doing. That being said, I've got myself a standing desk so I try not to spend all day sitting. Working from home full-time also means I can move around the house if I get bored in my office and I can take the dog out for 2–3 walks a day which we both love!

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

I definitely don't think you *need* a PhD to do my job. The main thing I think that's helped is being able to spin many, many plates and meet competing deadlines. I like to say I have a 'limitless capacity to say yes', because my workload never feels as high as it was during my PhD and postdoc. But there's always lots going on! On a more practical level, having an understanding of the research funding process and demands of a research career comes in really useful when working with researchers. My neuroimmunology expertise and lab experience also come in handy when reading funding applications or progress reports. I have more of a grasp of whether things may be feasible or if they're on the right track. But I think if you have relevant research experience (not necessarily lab-based!), even if that's not a PhD, that would be helpful.

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

The thing I always enjoyed the most about my research was planning all my experiments and reading cool science. I just didn't really want to be **DOING** the cool science. I've really struggled answering this one without making it sound really dull! If you enjoy the 'admin' part of your PhD and need a varied working environment where you can still be in touch with research, then research management is definitely worth considering. I wasn't sure if I was a good fit when I started the role, but even if a Research Officer/Grants Officer position isn't right, there are loads of other charity sector roles that might be!

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

If you're able to work with a funder as part of your research, you'll be able to gain some insight into what we do 'behind the scenes'. This could be by sitting on or observing a governance panel (e.g. funding panel) or taking part in a steering group for one of their initiatives. Having an awareness of some of the 'big picture' initiatives in the sector also helps, for example DORA or Plan S. Your role may not require an in-depth understanding of these but most funders will consider how research outputs are assessed or have an open access statement or policy. If you're looking to apply to a charity funder, I'd say the most important thing is to get involved with the community the funder is supporting; for us, working *with* the MS community is critical in our research program and we ask all our researchers to involve people affected by MS in all aspects of their research. If you can start working with the relevant community, going beyond public engagement to patient and public involvement (PPI), you'll have a really good basis to bring into a research management position.

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?

I think yes, particularly working in the charity sector. There are similar roles in most charities that fund medical research, so you don't necessarily need to apply for roles where you have research expertise in that condition. The skills you use will be transferable across different charities; it might just be that you need to do some

background reading when you start to make sure you're developing that subject matter knowledge. In my case, multiple sclerosis isn't something that I'm affected by personally, but my neuroimmunology expertise was relevant. But now I've worked with many people affected by MS and that more than anything has given me the drive to keep doing what I'm doing. I actually feel like I'm making more of a difference now than I ever did in the lab. Something that I have always been fiercely passionate about is research culture. There were lots of things that didn't sit well with me when I was a postdoc, and here I feel like I'm slowly chipping away at 'the system' from the inside. Part of that is through leading on our Early Career Researcher Network and working with ECRs to make sure we're offering relevant funding, training and support where we can. Change is happening, but I think it's slower than anyone would like. But I'd say if you're looking for something outside academia where you can make a change for people who still want to stay in research, research management is a great place to start.

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?

It's definitely a different working environment; we have to work within the MS Society's Organisation and Research Strategies to achieve our goals for people affected by MS. But that doesn't mean there's no scope to do anything new or different. You just need to be able to justify it within those strategies. For example, the ECR Network fits into our Research Strategy as capacity building, but I've been given pretty much free reign to co-develop training and resources with our Steering Group. If anyone in the team has an idea that may be able to improve things for our researchers or the MS community, we work as a team to see how we could fit it into our workload. There's an annual business planning process the organisation goes through where we can try and pursue new things. There is less freedom, but there is flexibility.

Have you thought about returning to academia?

In all honesty, I've not looked back once. Part of that is that I'm now on a permanent contract, and it's taken me a while to stop living like I'm going to have to look for a new job in a year's time. I think the biggest difference for me is that I can switch off when I leave my desk, even if it's at home. I have a work-life balance that just didn't seem possible for me in academia. The 'for me' is really important; others may well be able to have that work-life balance, but I was very much the 'research is

all-consuming' type. I'm in a much better place mental health-wise now, and being able to say that whilst doing a job I really love is great. Working from home full-time has also meant that I could get a dog, and he's the best office buddy.

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

I think my biggest piece of advice is not to feel bad if academia isn't for you. I was terrified to tell my PI that I didn't want to stay in research because it felt like the 'done thing to do' – PhD, postdoc, fellowship, etc. I did my postdoc because I wanted to see if academia was still for me, and if I'm honest, I was scared about what life outside of that sphere was like. Looking back now, I wish I'd been more honest with myself at the time and looked at alternative careers. It's not for everyone, and that's okay!

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

If you're not sure whether something would be the right fit for you, reach out and talk to people from the company/organisation – in similar and in different roles! I've found that people are generally really keen to share their experiences. It's also helpful to have that 'insider information' when you come to applying – if you can show a good understanding of the organisation AND a passion for what they're trying to achieve, it goes down really well. You can find me on Twitter (@KatharineAskew) if you'd like to chat more about research management and/or you'd like to see pictures of my dog.

Thank you for sharing your journey with us, Katie!

“At NIH, There Are Many Tasks and Operations That Need to Be Done or Grants Would Not Be Reviewed or Awarded”



Crystal L. Lantz



Crystal L. Lantz

Abstract In our interview with Crystal Lantz, she shares her journey from studying visual system development to becoming a science advisor at the NIH BRAIN Initiative. Initially only considering academia, Crystal realized through peers’ examples that other options existed. She values supporting impactful research and an engaging team. Crystal continues applying project management, scientific expertise, speaking, and analytical skills from her PhD. She retains passion for neuroscience and enjoys some flexibility in choosing projects. Crystal encourages informational interviews and exploring interests with outreach or policy. She considered tenure track jobs but ultimately prioritized work-life balance. Crystal advises casting a wide net career-wise and giving yourself time to reflect on what’s important.

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C. L. Lantz (✉)
NIH Brain Initiative, Washington, DC, USA

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

Crystal: I am a Science Advisor for Programs in the Office of the BRAIN Director (OBD) at the National Institutes of Health (NIH). The NIH is a U.S. government agency within the Department of Health and Human Services. It is a biomedical research center made of 27 institutes and centers that both support and perform scientific research.

In my current position, I work for the Director of the BRAIN Initiative, Dr. John Ngai, along with my other OBD and NIH colleagues to plan our scientific programs, as well as develop funding plans. I also work on shaping and growing BRAIN Initiative policies such as Data Sharing and the Plan for Enhancing Diverse Perspectives. My work on these involves using data analytics to examine our portfolio of funded projects, people and institutions to inform our future planning.

What was the focus of your PhD?

My Ph.D. is in neuroscience. It was at Virginia Commonwealth University, in the Department of Anatomy and Neurobiology, in the lab of Dr. Alexandre Medina. As a part of this work, I developed a mouse model of fetal alcohol spectrum disorders. Using this model, I studied the effects of early alcohol exposure on the visual system and how alcohol can disrupt plasticity seen in the critical period for visual cortex development. I graduated in 2012.

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

When I was finishing my PhD, the only next step I was thinking about was a post-doctoral position, and how best to become a tenure track professor. I have always held a wide variety of interests (scientific outreach, 3D printing, sewing), but at the time the other pathways available to me were not quite as clear. It was not until several years into my postdoctoral position, when I saw my friends and colleagues moving into roles outside academia, I ‘realized’ there was a world of options outside of academia.

Did you apply for tenure-track professor jobs? How did you decide to go outside of academia instead?

Yes, I applied for tenure track jobs in the 2019–2020 academic year. I got a handful of interviews, along with a few offers that came in as the pandemic started. Although they were good offers, from good institutions that I would have been happy to work at, I began to reassess what I wanted out of my life and career. After many discussions with my partner and late nights mulling over options, I didn’t think that the academic path was the one for me. I truly felt like I could do more good for the world and science in a different role than running my own lab. Working in the Extramural side of the NIH seemed like a good fit, where I could help support excellent research and foster the next generation of scientists, while maintaining a reasonable work-life balance.

How have your career plans changed as you’ve continued on to your current position?

Before applying to positions at the NIH I had only heard of two jobs scientists could have in the extramural environment, Program Officer (PO) or Scientific Review Officer (SRO). It’s been eye opening to learn of all the different roles people with scientific backgrounds have within the NIH.

There are positions in policy, operations, and communications, just to name a few. When I first started at NIH I was hired as a Health Programs Specialist, a position that can mean many things. In this role, I predominately assisted POs with analysis and administration of grant applications and awards. After my first year as a Specialist I was offered my current role, and I leapt at the chance to be more involved in programmatic planning and operations as a part of the NIH BRAIN

Initiative. At this moment I don't know where I will go next, but I envision it at the NIH. My working environment is incredibly supportive and allows me to use the skills I developed in my PhD and postdoctoral work, as well as think critically about neuroscience past, present and future. It's certainly a very different role than I envisioned, as a tenure track professor, when I finished my PhD but I am thankful I found it.

Can you tell us more about the BRAIN initiative and your role in it?

The BRAIN Initiative is a unique program formed in 2014. It comprises partners across multiple federal agencies, as well as non-federal partners. The NIH BRAIN Initiative, where I work, comprises efforts from 10 of the NIH Institutes and Centers (ICs) and is headed by The Office of the BRAIN Director, housed in the National Institute of Neurological Disorders and Stroke (NINDS), where I work. Our office is a small, nimble, team that works to coordinate all things BRAIN at the NIH. As a member of a small team I do a bit of everything, from assisting with programmatic review of grant applications to helping plan the BRAIN Initiative Annual Meeting. I serve as a Subject Matter Expert on steering groups for large projects and consortiums, plan and execute evaluations of our programs and policies, and generally help keep grant administration running smoothly. As a federal agency there are a lot of checks and balances to make sure that grant applications are reviewed fairly, paid out correctly, and that we are being good stewards of federal tax dollars. Coordinating all of these efforts between the 10 ICs that contribute to BRAIN can be a monumental task.

Can you tell us a bit about what day-to-day life is like in your current position?

Work in Extramural (research outside of NIH) NIH runs on 3 annual council rounds (application receipt, peer review, council, grant awards). Due to these cycles, each day is always different depending on the stage of the council round we are in, as well as what larger overarching projects I am currently working on.

Generally, I check emails in the morning, followed by a few meetings which can range from one-on-one check-ins with colleagues to larger programmatic review, or policy meetings. Between meetings I work on larger projects, whether that's helping plan a new funding announcement, organizing a workshop, writing code for a new portfolio analysis, or putting together guidance on policies. My day varies constantly.

What do you like most about your work?

I like knowing that the work I do makes a difference in the lives of scientists, patients and the public writ large. The NIH BRAIN Initiative funding, which facilitates this research, builds careers and leads to new treatments and cures. Playing my role in this is incredibly fulfilling. I also work with many incredible people, which makes every day at work better.

And what do you like least about your work?

Emails! I think I speak alongside many people when I say I get far too many emails, and responding to them takes up a large amount of my time. That said, I'd rather get emails than an equal number of phone calls, and people should never stop emailing me. I am always happy to help, in whatever way I can, those that reach out.

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

Absolutely. In my scientific training I learned how to manage multiple projects at once (with competing priorities), was able to hone my public speaking skills, learn to ask questions and design approaches to solve them. I use all the skills every day in my current position. Additionally, I often read and review the content of grant applications; all of the extensive neuroscience training I received helps me to better understand the why of proposals and how they fit within a broader landscape of neuroscience research.

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 really encourage reaching out to people at the NIH that hold positions in Extramural for informational interviews. Many of the institutes that make up the NIH (such as NINDS, NIMH and others), have specific websites dedicated to hiring, with lists of open positions and the names of people to contact with questions. Contact those people and ask about the positions; ask about talking to someone currently in that position. If you're at a conference and there's an NIH booth, or you see an NIH employee around, ask to have a chat! I have gladly talked to many graduate students, postdocs and faculty members interested in working at the NIH and am

always willing to do more. It can seem daunting to reach out to people like this, but know that the vast majority of people are happy to help. That's why we work in public service.

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

Keep focusing on your PhD, but think about ways to get involved outside of the lab. As a graduate student and a postdoc I volunteered with many neuroscience outreach activities in my community. This helped me gain the skills to talk about complex scientific topics to a variety of audiences. I also volunteered with policy outreach efforts on Capitol Hill, which exposed me to the laws and policies around how the NIH receives funding allocations from congress. Both of these skills helped me smoothly transition into my role at the NIH.

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?

Absolutely. I deeply care about scientific research as a means to better understand the world around us, as well as how it can be leveraged for better treatments and cures for disease. My work is tightly intertwined with both of these pursuits, via NIH-sponsored research that facilitates science across the US and world. I also love the brain and neuroscience (I would not have become a neuroscientist if I didn't) and I get to spend every day thinking about neuroscience research and its future.

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 often wonder how much freedom exists within academia given the structures of universities. Working at NIH, there are many tasks and operations that need to be done or grants would not be reviewed or awarded. Our office works as a team to get things done, often passing tasks between us as we each have unique skills and talents. This allows me some flexibility when choosing the areas I work in, such as I enjoy working on analytics and policy, but I am not exceptionally skilled in communications. There are also many groups that cover a variety of topics from short-term funding announcement development to broader policy rollouts and

disease-specific areas. In my current role, I have the flexibility to work on the groups that I am the most passionate about and interested in, which gets me involved in a wide variety of areas, including things like workshop planning and conference hosting which I really enjoy.

Have you thought about returning to academia?

Not particularly. I think if the right type of position opened up I would consider it, but I enjoy the service aspect of my position, as well as the exposure I have to the breadth of research that is happening across the country. As a bench scientist, my view of the scientific world was relatively narrow as I focused solely on my own expertise and training. In my current role the ability to span a wider area is incredible. I've also found a healthier work-life balance where I am well supported and have the ability to truly check out of work in a way that I did not have in academia.

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

Cast a wide net. Do not be afraid to explore things that interest you. Give yourself time to breathe and to think about what is important to you. It's okay to not want to be a professor, it's also okay to want to be one. Talk to the people who have the jobs you're interested in, most individuals are happy to talk about themselves, and there is a lot you can learn about the opportunities that exist in the world when you start to ask questions.

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

When I left academia, I spent a lot of time thinking that I was a failure for not accepting a tenure track position. I think that feeling is completely normal. When we have been groomed from the first day of graduate school to think that a tenure track position is the ultimate goal of our studies, it is difficult to see the huge world of opportunities for scientists outside of academia. Every job has its positives and negatives, including those in academia. Finding joy and meaning in your work is at least in part about finding the balance that works for you, and just you.

Thank you for sharing your journey with us, Crystal!

“I Am More Passionate About Supporting Researchers Than with Any Research I Did During My PhD”



Andrew Rowe



Abstract In our interview with Andrew Rowe, he shares his journey from a transport studies PhD to managing researcher training and development. Inspired by supporting peers, Andrew realised academia was not his passion. He now develops workshops and initiatives to support researchers’ needs. Andrew continues applying research skills like critical thinking, presenting, and project management. He encourages finishing PhDs to be proactive in gaining experience, use social media strategically, and utilise campus career services. Andrew advises finding what you’re passionate about.

Andrew Rowe

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

Andrew: I'm Andrew, a Researcher Training and Development Manager at the University of Nottingham. I work for the Researcher Academy in a highly skilled and passionate team who promote healthy research cultures and provide support to enable our researchers to flourish. We provide training and development opportunities for all researchers at the university, from postgraduate researchers right up to senior leaders. Our researcher community is at the very heart of everything we do and we take great pride in the sheer number of opportunities we are able to offer them. We have completely revamped our training to connect researchers with the skills they need to take their specialism out into the big, wide world. We have specific programmes of training for research staff and supervisors and sessions which cover foundational skills and knowledge that all researchers should possess. We also offer specialist training programmes. Themes covered include: Innovation and Knowledge Exchange, Policy Engagement, Public Engagement, Research Administration and Management, Research Methods, and Research Communication. I convene, teach and lead on the latter of these programmes which lends to the skills and knowledge I developed whilst doing my own doctorate.

What was the focus of your PhD?

I technically have a PhD in Transport Studies from Loughborough University (graduating in 2017) and was based in the school of Architecture, Building and Civil Engineering. My research looked at new media technologies (specifically Twitter and Facebook) and the challenges and opportunities these bring when they are incorporated into existing protest campaigns, through a case study of long-standing campaigns against the expansion of Heathrow Airport. You can see that this really isn't engineering focused at all and it was more relevant to my undergraduate degree background in human geography. To be honest, the research was incredibly multi-disciplinary and was influenced by other areas such as computer science,

information science, sociology, human factors and environmental politics. Mixed methods research was also very much at the foundation of my thesis and I would say that this has made me an 'all-rounder'.

Firstly, my interest in the many parts of the Occupy Movement started me on this path. I was fascinated by how these campaigns organised and mobilised. The anti-Heathrow expansion aspect evolved from the work I'd done at the undergraduate level. Some of these campaign groups were transient in nature, whilst others had been active for long periods of time. It became clear that these long-standing groups had had to adapt and change over time with the advent of more contemporary communication tools; and it was trying to understand the issues around this change in approach that led me down this path. Secondly, social media piqued my interest too, particularly with how a message could reach so many people, at very little financial cost, and still have the potential to have a huge impact. Then, I fell down the rabbit-hole of social network theory and analysis and the 6-degrees of separation idea that any person on the planet can be connected by five other intermediaries (made famous by the "Six Degrees of Kevin Bacon" game!) I managed to incorporate all of these interests together into a thesis. So, you can see how it became such an interdisciplinary piece of research.

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

I'd been thinking about my post-PhD career since 2014 (I started my PhD in 2012). I had developed a real passion for supporting other postgraduate researchers through the doctoral journey, so much so that a friend and I created a university-wide support (and social) network for postgraduate researchers. It was a peer support initiative designed to get PGRs together on a Tuesday lunchtime to take some time away from our research, to meet new people and just talk to each other – a simple concept really, but it worked. We won numerous university awards for the scheme, which was brilliant, and I believe it is still running today, several years after we graduated. I developed some great relationships with staff in the Doctoral College and got to know what they did and the role they played in supporting PGRs. It was very soon after setting up this initiative that I decided supporting PGRs, more formally, was something I really wanted to pursue; and fortunately, I've found my dream job.

I knew, after this fire was ignited, that an academic career wasn't for me; in part because of the mental and emotional exhaustion doing my research had put on me, but actually I really wanted to pass on my knowledge and experience to other PGRs and support them along their own doctoral journey. I must say that after I passed my viva, I was fortunate to get three papers published, with my incredibly supportive supervisor, and I tried to ride the crest of that wave which led to me applying for a couple of grants with an encouraging and dedicated mentor at the University of Nottingham; but ultimately the fire for doing more academic research burnt out.

Can you tell us a bit about what day-to-day life is like in your current position?

My job is incredibly varied and no 2 days are the same, which is why I love it. We design our provision and activities to make sure that by the time our researchers leave the university, they have developed a well-rounded, transferable skill set to apply them to their future careers. As well as leading, and teaching, on the Researcher Academy's Research Communication Programme, some other parts of my job entail:

- Supporting the training and development of Faculty of Science researchers alongside a senior academic, who is the interface between the Researcher Academy and Faculty of Science.
- Teaching some of our other courses in our Researcher Fundamentals Programme related to constructing a literature review, how to be an effective doctoral researcher and mixed methods research, to name a few.
- Designing, developing and delivering training. I have the opportunity to create course content, across platforms, through synchronous, asynchronous and hybrid delivery.
- Representing the Researcher Academy on certain school level postgraduate researcher committees.
- Managing a dedicated networking and collaborative space for researchers over at our Sutton Bonington campus.
- Providing training for some of the University's Doctoral Training Programmes and Centres for Doctoral Training.
- Being part of a dedicated well-being group which has been tasked to develop a holistic approach to the Researcher Academy's activities to support and understand researcher well-being.
- Sharing knowledge and best practice with other researcher training and development managers in the Midlands as the University of Nottingham representative on the Midlands Researcher Development Forum.
- Co-leading on the University's FameLab Competition, a research communication and public engagement opportunity where participants communicate their research with the public.
- Co-managing a pool of demonstrators who support us with certain courses.

The list could go on! Long before each academic year starts, we collectively sit down and plan our teaching schedule so that we know, in advance, how much time we have to complete additional activities and projects to meet the needs of our researcher community.

What do you like most about your work?

There are a few different things I could have talked about here, but I'll mention three:

Firstly, I have to say the people. The Researcher Training and Development Team are a wonderfully supportive, intelligent and compassionate bunch! Open and honest communication has helped us to build relationships, not just with each other, but with our stakeholders. Each member of the team is given space, and encouragement, to come up with innovative ideas to provide our researchers with the most up-to-date training and development opportunities. We are incredibly adaptable to the needs of our researchers. This was typified during the COVID-19 lockdown when we had to quickly convert a lot of our in-person training into an online format. My colleagues in the wider Researcher Academy also make it a truly fantastic place to work. Yes there are challenges and sometimes frustrations, but we all work together towards the same goal. We respect and value each other's opinions, ideas and experiences as we are able to bring so many different skills to the table – the true epitome of teamwork. We also have brilliant staff in the other professional service teams that also provide support for researchers, and so getting to work with (and learn from) them has been incredibly rewarding.

Secondly, the other part of my job, which I get a lot of energy from, is the day-to-day interaction with our researchers. I've learnt a lot from them, and hopefully they have learnt a lot from me too. Seeing our researchers learn, develop and evolve is special. Without our researcher community we wouldn't be in a job! They challenge us to design and deliver the best possible training and we are continually improving our support and development opportunities to meet their needs.

Lastly, I also like the fact that we are encouraged to think critically and creatively to respond to the ever-changing landscape of researcher development and that our ideas are not simply dismissed but listened to and adapted and altered where necessary.

And what do you like least about your work?

I love the vast majority of what I do, but there are irritations. I suppose the main one, and I know that anyone who teaches or trains (irrespective of whether it's for researchers) will be able to relate to this, is course conversion rates (the numbers who book onto the course and actually attend). It's really frustrating when people book onto sessions, and don't notify us that they can't attend. We appreciate that things come up last minute but this isn't the case for everyone. We put a lot of time and resource into designing and delivering engaging training, so it is really disappointing when people just don't turn up. To be honest, I feel sorry for those that sign onto a waiting list (if a course is full), often desperately wanting to join, but they don't get the opportunity to attend that training if people don't cancel.

We have developed our new training programmes, with different engagement requirements for a certificate of programme completion, and I think, anecdotally speaking, that the conversion rates have improved; but it's an ongoing issue for graduate schools and doctoral colleges across the country. Just don't get Researcher Training and Development Managers started on this subject!

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

I think it has helped, as it has meant that I can certainly relate to some of the struggles that researchers face during their PhD, because I've been there, done it and got the t-shirt. I've found that the stories and anecdotes that I tell about my own journey, when delivering training, help researchers realise that not everyone sails through a PhD and they are not alone with the difficulties they face. They say that they find this approach reassuring. On the other hand, there are people in the team who don't have a PhD but have lots of experience supporting researchers, so I think having a PhD is desirable for my role, but I wouldn't say that it was essential.

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

If researchers are passionate about supporting their peers, have been proactively involved in their development in some way (maybe through organising events, setting up support groups, creating blogs/vlogs/YouTube videos about their experience) and enjoy teaching, then this role could be a good fit. In our team we have people who have come into this role from both traditional research backgrounds and other professional service roles (both internal and external to the university). These experiences have enabled the team to approach researcher training and development with diverse skill sets and expertise, which are key components of why we work so well together because we all bring something different to the table to make our provision so well-rounded and all encompassing.

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

From my own perspective, working with researchers is the key part of this role, so some previous experience of doing this is really important, in whatever capacity. If they do not yet have this skill set, then reaching out to someone who might be able to help advise and guide (a mentor, for example) would be important. LinkedIn is a brilliant tool to help with this! There are also other skills which are developed with doing a research project, so sitting down and really thinking about some of these transferable skills and how they might relate to a role like this, for example presentation skills, managing and prioritising your own workload, including project

management, working as part of a team, problem solving skills, interpreting and analysing both qualitative and quantitative data. Also, reading around current national and international policies, legislation and regulation associated with research training and career development and understanding the wider issues and challenges affecting other doctoral researchers is imperative.

I think my path helped me, so I would say that if there is a gap in support within your school, faculty or wider university, then be proactive and do something about it. Although, it's always best to look into it first as it could be that a different person or group of people have set up something similar! Also, try and involve others and relevant support services to ensure what you're doing has buy-in, impact and longevity.

Finally, I would always suggest that researchers book appointments with Careers Advisors (who particularly specialise in postgraduate/postdoctoral researchers) as they can help navigate job descriptions, assist with CV building and guide researchers through the process of identifying key skills and requirements from job adverts. We are very lucky to have fantastic support from the Careers team at the University of Nottingham and they go above and beyond to help support our researchers to carve and navigate their own path post-PhD.

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?

Oh yes, definitely. I am more passionate about supporting researchers than with any research I did during my PhD. It's strange, in a way, because I'd always had a desire to teach and be able to pass on my knowledge to others. I filled out a PGCE form to teach Geography back in 2010 (when I finished my undergraduate degree); but something didn't feel right, so I never submitted it. Then, when I started my PhD, in 2012, I found the transition really difficult from a non-academic role (working in the NHS) to a research-focused one; and had crippling imposter syndrome as a result. I ended up not having the best PhD experience; but sometimes challenges present unexpected opportunities. This was how the peer support network at Loughborough was born, and when we started to support an increasing number of postgraduate researchers, I knew then that I had found my calling. So, I've almost come full circle because I am able to combine both passions into one job: teaching and development. The role still retains an academic perspective because, as a team, we are strongly encouraged to present, write papers and network with others in the sector.

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?

Interestingly, one of the many benefits of this role is the freedom, with encouragement, to design initiatives that will really engage our researcher population. Of course, we can't just do anything and we have to critically justify why we think a training course, or event, would be useful to our researchers. With this overarching ethos, you really feel like your expertise and knowledge are valued! Of course, we don't know everything, but the team is brilliant at thinking of creative ideas and then, logically, coming up with a plan and course of action, with the ultimate aim of putting our researchers at the centre of everything we do. We are also fortunate to have experienced and supportive colleagues, within the Researcher Academy, to run ideas past and provide us with critical feedback.

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

Firstly, I would say think about your next career step long before you finish your PhD. Try your hand at different things to build your skills further and think about your strengths. We have a brilliant placements team who support researchers at the University of Nottingham with their personal and professional development. The wide-ranging opportunities they provide are invaluable to help researchers experience the world outside of research. Doing things like this certainly makes researchers more employable as it demonstrates that they can apply their skills to different problems and projects outside of the confines of a PhD.

Secondly, increasing numbers of researchers, with PhDs, are looking for opportunities outside of academia. This means there is not just competition from other newly graduated PhDs, but also from more senior researchers who decide to leave academia, so the pool of job opportunities becomes smaller. As a result, it is important to enter the job market search with realistic expectations – don't think that because you have a PhD you can walk into any job, be prepared to apply for entry level positions. Anecdotally speaking, if you can apply those transferable skills, learnt during your PhD, and show willingness to learn from others whilst you are in the role, then your chances of progression, once you're in a job, could be accelerated.

Thirdly, utilise LinkedIn and other social media tools to publicise your profile and network with others. I totally acknowledge that these platforms can be double-edged swords but this is the way the market is moving. Developing these social networks doesn't come overnight and so fill your network with a rich variety of

people; after all those whom you least expect may be looking for someone with your very skill set. Once you've identified an area/role that you might want to pursue, you can then strategically hone your network further by investigating certain individuals and their connections and experiences – why not message them and seek advice?

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

I would always advise researchers to participate in training from their graduate school and doctoral college (or in our case Researcher Academy) as this helps them to unlock their potential and provide the skills required to go out into the world post-PhD, whether that be in academic or non-academic roles. Also, make themselves known to their Careers Service as Careers Advisors are best placed to support researchers with job applications, CVs, identifying strengths, careers and personal development resources, interview preparation and so much more! Additionally, finding a mentor can be really useful as this can help their career development, help them trouble-shoot, give them contacts in the right networks and is a crucial part of helping the transition into life after a PhD.

Thank you for sharing your experiences with us, Andrew!

“Look for Internship or Placement Roles in Areas That Support Research”



Donna Palmer



Donna Palmer

Abstract In our interview with Donna Palmer, she shares her journey from a chemistry PhD to managing doctoral training programmes. Initially planning for a postdoctoral position, Donna realised through conversations with peers that conducting her own research was not her passion. She became a project manager in industry, continuing to collaborate with her previous research team. Missing academia but not research, Donna moved to coordinate a network of energy research centres. She now oversees all aspects of funded PhD programs, managing doctoral training programmes. Donna values the variety of tasks and people she interacts with. She applies research mindsets like problem solving and communication skills. Though lacking industry connections currently, Donna engages her passion for supporting researchers. Donna advises talking to people in roles of interest and identifying transferable skills from PhD experiences.

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

Donna: I have worked in academia but not as an academic for over 10 years. I currently manage two Doctoral Training Partnerships (DTP) at the University of Nottingham. These are funded by the Natural Environment Research Council (NERC) and the Economic and Social Sciences Research Council (ESRC), which are two of the UK funding bodies that fund research across environmental science and economic, social, behavioural and human and data science, respectively. Doctoral training programmes provide funding and training opportunities to PhD researchers.

As a manager, I have an oversight of the full postgraduate research lifecycle and support those applying to and those on the programmes. Both programmes are collaborative partnerships with other universities, so the role involves working with central university services, supervisors, internal/external training providers as well as colleagues and researchers at other academic institutions. It is an incredibly varied role and that is what I love about it.

Previously, I worked at Loughborough University where I managed an Engineering and Physical Science Research Council (EPSRC)-funded Centre for Doctoral Training (CDT) as well as an EPSRC-funded research centre in electronics manufacturing. Prior to Loughborough, I was at the University of Nottingham, based in engineering, managing a Network of Centres of Doctoral Training, which were all focussed on energy research.

What was the focus of your PhD?

I have a confession... I am a chemist. My PhD was in green and sustainable chemistry at the University of Leicester with Professor Andrew Abbott and Professor Eric Hope. My PhD focussed on investigating the properties of supercritical solutions. I explored different types of compounds and how they behaved in different supercritical fluids. Supercritical fluids are used for material processing, so investigating the effects of different solution structures can inform processing conditions and, hopefully, new applications. My PhD was co-funded by an industrial partner but, unfortunately, they ceased trading towards the end of my first year. This meant that as I was able to have more control over the direction of the project but it also meant the work lacked the focus and ‘real-world application’ that it should have. It also meant that I was not able to gain experience working with an industrial collaborator. I am rather smug about the fact that I did it within 3 years, 2003 to 2006.

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

I simultaneously loved and hated my PhD. At the time there was very little training/development/focus on what was commonly called transferable skills. As time went on, I knew that the aspects of doing a PhD that I loved were not necessarily the aspects that you need for a career in academia. So I took every opportunity available to me during my PhD (coincidentally, these are often the things that those on CDT/DTPs get provided with these days). I was fortunate to attend a week-long programme of workshops arranged by an organisation called Vitae. I was also fortunate to attend a summer school and a number of conferences to present my work and meet other researchers.

Spending time with other PhD researchers from the same and different disciplines made me feel that I was not like them. I did not share the same passion for my research as they did for theirs, so I felt that a career in research was not for me. Typing this and looking back at this time, I now realise that I was suffering from severe imposter syndrome!

I explored a few different avenues (searching for jobs and making contact with employers that looked interesting) but really struggled to understand what a PhD graduate did if they did not go on to do postdoctoral research. As I was approaching the end of my funded period, my supervisor had been awarded a collaborative research grant funded by the UK government (what would now be called Department for Business, Energy and Industry Strategy). He offered me a two-year Postdoctoral Fellowship, which I was prepared to take with no other options presenting themselves; however, he also put me in touch with one of the project’s collaborative partners who were recruiting a project manager to work on the same project. I had an interview at the company and was offered the position, so I took the leap to work

for them. This was a great decision as I was involved with my old research team but was also exposed to many other projects, people, etc. and quickly discovered that my happy place is surrounded by research by not ‘getting my hands dirty’ by doing it myself (as a chemist my hands were always in gloves or in need of washing).

How have your career plans changed as you’ve continued on to your current position?

I loved my first role, the company and the people I worked with. I was managing a portfolio of different research projects, working with colleagues (technicians, scientists, engineers, administrators, company owners) in the UK as well as across Europe. This meant quite a bit of travelling to visit project partners. Within 3 years, an opportunity came up to become the team leader of the team I was working in. Most people thought I was the obvious choice for the role so it felt like the right thing to do. This gave me the opportunity to gain line management experience and the focus of my daily life shifted away from being involved in my own research projects to having the oversight of the whole team. Unfortunately, a company restructure drastically changed the remit of the role, and after giving it time to let the dust settle, I found myself in a role I hated. This was my drive to seek out other opportunities and took me back to the question of what someone with a PhD does when they don’t want to be a researcher themselves.

After applying for a few roles that looked interesting on jobs.ac.uk, I was fortunate to be offered a fixed term role at University of Nottingham in Engineering, managing a project funded by Engineering and Physical Sciences Research Council (EPSRC). The project was a collaboration with the University of Leeds aimed to create a network of the Centres for Doctoral Training that were focussing on energy challenges. Centres for Doctoral Training provide funding for PhD researchers to study in a supported environment. They normally have a bespoke training and development programme which PhD researchers follow alongside completing their PhD research projects. My role was to provide opportunities (such as training, conferences) for the researchers across all the centres, as well as for the academic and administrative staff, to meet, work together and share best practices. I worked alongside a colleague based in Leeds whose remit was to enhance the delivery and impact of public engagement across the network of centres.

This role introduced me to working in higher education but not as a researcher or academic and also introduced me to the world of funded doctoral training programmes, which did not exist when I did my PhD. By working with a variety of doctoral programmes across the UK, I knew I wanted my next role to be one that would mean I was managing a doctoral training programme.

Can you tell us a bit about what day-to-day life is like in your current position?

Every day is different and a lot depends on where in the calendar year we are.

At the moment (November), we are in the middle of recruitment for our next cohort to start next October. I am fielding enquiries that come in from prospective applicants, supervisors and academic colleagues across the institution. I am also ensuring that the content we have online is up to date and preparing information to be delivered at our virtual open day.

For our existing researchers we have a programme of events running throughout the year and I am making sure all involved know when and where, making the necessary changes to event programmes. I am also responding to enquiries from our existing researchers, advising them and checking progress. We have annual reporting deadlines for the funding bodies and the researchers have deadlines to report to us, so another task is following up outstanding paperwork and reviewing it. A lot of what we learn from our researchers goes into forward planning for future activities and changes. That was today!

What do you like most about your work?

The variety and largely being able to set my own schedule and priorities. I also love the range of different people that I interact with: PhD researchers, academic members of staff and professional services colleagues. This is extended to those at other higher education institutions as my current role is part of a consortium. I can sometimes spend more time working with colleagues at other institutions. Overall the variety can help bring about different insights and ways of working.

And what do you like least about your work?

One aspect I do miss in my current position is engaging with people outside of academia. In previous roles I have worked closely with those in industry and this is something that is not at the forefront of my current role.

The aspects of my role that I can find most challenging are at the interfaces with ‘business as usual’ processes. Working with DTPs can offer numerous benefits and opportunities to the researchers and academic members of staff but sometimes these do not map directly onto existing university processes. It is exciting to develop new ways of working but timeframes, priorities and systems do not always match up to make things run smoothly or quickly.

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

Firstly, there is a level of understanding, appreciation and empathy that I have because I have been through the process.

Secondly, I think the mindset and skills developed as a researcher (or dare I say project manager) have been crucial, e.g. problem solving, planning, organisation, presenting complex information to non-specialists, being able to motivate myself, plan work, prioritise.

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

There are several different approaches that can be taken; some of the ones below I have done myself, and others are things I would consider if I were in their position.

1. Talk to people who do the roles that they are interested in.
2. Look at job adverts and specifications (even if you are nowhere near applying for them). These give you an idea of the kind of things that are expected in the role and if you can get excited about them and imagine yourself doing them, that is a good sign.
3. Look for internship or placement roles in areas that support research. These will give first-hand experience and allow them to try out roles to see if they are a good fit.
4. Another aspect is to be honest with themselves about what they enjoy doing, e.g. what skills they like to use. There are many different self-assessments, like strength profiling, which are often provided by careers services and might help provide some focus. The kinds of roles which I have had focus more on what skills and experience you have, or the potential to have, rather than what your PhD was about and how many papers you have published. So, understanding what your strengths are and how to demonstrate you have them are crucial.
5. At times when I have not known what my next move was going to be, I have contacted organisations that were recruiting to 'find out more' and even sent speculative communications to those not currently recruiting but who I thought I might like to work for. Most of the time I was able to have a phone call or an in-person meeting, which helped me know if I wanted to work there or not.

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

Similar to above: talk to people in similar roles to get an appreciation, make some contacts and look out for internship or postgraduate placement roles they can do alongside studies or for a short period of time if they need to pause studies. These will give valuable insight and experiences that can be spoken about in future applications and open up networks. Look at job adverts and specification to understand what employers are looking for, and then look at yourself to identify where you can evidence that you can do those things. If there are gaps, then find things that you can do now to be able to give you skill or experience.

Research the types of organisations that do the kind of work that they are interested in because it is not just Higher Education Institutions (HEI's) and keep an eye out for opportunities to find out more about the organisation and the people who work there. The internet (and LinkedIn) is a marvellous thing.

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?

Definitely, I am passionate about supporting others to be the best they can be. This translates in my current role in several ways, providing individuals with the information they need in order to decide to apply for funding their PhD studies, and if successful, I support them as they go through the process and move to the next stage of their life. Support is a very broad term and can be done through providing and clarifying information, listening, advising, advocating, promoting, connecting and generally helping them navigate the way through.

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

For me the balance is right. There are deadlines that must be met and 'business as usual' processes that have to take place. These provide a comforting structure but at other times I can be proactive (or reactive to external influences) and dedicate time to explore things of interest. A couple of recent examples I voluntarily put myself forward to work on are (1) Athena Swan self-assessment team, a group formed in order to help the institution to prepare for its next Athena Swan submission, (2) the

Researcher Academy Wellbeing Group, which has a specific remit to work on initiatives for the whole of Nottingham, (3) the renewing of the ESRC DTP, I have been able to be part of a number of the working groups who are devising and deciding the scope and structure of the next iteration of the DTP, and (4) preparing a case study on our experiences of collaborative doctoral training with other Researcher Academy colleagues, which will be published in a book in 2023.

Have you thought about returning to academia?

No, I am very happy working in academia but not as an academic!

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

Congratulations on making it so far and the end is in sight. Remember, there is no such thing as the perfect thesis, only a completed thesis.

It can feel disconcerting when you finish or are so close to finishing and next steps may be unknown. These feelings are valid and you are not alone. You will make the best decision for yourself.

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

When someone describes their career path, it can often sound like a simple trajectory, starting at point A and moving sequentially through point B to C, D, etc. The reality is far from this and there are many ups, downs and turns.

Thank you for sharing your experiences, Donna!

“The Idea of a More Immediate Impact of My Work Was Very Appealing”



Sebastian Similä



Sebastian Similä

Abstract In our interview with Sebastian Similä, he shares his career journey from his doctorate studies in psychology to his work in product management. He now works at a company in the area of anti-money laundering and counter-terrorism financing. Seb reflects on the realization during his PhD that he didn’t want to commit to an academic career indefinitely. Instead, he was drawn to a field where he could have an immediate impact and harness the skills he had developed during his studies. The transition was challenging but rewarding, leading him first into user experience and later into product management. He highlights that there are more career paths available than one might initially perceive, encouraging those in academia to explore alternatives that align with their passions and skills.

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

Seb: I am Seb (or Sebastian). I am half-Finnish and half-Peruvian, and although I currently live in Berlin, I've spent most of my life in Rome and Edinburgh. I work as a product manager at Klarna in the area of anti-money laundering and counter-terrorism financing, and more specifically in their sanctions screening. Eight years in, this is now my third role as a product manager.

What was the focus of your PhD?

I have a PhD in psychology, and I investigated how movement planning influences the allocation of attention. This involved carrying out a series of movement – and eye-tracking experiments. There is a close relationship between saccades (i.e. an eye movement) and attention. One example of this is how covert attention has been shown to be increased at the target location of an upcoming saccade, and this is believed to be necessary for accurate planning of the motor execution of said saccade. Manual movements have also been shown to be influenced by attention, and I was investigating how changing the predictability of the upcoming manual movement influenced attentional allocation, as well as whether this could result in parallel splits of attention. This was between 2011 and 2015 at the University of Edinburgh.

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

I realised that although I had enjoyed the PhD, I didn't feel like I loved the idea of staying in academia forever. When you combine that with the challenging job market for academics, I thought it would be a good idea to change track and see if I would find something that I may enjoy (even) more while leveraging my existing skills. I did feel some sense of guilt about that, especially as it felt that no one else was considering and talking about options beyond postdocs. However in the end I thought that statistically speaking there aren't enough positions in academia for everyone, so some proportion of people clearly must be leaving it.

Having spoken with some friends outside academia, some people suggested that perhaps I might be interested in working in the world of user experience (UX), which seemed both interesting and something where I could leverage my own experience. The idea of a more immediate impact of my work was also very appealing. In the last year of my PhD I decided to explore this opportunity by doing some tangential roles, first as an online resource intern at the university and then as a part-time tester at a software company. These were both great experiences to start seeing how the process of building products works.

How did you find these initial roles? Did you do them at the same time as finishing your PhD, or after you had submitted?

I did both of these roles in the final year of my PhD, when I was essentially writing everything up. The first position I found through the university, as they had a program for PhD students to trial other things. The latter I found through a university friend who was working at the company at the time.

Was it hard to manage doing these positions at the same time as your PhD? Did you discuss this with your supervisor?

It wasn't easy, and especially in the latter half of the year it meant working most weekends on writing up. I don't recall if I talked about it with him beforehand, though it would have come up. I didn't ask him for permission. I did not have funding for my last year of PhD, so if I hadn't done these activities, then I probably would have had to find something else.

How have your career plans changed as you've continued on to your current position?

I ended up in my current role a bit by accident. My original plan was to go into UX. I was still a tester at the software company, and when I brought up the subject again to my boss, he asked if I was interested instead in a job as a product manager. I didn't really know what that was at the time, but it sounded interesting, so I went for it! That's definitely a potential advantage of working in a smaller company, which is that you get to try different things.

Can you tell us a bit about what day-to-day life is like in your current position?

It varies a bit from company to company, but the main focus is always to help prioritise the different potential work of the team. You do this by receiving information from lots of different sources and/or stakeholders, keeping the work in line with your long-term objectives and strategy, collecting the different requirements, and talking to customers and end-users. Sometimes this will also entail coming up with potential wireframes and designs. Communicating the work your team is doing also is important, especially in larger companies. As one can imagine, there is a lot of variety in the work.

A typical day will start with a standup with the engineers in the team, where everyone updates the rest of the team about what they are working on, and I will often have similar meetings also with people in other teams so that I can have a more complete picture. I will often have to deal with feature requests and questions from people from other teams (such as clarifying the existing functionality), and I will strive to be in regular contact with our different users and customers and see how they are using our product. I will use the information I gather to define the different problems our product should be solving and set up the requirements of the use case. The engineers and designers in the team will tend to own the solution, as they will also be the ones that build it, but my job is to try to make sure that we are building something that is worth building, and in an appropriate order.

Let's take an example, and assume that there is a requirement to send alerts when documents are uploaded into a shared online workspace. This seems initially like a simple request, but you have to understand the context in which these notifications would be used to know how to best craft them. Are people typically uploading individual documents at a time, or several? In the former use case, you might want to send an email after each document gets uploaded, but otherwise you do not want to flood a person's inbox with an avalanche of emails. Furthermore different potential aspects of the feature will provide different amounts of value. The basic need is to send an email alert when new documents have been added. But there is more. You may want to say how many were added, what they are called and perhaps add a link,

either to the folder or individual documents themselves. There may also be some other constraints. Perhaps the documents are sensitive in nature and you therefore do not want to include too much information in the emails themselves. Additionally, not everyone will want to receive email notifications for this, or maybe just sporadically. Others may not want to receive emails at all, and rather be notified in Slack.

As a product manager your job is to help the team navigate through these different options, armed with knowledge of the issue and the user. Of course there is more to the role than that, such as aligning the customer needs with the potential business impact and your product strategy, but understanding the user problems is really at the core of everything.

What do you like most about your work?

It is hard to pick one thing, so I will go with my top two. The first is the potential impact. It is very rewarding to see the impact that building and improving a product has on the everyday life of the people using our product. The second is that it is a great way to learn about different domains in the world. For instance, at the moment I am learning about the world of sanction screening for my work, and though it may appear dry on the surface, there is a lot to uncover there! It's a great job for someone who is curious.

And what do you like least about your work?

There usually is more to do than can be done at one point in time, which is why prioritising is such an important part of the job. This means that some things will have to wait more than others, and this means you always have some disappointed (and sometimes even irate) stakeholders.

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

I don't work in my field of study, but it is easy to take all the skills and knowledge you acquire for granted. The most concrete thing is that it has trained me to think how different systems fit together, and the consequences that may ensue. This is useful for better understanding the architecture of a product I am working on and what effect different improvements would have on this. Furthermore, the PhD provided me with ample chances to hone my writing skills, and clarity is very important in my line of work. The tutoring I did alongside my PhD has also been very

helpful, as it has improved the feedback I give others, and I often still need to be able to present complex topics in an accessible way.

Were there some benefits to doing a PhD that you still think were useful, even if they were not directly relevant to your current position?

Doing a PhD is such an all-encompassing experience that it is hard to untangle some of the benefits as you take the things you learn for granted. As I mentioned above, you end up acquiring a lot of transferable skills. If that wasn't enough, your field of study is also going to have an impact on the way you see the world and tackle your work. In my case, my background in experimental psychology has helped me form mental models on how the products that I work on are put together, which in turn helps in debugging issues as well as learning how they work. Learning about cognitive biases has also been very useful, and the general awareness of human fallibility has ironically helped me cut people some slack and be more understanding towards some slip ups.

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 found listening to podcasts and reading books on the subject a good start, as it allowed me to see if it appeared interesting. I also talked with people in the industry, some of which worked at the university, who recommended other resources I could use. Then the internship and part-time job seemed like a good way of experimenting further without having to make long-term commitments.

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

Find out about the potential role in different ways, and if possible find different ways of trying it beforehand and getting exposed to it. I used a lot of books and podcasts to learn about the domain, even if only to get familiar with the terminology. There are a lot of resources out there, and as far as free resources go, there is a podcast for everything these days. Also, start exposing yourself to your domain of interest early, so you can still pivot to a different path if you find out you want to instead try something else.

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?

That’s absolutely possible. I am lucky that I have discovered what I really care about, working on products that solve a user problem and that work well. Of course if the product is one that makes the world a better place, then all the better. At the moment I am working in the domain of sanctions and anti-money laundering controls. I would be lying if I said that it was a topic that I had always been really passionate about, but I am discovering that it is a rich and deep area, with a lot of interesting challenges, and a good way of improving my skills and experience further.

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?

This will depend on where you work, but so far I have been lucky in having relatively high levels of flexibility. One can work from home; no one is checking your hours and so on. However I can’t pick things exclusively because they are interesting, and that is a driver that I sometimes miss. Also working with more people will definitely curtail your freedom more than being an individual researcher. You will need to be available to your team and beyond. My calendar certainly has filled up a lot since I first entered the field. I have started to have to put focus time on there to make sure I keep some time just for me.

That being said, I am also in a role where I can influence what the thing being worked on should be, and the work environment is also very flexible. I now need to work on the problems that will provide the most value to the user, and for me that is a more rewarding incentive. Also I think the freedom you get in academia is somewhat oversold. Yes, you have freedom and flexibility, provided that you are happy to work all the time. Also the more you climb the ranks, the more non-research responsibilities end up on your lap. When I left academia, I actually felt that I got my weekends back!

Have you thought about returning to academia?

Yes, and that is probably something that everyone who leaves it considers from time to time. There are aspects of it that I miss, especially when I read the odd popular science book or watch an interesting documentary. Still, I don’t regret my choice,

and I imagine if I ever returned, it would be within something to do in my professional competence. Some business schools, for instance, have started offering modules in product management.

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

Whether you stay in academia or not, you have more options available than you may think. However, don't feel that you have to stay in academia if you aren't convinced, and it is not a failure to decide to change things. I also know several people from my PhD cohort who ended up leaving academia, even after a postdoc or two.

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

When it comes to your career, there aren't right or wrong choices, and you can also decide to try something else later on if you want. If you decide to switch away, your initial salary may also not start as the highest, but getting the initial experience will stand you in good stead, and your salary can increase significantly within a few years. Those first experiences are a gateway to a new world that will allow you to explore what your options are. Whether you stay in academia or not, the most important thing is to be aware that the choice is there.

Thank you for your advice, Seb!

“Find Something That Is Worthwhile to You”



Veronika Vilgis



Veronika Vilgis

Abstract In our interview with Veronika Vilgis, she tells us about her transition from clinical neuroscience PhD to Head of Insights at Dataprovider.com, a tech company. Veronika initially wanted to stay in academia but later sought out other career paths due to dissatisfaction with the academic system. Here she discusses her journey of career exploration, voluntary work, practicing yoga, and ultimately leaving academia. Veronika emphasizes the need for self-knowledge, the importance of maintaining connections, and the freedom that can come with working outside of academia. Finally, she reassures those considering leaving academia not to feel stigmatized or shamed, as changing priorities and desires are a part of life’s growth.

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

Veronika: I am currently Head of Insights at a company called Dataprovider.com. The company indexes nearly every single website on the internet and then organizes the data collected from and about the website into a structured database. My work is part data analytics, part data storytelling and data quality checking. Additionally, I spend considerable time liaising between different teams. With skills and knowledge about data, writing and programming I am uniquely suited to communicate and coordinate their activities. I have also taken over responsibility for the content of the company’s blog where we give examples of how the data can be used for different purposes. As we serve a lot of different industries, it can sometimes be hard to understand exactly what type of insights you can gain from web data. The blog provides a range of different analytical approaches to answer questions around web security, technology innovation, investment opportunities and also socio-political happenings.

What was the focus of your PhD?

I completed my PhD in 2015 at the University of Melbourne, Australia. For my thesis I looked at attention difficulties in children with ADHD and children with chronic depression and whether underlying brain function, measured by fMRI, is disorder-specific or comparable across the two. The results suggested that attention difficulties in depression mostly are associated with distraction from internal thoughts while in ADHD the distraction is commonly externally driven by environmental stimuli. This pattern was supported by differing neural mechanisms. As part of my PhD I was responsible for all parts of the research project, including the recruitment of participants, data collection (behavioural and MRI), data pre-processing, statistical analysis and write-up.

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

I knew I wanted to stay in academia, eventually becoming a professor and leading my own research group, so I actively sought out postdoc opportunities. Towards the end of my PhD I visited several labs and presented my research. One group was very enthusiastic and it was a great fit, but they weren't sure if they would have sufficient funding. They asked me to stay in touch. Initially it looked very promising, but when I finally handed in my thesis 6 months later, the postdoc I had hoped for fell through. What followed were several months of applying to advertised postdoc positions and reaching out to research groups all over the world. I had many interviews and very diverse interview experiences – from very casual to very structured. In the end I made it into the final rounds with two US-based research groups and I decided on a position at the UC Davis Center for Mind and Brain.

How have your career plans changed as you've continued on to your current position?

Towards the end of my PhD and increasingly throughout my postdoc, I grew more and more dissatisfied with the academic system and how science was conducted. On top of that I also never really felt good about my own research; it often did not live up to my own standards. Additionally, I did not enjoy the day-to-day work of my postdoc; most of my time was just data analysis, often spending hours trying to find solutions to coding problems. Increasingly it affected my mental health, so in the end I decided to explore alternative career paths.

How did you go about exploring different career paths?

My first point of call was the university's career service. They had a program for people to transition into industry and several advisors who specifically worked with postdocs to help with alternative career exploration. I had several one-on-one consultations and participated in a few group workshops. I really had no idea what I wanted to do instead and I came up with the most obscure jobs and career paths that I thought would spark my interest. Quite a few of the things I came up with had little to do with my background in psychology, neuroscience and research.

One day I discovered a company called IDEO, a global design and consultancy firm that specializes in design thinking, a concept I wasn't familiar with then but found fascinating. That was the first time that I genuinely got excited about an alternative career. When I mentioned that to my contact at the Careers Service she reached out to someone at IDEO asking for an informational interview. A month

later I had coffee with an employee at the IDEO office in San Francisco. Even though they didn't offer me a job, I ended up volunteering as a reviewer and mentor for the OpenIDEO platform. I think, from there things went into a more positive direction. I saw that I had knowledge and skills that are valuable beyond academia and new opportunities to apply them. Around the same time I started practicing yoga intensely; it was a way to deal with the stress of the postdoc and to look after myself. I enjoyed it so much that I signed up for yoga teacher training. Even though I had no intention of becoming a full-time yoga teacher, acquiring these extra skills provided additional security to leave the academic path. This whole process took well over a year from reaching out to the career service to finally deciding to leave my postdoc.

When I informed my PI that I would be leaving the postdoc at the end of the year, I had no other job lined up. My plan was to go to Costa Rica for a few months, learning to surf and teach yoga on the side, then return to Europe and find a more permanent job. That was the plan and then life threw a curve ball and I ended up in Chile for a three-month data-science project for the United Nations and 3 months turned into 3 years.

In yoga we talk about letting go and trusting the universe. Until I left the postdoc I always had a plan, a goal, it didn't always work out exactly the way I hoped (see the postdoc application) but I was always pursuing something. Then, I finally let go for the first time and the opportunity to work for the UN presented itself. It's weird, but it really made me question what would have happened if I had let go earlier or more often in life.

Can you tell us a bit about what day-to-day life is like in your current position?

I currently work for a tech company that sells data. I am bridging the work between the data analytics team and the marketing team, ensuring that any data and statistics we publish is correct and adheres to quality standards. This work also includes coming up with research questions and ideas on how our data – in this case, web data – can be used for different purposes and to gain insights into different industries. With this kind of data you can answer questions about cybersecurity, technological advancement and social or economic happenings on the web. As part of my work I often run analyses and then write about it for our blog or for industry reports. Other aspects include monitoring data quality and contributing to content planning. Any 1 day can be quite diverse, as I often am included in other aspects such as customer support, preparing other content, e.g. videos or webinars, creating data visualizations or discussing product developments with the data science and backend operations team.

What do you like most about your work?

I like the diverse tasks I am presented with on a daily basis and I love that I have quite a lot of freedom to decide what I want to work on. Often results can be seen quickly. I also appreciate working in a team where everyone has a different kind of skill set and works together on the same goal. As I have never worked for industry, I enjoy being exposed to different ways of working and to new concepts. Learning something new always keeps me motivated.

And what do you like least about your work?

I can't say that there is one thing that I really dislike. However, I sometimes miss more meaning behind my work, up until I had this job I worked for universities or not-for-profit organizations and there I find it easier to see the meaning or a higher purpose behind the work. The overall goal was always to contribute to improving someone's life or make positive change in society. That is a lot harder to see in a for-profit tech company.

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

It's hard to pinpoint the specifics, the most obvious for me and my current role is working with data. By that I don't only mean processing data but also understanding what you can and can't do with the data, how to extract meaning from numbers and draw the right conclusions. When you work in science, you take these skills for granted but you'd be surprised how many people find it really hard to calculate even basic statistics and then put those into context. On a more abstract level, I think the PhD has taught me to work independently, organized and efficiently.

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

As my path isn't exactly linear, it's hard to imagine someone actively envisioning a similar career. What I would say, though, is that even as you start your PhD you should prepare for a Plan B. Chances are you may change your mind about staying in academia and then it is good to already know your options and have contacts that you can reach out to when you eventually look for work outside of academia. So my advice is to keep your eyes and ears open for alternative careers. Many of the

graduate students and postdocs that you'll meet will leave academia, pay attention to what jobs they get and stay connected. It also helps if you engage in some form with activities that are not academic, such as volunteering, internships or writing. For me yoga turned into something more, for another postdoc I knew at the time, it was improv. So, it can also be a hobby that you take further. If you have some experience outside of the academy, this will not only improve your chances with any future employer but also help you gain confidence and see the value of your skills beyond academia.

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?

It is not true in my case, but I made a conscious decision to accept this position because it fulfilled a lot of other requirements that are important to me right now. Additionally, I have enough time and space to integrate topics I really care about in other parts of my life, outside of my work. Sometimes I do miss working on a topic I really care about, but I also see the benefits of not getting too caught up in my work. I now leave work at the end of the day and I can let it be until I am back at the computer the next day. In academia, I often cared too much and the work never left me, invading my free time and preventing me from enjoying my weekends and sometimes holidays. So caring a lot about your work can be rewarding but can also be a burden.

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 personally feel I have a lot of freedom in how I structure my work as well as what topics I can focus on. Of course, there are certain limitations but in retrospect I feel freer outside of academia than inside. There is also a certain type of freedom, at least in industry, that comes with easier access to financial means. Let's say you have a great idea for a project but perhaps you need an expensive piece of equipment or software. If your idea is supported, you could have that equipment in just a few days and get started on realizing that idea immediately. In academia you'd probably have to write a grant first and it could be months or years before you can even start. In both cases you will need to convince other people that it is indeed an idea worth testing but in industry it could just be one person and a 5-minute conversation rather than pages of grant proposals and several rounds of reviewer comments.

Have you thought about returning to academia?

Yes. I have even applied to a few positions 2 years after I left. I still think about it sometimes although I am aware that too much time has passed now and realistically I don't think it is possible. Having said that, I am convinced that overall I am happier outside of academia. But you never know what life has planned for you. I wouldn't exclude the possibility of returning someday but it might be a different field than psychology or neuroscience.

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

First of all, finish it. I knew several people who were ready to leave during their last year, but you have come so far, so let go of perfectionism and just get it done. Then take time to celebrate your achievement.

The second piece of advice is to really get to know yourself. What exactly is it that you like about academia and the research you do? If you really love working with the data and running experiments but you dislike writing, or the idea of teaching or mentoring isn't exciting to you, then industry is a better option in the long term. If you stay in academia, you will eventually have to do much more of the writing, admin work and teaching than the other parts. On the other hand, if you are someone who doesn't necessarily like the bench work but you like writing grants, teaching and mentoring, then start applying for tenure-track positions as soon as possible, even if you are not ready. Preparing the application documents takes time and they will get better each time, so doing it as early as possible will mean you are ready and prepared for when you want to move on.

The last advice I would like to give has to do with the stigma and shame that comes with leaving academia. Sometimes people experience a lingering feeling that they might not have been good enough or that they have not tried hard enough. First, acknowledge these feelings but realize that it is a story that you are telling yourself and you can change that. Life changes you and your priorities naturally evolve as you get older. If a person valued the exact same things at age 40 as they did at age 20, it probably indicates limited personal growth. It is perfectly reasonable to pursue different goals like a better salary, work-life balance, or more stability as you grow older, signifying a shift in your interests and priorities with more life experiences. At the end of the day, you have to make yourself happy, so find something that is worthwhile to you, and if it isn't, then go and find it somewhere else whether that is inside or outside of academia.

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

There are always more options than you think there are and life will turn out to be different than you expect it, but that is the beauty of it. Embrace it and enjoy the journey.

Thanks so much for sharing your experiences with us, Veronika!

“The Title of Dr. Holds Significant Weight When You Enter the World of Industry”



Damien Neadle



Damien Neadle

Abstract In our interview with Damien Neadle, he shares his journey from primate cognition research to a data scientist role in a grocery chain. Initially planning an academic teaching career, Damien became disillusioned with stagnant pay and progress. He transitioned his skills to data science through online courses and personal projects. Damien values problem-solving and the ability to switch off after work. He continues applying his statistical abilities and communication skills explaining technical details. Damien notes less passion-driven work but flexibility to guide the direction. He encourages documenting all PhD accomplishments and exploring options fully before deciding. Damien advises determining one’s priorities like travel and work-life balance in career decisions.

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D. Neadle (✉)
Large UK Supermarket, London, UK

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

Damien: My name is Damien. I'm currently a data scientist in a grocery chain. My role within the business is to provide advance statistical support and analysis, primarily focussing on machine learning-based problems. I spend a lot of my time forecasting and trying to understand the behaviour of shoppers in a predictable manner.

What was the focus of your PhD?

I completed my PhD at the University of Birmingham's School of Psychology between September 2016 and August 2019. My PhD research aimed to understand more about the mechanisms that underpin non-human culture and how these might differ from human culture. I used voluntary experimental methodologies with non-human apes (chimpanzees, bonobos, gorillas and orangutans). These experiments were primarily focusing on testing and documenting the responses of these individuals to novel experimental stimuli, which required novel tool use techniques to solve.

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

I was certain of what I thought my career was going to look like, following the 'traditional' path in academia of post-doc, permanent lectureship, senior-lecturer, reader, professor. I had no intention of moving outside academia and therefore had begun to adapt my skills as such.

Towards the end of my PhD, I found that teaching was a major passion of mine; therefore I began to change my aspirations from a research-focused route to a more balanced one. I therefore knew that I would aim to gravitate towards post-92 universities.

It wasn't until after about 2 years working as a teaching-focused lecturer (with a permanent post at a post-92 university) that I began to consider exploring options outside of academia. This was following a 3 year pay freeze and little to no prospect of progression, despite my taking on senior roles within the department. I compared my skill set with that in industry and discovered that I could command approximately £20 k more per year in industry. Thus I began to transition my skills towards data science.

Can you tell us more about the challenges you saw in staying in academia?

Academia is a very self-driven field that has many advantages and opportunities for the right kind of person. For me, I enjoy helping people, but I often don't know how to stop when it starts to impinge on me and my own life. I was working at least 50 hour weeks in order to provide my students with the support they wanted (note the use of the word wanted, not needed). There is and was significant pressure on academic staff in post-92 institutions to provide students with an experience that satisfies, regardless of what this means for their education. I often found myself at odds with senior staff in the university which led to some difficult times and difficult discussions. Equally, the sector is undergoing some radical shifts and pushes from trade unions in response to the consumerisation of higher education. I found myself drawn to supporting colleagues going through these struggles, and again, this led to me sacrificing my personal life for work, in this case unpaid.

I was fortunate. I chose to leave academia before the cost-of-living crisis became quite surreal. Therefore I benefited from the additional salary that industry had to offer. In reality, my family would not have been able to continue at a current standard of living with me on the salary I was on. It would've required my wife to increase her days at work, therefore increasing the number of days my daughter is in childcare. This would not have been the end of the world, and is commonplace for many families; however, we wanted to avoid this as it was simply not something we were willing to do. The fact that lecturers and academic staff generally are amongst some of the most qualified and educated individuals in society, yet are regularly paid less than your average supermarket manager is the reason for some of the exodus that we are seeing from younger academic colleagues like myself.

How did you go about transitioning your skills?

I already had a good foundation from my own education of statistics and through my masters I had picked up R, my first coding language. During my PhD, I did a basic course in Python for social scientists. So, it was more a case of applying them to a business context and picking up machine learning theory.

I began by using DataCamp to get me used to using Python as a main tool and from there I used Kaggle to download sample data and solve problems with the kind of skills I'd be expected to show as a data scientist. Of course, like any developer, I used the website Stack Exchange regularly and Google was my best friend (and still is).

How did you go about finding a data science position?

I began my search on LinkedIn, like many people these days. I soon began using other search engines such as Indeed; however, I found my current role by LinkedIn and all interviews I achieved were also via LinkedIn. I simply used the job search function and set my parameters and checked my emails for the LinkedIn job alerts daily. I was quite selective in the jobs. I applied for, feeling passionate that I would only work for a company whose morals are aligned with my own. I was keen to work for a company that had clear, positive environmental and social impacts on the world. My passion for equality and diversity was also a key factor. I wanted to work for a company that was dedicated to this.

I had several interviews and was offered other jobs. However, the position of my current employer fit almost all my criteria, also with a very clear progression plan.

Can you tell us a bit about what day-to-day life is like in your current position?

Of course. So I begin my day with a 'stand up meeting', where the entire functional businesses intelligence team meets to let others know what we are working on that day and identify any blockers, etc. I then check my email for any jobs that might have failed overnight – I.e. error checking and debugging. This team consists of myself, a team of data engineers and a data analyst.

The bulk of my day is taken up with coding time and planning of future projects, following meetings with various stakeholders in the business. I work in a wider team of financial analysts and project managers, where we work together to ensure that large business decisions and projects are likely to make the business money and provide benefit to our customers.

What do you like most about your work?

I love the problem-solving element. I really enjoy being provided with a business question and then being left to identify a solution and create an end-to-end process.

And what do you like least about your work?

I find that the documentation element is challenging, but clearly recognise the importance of this step. Doesn't make it any easier!

In this context documentation is laying out exactly what a project will, and will not do; we call this scoping, equally, ensuring that all stakeholders are informed where required and made responsible for relevant parts of the project. Another important aspect of documentation is commenting within the code so that someone unfamiliar might still be able to understand exactly what the code is doing. We also make it a policy to ensure that the data catalogue is completed for each project. This involves explaining the meaning of each and every field and also laying out naming conventions, etc.

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

Yes, without a doubt, I think one thing that is often overlooked in academia is how impressive completing a PhD can be: this is not to blow my own trumpet. The title of Dr. holds significant weight when you enter the world of industry because not many people have it. Contrast this with academia where, at least in the psychology department, the vast majority of staff will have a PhD.

Indeed, it also helped me in evidencing a lot of claims that I've made because I was able to point to instances where I had completed analyses of all projects in print via my publications or my thesis.

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

If it is a choice between entering traditional academia and data science. Then I would say determine whether you are willing to travel for work, and by that I mean international travel. Whether you are willing to relocate regularly as temporary contracts come and go. If the answer to these two questions are no, then I would

seriously consider the potential limitations that you may have on an academic career. That is not to say you could not be incredibly successful, but you might find it a little harder.

Turn specifically to industry and data science do you have to ask are you willing to continually develop your skills in response to new technologies? If the answer is 'no', then data science simply is not for you. You're also going to have to spend a lot of your time explaining technicalities to people who are simply uninterested in the technicalities or do not have the capacity to understand. I'll caveat that by saying it's not that they're unable to understand them, but they do not have the time to learn the skills. This is what you are employed for. A lot of time is spent storytelling and presenting your solutions and models to business stakeholders. If this does not excite you, then data science is not for you.

This paints the career in a somewhat negative light, so you must ask yourself, do you want to be able to switch off from work at the end of the day with little to no guilt? If the answer to this is 'yes', data science and industry in general could well be for you. When I was in academia, I was often working on my days off. One memory that sticks in my mind is dealing with a student crisis whilst at a family funeral. This is simply not expected in my current role. As academia develops back towards a face-to-face environment, one also has to ask themselves whether they wish to work in-person or from home. Tech jobs generally have more capacity to work from home than any other; therefore, someone entering data science could realistically expect to work from home, at least 50% of the time. This is unlikely to be the case for academics for much longer (after the COVID pandemic). However, I will say that academia presents as one of the most flexible jobs available. The ability to manage your own workload with more supervision than management can be advantageous for some. In the corporate world, you are beholden to the core hours generally.

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

I believe that someone wanting to enter data science should complete as many projects as they can. Within the data science community, a project is simply a series of analyses designed to answer a given question. Those questions can be self-imposed or imposed by an organisation. Kaggle provides access to a myriad of free and open data sets. They also organise 'competitions' where a series of questions, and data scientists and analysts compete to answer them in the most effective and fastest way possible. One should not expect to win these competitions with any degree of ease. However, the experience is invaluable. Even engaging with some of the better-known data sets in the data science community for instance, the titanic dataset can be persuasive in a job interview. So I guess, my big tip if you'd like to call it that would be projects. If you believe you can do something or are going to say that you

can do something evidence it with a project, the more projects, the more evidence, the better your chance of success.

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?

Honestly, probably less so. However, I was forced to balance this with my work-life balance. Another factor was to get job stability. I chose to work in a teaching-focused institution. This meant that a lot of my research projects were deprioritised which resulted in me not having time or financial support to work on them. That said, I have a deep passion for storytelling with data; therefore, I do have this advantage in my current role.

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?

Personally, my company is in the infancy of data and analytics and the potential it holds. This means that I’m often able to steer the department in a way that I find interesting. This is more generally the case in smaller start-up companies. However, I work for quite a large organisation and am very fortunate in the sense I could not say that this will be the case for all people.

How do your experiences inside and outside of academia compare?

I would say that the experiences are what you make of them. I left academia before I grew truly resentful of it. I look back on my time with generally positive and particularly fond memories of working with my many students. I have experienced some once-in-a-lifetime events. From seeing a new-born baby Bonobo, right through to the sheer elation, of watching one of my students graduate. Clearly, as I mentioned, there were downsides. For me, these outweighed the good times, particularly towards the end of my employment.

Since moving outside of academia, I have found that I have more time, more money and perhaps most importantly, more space to grow. If it means that I must lose some freedoms to do so, this is the price I am willing to pay.

What do you see as some of the relative benefits of either workplace?

For academia, I will always say flexibility – both in terms of what you do, and when you do it. Equally, the rewarding aspect of seeing a student succeed.

For industry, the ability to switch off. This substantially greater pay and a competitive marketplace will mean I can always move around in order to ensure that I am getting the best pay possible.

Do you see the two settings differing in their commitment to equality, diversity, and inclusion (EDI) practices?

I can comfortably say that I've been very fortunate in most places I have worked that there have been a group of people willing to make changes in the right direction. My current organisation being so large can be quite slow to move. However, the intentions of senior leadership are there, and the support for initiatives is always forthcoming. This means that there is always a financial backing to projects that I propose to improve the EDI practices in our department.

Given that universities often run on a shoestring; sometimes the financial resources are not available in quite the same way. That said, universities are filled with fantastically passionate staff who often make up for this lack of financial backing with their own blood, sweat and tears.

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

If you've not done your viva yet, then try not to panic too much. The viva can and should be a relatively enjoyable experience. Remember you're going into this as an expert in your field you're going in as a peer not as that lowly undergraduate student, you thought you were.

If you're still writing, then remember you are tackling a monumental feat. Don't try to do it all at once; deal with it in small bite-size chunks little and often.

Most of all, regardless of where you are, remember to document all the things you've done during your PhD – all the small courses you've done, all the challenges you have overcome, and all the skills you gained. Regardless of whether you'd like to go into industry or academia, you will need this record to show that you can be and are forced to be reckoned with in employment.

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

My journey is not yours. Everyone will have different priorities and challenges along the way. My views here on my own and reflect how I feel now. In 10 years’ time, these may have changed. No decision in your career is irreversible; your qualification will always be with you and therefore your ability to come and go into and out of academia.

Thank you for all the advice, Damien!

“Being Near Family and Friends Felt More Important to Me Than Continuing to Pursue an Academic Career”



Emily Batty



Emily Batty

Abstract In our interview with Emily Batty, she shares her journey from comparative cognition to police analyst and now city mobility analyst. Wanting to stay in her hometown and start a family, Emily did not pursue postdoctoral positions. She applied broadly for research jobs, finding a long-term role in the police service analysing complaint trends. Emily values the clear work-life balance and serving her community. She applies critical thinking skills placing data in context. Emily recently started a new role analysing traffic data to improve road safety, allowing her to keep problem solving. Emily advises deciding based on personal factors, as all paths have good and bad.

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E. Batty (✉)
City of Edmonton, Edmonton, AB, Canada

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

Emily: My name is Emily Batty. I am 43 years old. I completed my PhD in 2009, studying experimental psychology (focus on comparative cognition). After completing my PhD, I took an analyst position with the local police service, where I have been working for the last 13 years. I work in the Professional Standards section of the police service, where we investigate complaints about police officers.

As the analyst for the section, I manage our database to ensure that we are collecting good quality data, analyse data, and create reports for our various stakeholders. This can include reports to the various divisions of the police service (so that they understand what types of complaints they are receiving and can work to improve service), reports to the public, and reports to oversight bodies (such as our police commission).

What was the focus of your PhD?

I completed my PhD in experimental psychology in 2009, studying at the University of Alberta. My research was focused on comparative cognition – that is, comparing the cognitive abilities of different species of animals. My main area of focus was looking at spatial abilities and learning, and whether animals used absolute strategies (for example, the food is 8 steps away from the landmark) or relational strategies (the food is in the middle of the two landmarks).

What I love about comparative cognition, and something that I think serves me well in my current position, is that it takes a ‘big picture’ approach to problems. Instead of just looking at *what* animals do, there is a focus on *why* the behaviour occurs; what are the ecological, evolutionary, and/or neurological constraints that would lead to a certain behaviour, and how would different constraints lead to different (or similar) behaviours in other animals?

In my current position, it helps to bring that ‘big picture’ thinking to the analysis of complaints. Regardless of the audience of my reports, they are rarely interested in just the numbers – people want to know why we are getting certain complaints or why certain trends are occurring.

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

When I started graduate school, I opted to stay at the school where I had completed my undergraduate degree (which is also where I had grown up and lived all my life). At the time, I knew I'd have to move away afterwards to do a postdoc and get some outside experiences, but starting out, that seemed like a long way away. I chose to stay at the same university because I already had experience in the lab and felt like I could hit the ground running (and I do feel like that worked out for me).

However, by the end of my PhD, I was realizing that I wasn't really interested in moving away anymore. I was married and knew I would eventually want to have children, and being near family and friends felt more important to me than continuing to pursue an academic career.

Beyond staying in my home city, I wasn't really sure what I wanted to do. I applied for a variety of analyst and research jobs and ended up here with the police. I kept my 'foot in the door' for a while by lecturing on the side and applying at nearby universities, but ultimately gave that up.

How did you decide what to do next?

Deciding what to do after my PhD was really just about the circumstances. I applied for a variety of jobs where I met the qualifications and landed here with the police. At the time, I didn't really know what the job was except that it had something to do with statistics.

For me, the 'what next' was focused more on my personal life. I knew I wanted to stay in the city where I was and (eventually) start a family. 'What next' in terms of a job/career was a bit more of an afterthought. I just wanted to get into the 'workforce' and figure out what I liked and what I could do.

Can you tell us a bit about what day-to-day life is like in your current position?

Since I manage our database, I am the one who knows how to find the answers to whatever questions pop up about our investigations.

I have various reports due on different schedules. I create 'case management' reports for our management team on a bi-weekly schedule (every 2 weeks) so they can track what investigations are ongoing and what stage the investigations are at. I create monthly statistical reports that are distributed within the police service so that other areas know what types of complaints we are getting (and can hopefully proactively work to prevent further complaints). There are quarterly reports and annual

reports that go to various stakeholders, such as divisional commanders or our police commission.

In addition to scheduled reports, I field a lot of ad hoc inquiries. For example, some recent requests for information included whether there has been a change over the past few years in how complaints are resolved (either through dispute resolution or with the Chief of Police directing a more ‘formal’ investigation), trends in complaints related to our canine unit, and a summary of criminal complaints against our officers.

While my primary role is being able to create reports and answer inquiries, I also do some more in-depth work when complaints are first received. Complaints against police officers are regulated under the Alberta Police Act, so when a complaint is first received, there has to be some analysis of whether the requirements of the Police Act have been met and what our options for moving forward are. I work with our Intake Team and Strategic Assessment Committee to analyse complaints within the framework of the legislation to ensure a fair process for everyone. This can involve summarizing the complaint, summarizing police reports, determining which parts of the legislation apply, and recommending the scope of the investigation.

What do you like most about your work?

What I like BEST is the clear delineation between work and personal life. Due to the confidentiality of our work, it isn’t super easy to access my work outside work hours. Until Covid, I wasn’t able to access email or work files at all outside of the office. I don’t get work emails on my phone or receive any work phone calls at home. Since Covid, I have been able to remotely log-in to my computer, but I have to actually sit at my desk and log-in before getting to any emails or work files. It makes it easy to focus on my personal life when I am not constantly reminded of work tasks.

I like the community aspect of my job, in that I am working with an area that is actively working to make our community better by holding police accountable.

I like being an expert in my field. I’ve been in my position long enough to know all the ins and outs, and I feel appreciated when people ask for my advice and expertise.

And what do you like least about your work?

I miss the generative, open-endedness of science. The best part of grad school was going to conferences and coming home with SO MANY ideas, and really nothing stopping you from digging into them. My work now is more reactive and restricted. Of course, I can still come up with ideas on how to improve our processes and do things differently, but then there is all the red tape in actually getting any change effected.

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

There are a lot of different skills that can be acquired during graduate school, and sometimes, it comes down to how well you translate or generalize those skills (or how well you can ‘sell’ them to potential employers). For example, you learn supervisory skills in mentoring other students or lab members, you learn presentations skills (oral, written, visual) through conferences and presentations, you develop time management skills, etc.

I think what helped me the most was the critical thinking skills involved in placing data into context. Generally, when completing any research or writing articles, it wasn’t enough to just say what we had done and what the results showed – you need the context of why we obtained those results and what they mean. In the area of comparative cognition, that meant considering ecological, evolutionary, and/or neurological factors that could affect behaviour. In my role with the police, it can involve considering what is going on within the city or specific policing units. For example, if a division recently launched a traffic safety campaign and increased the number of tickets they were issuing, that could lead to increases in complaints about that division.

Recognizing and presenting the context of data is always helpful.

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

As mentioned above, I think it comes down to how well someone recognizes how their skills can translate across contexts. Being aware of what they have really learned in grad school, aside from the facts and area expertise, would allow them to align their skill sets with the role. This also helps narrow down what someone might be interested in (e.g. do they like supervising and mentorship, or are they more interested in individual work like data analysis?).

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

For pursuing a role in data analysis, knowing statistics helps but having an understanding of how data is organized and how to set up data to answer specific questions is more important. In real world settings, we aren’t often running full statistical analyses, but it helps to know different ways to find the data you need. Knowing

different databases or programming languages is definitely helpful – skills that can certainly be acquired in grad school by working with different types of data.

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 and no. Personally, I tend to get more excited about ‘solving the mystery’. I like to figure out why things are the way they are or discover the context behind data; the specific topic itself is not something I care as deeply about. In other words, I like the process of discovery better than the topic itself. My current position provides lots of opportunity for that process, but the topics are more limited. There is some space to suggest new research projects and topics, but I think there are more limitations and restrictions than in academia.

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?

As above, there is some space and freedom to explore new work, research projects, or new topics, but I think there are more restrictions than in academia. Generally, any ‘new’ work needs to fit in around your usual workload and responsibilities, and there is more of a necessity to prove how the new topic is valuable and relevant to your current work. In my mind, academia has more freedom for straight exploration – though I guess that doesn’t really account for the pressures of publishing!

I know you have just started a new job, can you tell us a bit about that role and what it entails?

I’m now a Safe Mobility Analyst with the City of Edmonton. I’m still figuring out the new role, but basically, I will be supporting various areas of the city in providing data analysis to help make our roads safer. I will be analysing data from crashes and automated traffic enforcement to determine which areas of the city could benefit from various interventions (such as engineering improvements to intersections, or targeted education campaigns, etc.). We also do some before-and-after studies to look at how successful specific interventions are.

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

Advice is so tricky because everyone is different! I guess I would just say that there are no wrong answers. I have trouble making decisions sometimes because I can’t figure out what I want *the most* – but there is good and bad in everything, and whatever the decision, you’ll adjust or you’ll move on with more experience.

Thank you for sharing your career journey with us, Emily!

“In Academia, Recruiters Care About What You’ve Done: Outside They Care About What You Would Be Able to Do Next”



Tommi Himberg



Abstract In our interview with Tommi Himberg, he shares his journey from music research to education and science policy expert. While his position as a diplomat is relatively unique, Tommi gives advice on how there are many opportunities to make a difference in international policy from a variety of positions. He also discusses how his PhD experiences provide a foundation for his current role, and generally provided the basis for many transferable skills. Tommi further suggests that we all consider how our work relates to real-world challenges, particularly the UN’s sustainable development goals.

Tommi Himberg

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T. Himberg (✉)
Permanent Delegation of Finland to the OECD and UNESCO, Paris, France

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

Tommi: I'm Tommi, and after doing academic research on music psychology for a decade and a half, I now work in the Finnish foreign service. I'm posted in Paris, where I'm a counsellor on education and science policy in the Permanent Delegation of Finland to the OECD and UNESCO.

What was the focus of your PhD?

I studied rhythmic synchronisation of dyads. Initially I thought I'd do cross-cultural experiments but ended up working on the methods and especially on how to analyse dyadic data. I started my PhD in 2003 in the then newly established Centre for Music and Science at the Faculty of Music, University of Cambridge. I spent 4 years there and then came back to Jyväskylä, Finland, where I had done my master's, to take a job as an assistant and later as a university teacher. I thought I could quickly finish my thesis, but teaching and new research projects at the Centre of Excellence in Interdisciplinary Music Research in Jyväskylä got me sidetracked. I ended up spending many years as "almost-ready PhD" and then only completed my degree and graduated as PhD in 2014 after moving to Aalto University to a 100% research position. By that time, the focus of my thesis had also shifted a bit from rhythmic tapping studies and musical beats to more general temporal patterns of interaction, and also other domains in addition to music, such as dance and conversations.

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

I was thinking about academia and becoming a professor at a university as the end goal. During my undergraduate and master's studies, I was active in student unions and worked for the rector of our university, but I deliberately put those ideas aside

as I knew that in order to make it in academia, you need to have full focus on your research.

How have your career plans changed as you've continued on to your current position?

They've diversified a lot. I can now see various options to continue after this current 5-year gig, and I'm surer now that something interesting will come along – where I cannot just use the skills and experience from my research career, but also the new ones I've gained in my current position. One thing that makes me a bit disappointed is that I really can't see a path back to research anymore; It's a bit like competitive sports where being outside for this long means it is virtually impossible to get back. The achievements that are valued in academia are such that you can only gain in academia, and other merits, even substantive ones, seem to be ignored. Having said that, I don't think I'd want to go back necessarily. But, in short, I can definitely see more diverse paths and options, just because in my current job I meet a wider variety of people, whereas in academia you tend to interact mostly with other academics.

Can you tell us a bit about what day-to-day life is like in your current position?

At the permanent delegation we operate in between the international organisation and our country, which is a member of the organisation. So on the one hand, we sit in various committees and steer the organisation (in this case OECD and UNESCO) to a direction our country thinks is best. On the other hand, we try to engage our administration back home with the projects these organisations are doing and we try to communicate the outcomes of these projects to our capitals and also our societies at large.

To give a concrete example, OECD conducts lots of interesting research on education; best known is probably the PISA study which is a learning assessment of 15-year-olds in more than 80 countries. But there are lots of other studies, with topics ranging from funding models of universities to social and emotional skills in early childhood education. Education specialists in permanent delegations have an important role in prioritising which studies to run and also checking they are run and communicated in a way that is relevant and makes sense for the countries. The OECD carries out international comparisons, and as all education systems are different, there's always negotiation on what to look at and what methods to use, etc. In this part of the job, I benefit greatly from my research background, and many times it's not too different from discussing studies in departmental seminars. I definitely have an advantage over those colleagues who are diplomats by training!

The second part is then facilitating Finland's active participation in studies and projects, for example, if Finland wants to commission a country report on a topic. And in the end, whether Finland has taken part or not, when the results are published, I write summaries or reports or just try to Tweet about the findings and ensure the reports find their way on the radar of people who should see them. Again here it's not much different from science communication efforts, although the studies are often more directly relevant to policy-making and thus especially the online discussions can take a very different path from what they are when discussing a paper on statistical methods, for example.

In practice, my role is more to do with the oversight of everything that is going on, keeping up with a large number of processes and projects, quickly changing and less about being very deeply involved in an individual project. The 'real' experts are often people from capitals, e.g. at the ministries of education who we counsellors try to support in various committees and working groups. Having this overview and having to switch focus very often is very different from having one's own research project and needing to immerse oneself in it very deeply for months and months.

What do you like most about your work?

I like the variety of it; the core of it is about interacting with people from all kinds of backgrounds and nationalities. There's a lot of freedom and creativity involved, and the results are very concretely making the world a better place. This direct impact, being able to influence national and international, even global, policies, is probably the most satisfying aspect of my job.

And from the point of view of personal life, the absolute best part is the ability to maintain a work-life balance. There are long hours occasionally and, of course, loads of stress at times. However unlike in academia where I was constantly struggling with bad conscience about unfinished work and not being able to take time off, now when the workday is over I can leave that be and focus on family or hobbies or other stuff without work creeping into my mind. I didn't even realize how important this was until this changed.

And what do you like least about your work?

There are a lot of meetings and some of them can get quite boring, and sometimes it's just email after email all day. So there are dull moments occasionally. But perhaps the worst part are the unavoidable frustrations of international cooperation, where things often advance much slower than what you'd like, or good processes just stop for random political reasons. And in the most annoying cases, things get complicated because some partners haven't followed the process and start asking/demanding changes after you thought there already was a consensus.

But, creatively navigating these difficulties or trying to anticipate them to avoid them completely is one of the coolest parts of the job. For example, working hard with others and then finding a creative solution that makes the text of a statement acceptable for everyone is very satisfying – not unlike convincing a very stubborn Reviewer 2!

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

There are loads of things and I probably can't even see all of them myself. First of all, just having the degree brings a lot of credibility when discussing education policy and especially when discussing science policy. And concretely, especially OECD is a data-driven organisation that essentially does a lot of policy-related research, and thus, knowledge about research methods, interpreting data, validity, reliability, sampling and other survey methods, etc. are things that often arise in meetings and I can follow/comment on while many others without scientific training can't. Without a PhD and the postdoc experiences I wouldn't also be this quick in reading and absorbing new information. I'm also using the same methods of note-taking, summarising and mind-mapping that I learned when doing PhD and after. Also I find that all the teaching and science communication activities (presenting, lecturing, popularising, social media, etc.) have been super useful. The results of OECD reports are often complex and being able to explain them clearly is important (so that ministers, their aides and government officials understand why the results are important and what they should do about them). Also giving talks and lectures is useful practice for all the public speaking one has to do in meetings where you might have loads of 'scary' people in the audience. Ambassadors and ministers from non-friendly countries are not more scary than grumpy professors from competing labs in conferences, though.

And of course negotiating a text for a declaration or convention is not so different from polishing your article manuscript based on peer reviewer comments or feedback from your professor or co-authors. Neither text gets accepted until you can find a consensus that everyone is happy with.

The thousands of hours of reading and writing prepare you for the most important component of any job as an expert!

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

First, it might be good to broaden the scope a little. I work as a diplomat in foreign service, and in a permanent delegation to an international organisation, but these posts are very rare, and in some countries reserved exclusively for career diplomats.

However, the secretariats of international organisations are full of experts whose work could be described as doing applied research and where academic merits have a lot of weight in recruitment. Most of these organisations have internship programmes or junior professional programmes that are good pathways to careers in international organisations.

There are also many opportunities where researchers can get a taste of this line of work. If you've enjoyed the international cooperation aspects of research, e.g. involved in organising international conferences, having experience in scientific societies or having held positions of trust in university admin (faculty councils etc.), you have gathered relevant experience. Also, if you are involved in social movements or activism of any kind (from promoting open science to science communication to supporting refugee scientists) and have a motivation to make the world a better place, you'd share a lot with people who work in international organisations or in diplomacy.

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

While you can build much of the useful skill set by just doing research, you would be even better prepared if you took an active role in your community, in whatever way you find rewarding. Organising events, doing things for one's community or volunteering are very rewarding in themselves, and good ways to balance hectic research work. Such experience also helps in demonstrating that you do not fit the old stereotype of hyper-focused and impractical scientist!

Organising conferences, being involved in scientific societies or researchers' unions are in my opinion especially good ways to gather experience and merits that are valued both in the academia as well as outside.

And speaking of merits, it would be a good idea to either regularly apply for non-academic jobs or in other ways ensure that your 'non-academic' CV is up-to-date not just in terms of its content but also its format. To oversimplify, in academia recruiters care about what you've done (your publications, positions, awards, grants) and outside they care about what you would be able to do next (skills, goals, motivation, attitudes). While in academia a long list of publications speaks for itself, outside it is just an example of one particular skill, and you'd need to spell out how that high-profile publication you coordinated that international group of researchers for reflects your leadership qualities, how setting up this new measurement rig demonstrates your capacity for problem-solving and how your use of social media in scientific communication shows your creativity.

There are many resources online and at universities that will help you hone your CV for non-academic purposes. At first these formats might feel alien and strange, but it's worth the exercise. And I really like the tip I saw someone give in Twitter: as a post-doc, you should apply for at least one job outside academia every year – just

to stay aware of what is out there and what skills are expected and how those processes work. This also helps you widen your perspectives about opportunities and prevent you from feeling trapped in one career.

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?

This is an excellent question. If researchers are prototypes of specialists, diplomats are the prototypes of generalists. I feel that in my job now, I'm at my peak of generalism, and I feel I'm covering a huge swathe of fields and areas. At the same time, in the diplomatic landscape I'm a substance specialist with a relatively narrow focus. So scope and focus are relative things; in my current world, a 'field' or 'topic' is what in academia would be covered by a faculty, not a department and definitely not what a research group or individual project would cover.

But I do care deeply about education and science, so while I can't often drill down and focus on a specific question or idea that would fascinate me, and I need to be able to hop from one thing to another sometimes very quickly, I still have the feeling of working with topics that motivate me intrinsically. And as mentioned earlier, the ability to have a direct impact on policies is very rewarding!

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 think it would be important to look at a few different aspects of freedom here. First, having a more stable (and often better paying) job gives you more freedom in life in general, but also in your job. If your research funding is running out, you need to keep churning out grant applications under very heavy pressure and there's very little freedom in that.

The other side is the content and ability to choose what to work on. I am lucky to work in an organisation where experts are trusted to make smart choices about what they focus on (a smart choice is such that it combines your own preferences as well as those of your organisation). In every job, including academic ones, there are things you will need to do whether you particularly like them or not, and in my experience, the ratio of nice things and not so nice things is at least as good in my current job as it was when I was doing research.

Finally, to choose how to work, what tools to use and when to work, etc. are a bit different. In academia there is usually more freedom about these compared to, say,

in a ministry. But having regular working hours and a centrally maintained set of tools also has its upsides – the office hours also mean work doesn't leak into evenings and weekends. And while I would personally run a different stack of tools, I can live with the ones I'm given as at least I don't need to pay any attention to updating or maintaining them.

In general, I also think the generalist nature of my role gives me a lot of freedom. I've joked that having to work with two different international organisations is of course hard, but it has the benefit of always having something interesting to do in the other organisation if the work in the other one seems stuck on its tracks. In a way, structured procrastination is easy when there's a lot on your plate!

Have you thought about returning to academia?

Yes, occasionally, and as my "gig" here is a fixed term, many people have asked if I plan to return or if I'd like to. There are aspects that I miss – the teaching and many aspects of doing research, especially the deep reading, planning and setting up experiments, etc.; but realistically I don't think it would be easy to get back. None of what I've done recently would be considered as merits in academia. And having a gap of 5 years in my already mediocre publication record will not help, either. Also, I am currently more intrigued about the other doors that might have opened.

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

Remain open-minded about career options, and explore your possibilities. And make sure you recognise and document all your skills, not just the ones that academic hiring processes value. Research training gives you a huge package of extremely useful and transferable skills, but unfortunately they are often unnoticed as in the academia they are taken for granted. Being able to operate in many languages, in international teams; gathering, synthesising and presenting huge amounts of complex information; ability to evaluate the reliability of information, track down primary sources; construct or criticise logical argumentation... all have huge value and are not easy or very common skills, even if in academia they are the 'baseline' everyone is expected to master. Having a wider range of career options will help you as well as others see your skills and your value, and it will stop you from feeling you must just gratefully accept whatever you are given in academia, no matter how short-term/poorly paid/uninteresting.

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

I'd like to propose a small challenge: pretty much everyone knows about the sustainable development goals (SDG's) that have been set by the UN to be reached by 2030. There are 17 objectives and within them 169 more specific targets. Can you connect your research to one (or more) or these? How is your research contributing to achieving the SDG's?

Some research funders are already posing this question to the applicants, but I think it could be interesting and useful for everyone to think about this. To answer, one needs to learn about the goals and related international projects, and this is useful in itself, as pretty much the whole world and the whole international community is working towards these goals. You might also find out about interesting job opportunities while researching this. Also, at least for me it was helpful thinking about my research in this wider (very wide!) context that is usually not so obvious. I'm convinced that with some imagination and sufficiently open interpretation of what forms a possible connection, everyone can find something in the SDG's that connects with their research. And if you find something that connects, it might boost your motivation. And if there's no connection yet, perhaps the thinking process leads you towards your next research idea that might connect?

Thank you for sharing your career journey and advice, Tommi!

“Having a PhD Doesn’t Mean You’ll Impress People with Your Education: It Means You Have to Impress Them with How You Apply It”



Bonnie Lakusta



Bonnie Lakusta

Abstract In our interview with Bonnie Lakusta, she shares her journey from exploring psychosis and addiction to a consultant evaluating health and social programs. Planning for clinical work after her PhD, Bonnie struggled to find a role before pivoting into evaluation. She values her small, collaborative team and learning about impactful initiatives. Bonnie continues applying research skills such as data analysis and communication in her evaluation work. Though she sometimes has to explain the value of evaluation, her clients’ passions for their initiatives keep Bonnie engaged. Bonnie encourages gaining work experience prior to starting a PhD program, in order to better inform one’s motivations and goals. She advises articulating the transferable skills developed during PhD training to counter potential employer assumptions.

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

Bonnie: I'm Bonnie Lakusta. I did an undergraduate degree (BSc) in biopsychology – but I often tell people it was neuroscience since they seem to understand that better. That was at the University of British Columbia. I worked as a research assistant in the forensic psychology and health promotion departments for ~3 years after my undergrad. I came to the University of Alberta (UofA) to pursue an MSc in psychiatry, which ended up being a PhD.

I struggled to get a job out of university with a PhD, and I fell into the world of evaluation, which I think has a lot of transferable skillset requirements. I worked at Alberta Health Services (AHS) for a year, before moving to the Alberta Medical Association, as a permanent, full-time contractor, where I stayed for 9 years (the latter two being as an employee).

In spring of 2021, I joined Three Hive, an Edmonton-based evaluation-focused consulting firm. We are hired mostly by healthcare and non-profit organizations to evaluate programs – often based on grants. We help those programs articulate what they achieved, opportunities and recommendations for improvement and areas of strength. We do a lot of understanding (what is the program, what are the goals, environmental scans, lit reviews), data collection (creating and using surveys, interviews, focus groups) and using that data (reporting, presenting, infographics, data, etc.).

What was the focus of your PhD?

My PhD was during 2006–2011 in the Faculty of Medicine and Dentistry, Dept of Psychiatry, University of Alberta. My supervisor was an MD, psychiatrist, with a special interest in early psychosis/schizophrenia. I had an interest in addiction. I created a doctoral project that explored metabolic brain differences, through magnetic resonance imaging, of persons with stimulant-induced psychotic symptoms – that is, chronic cocaine or methamphetamine use inducing persistent symptoms of psychosis – compared to healthy controls, compared to persons experiencing a non-drug-related first episode of psychosis. In addition to metabolic differences, we explored symptom assessment and cognitive testing – focusing on executive functioning.

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

I was confident that I wanted out of academia. I was confident that I wanted to – and could – get work in the world of mental health and addictions. I envisioned a 10-year future being a director of programming. I applied to health organizations, community-based organizations, social services and not-for-profits. I struggled to find work.

I broadened my scope to include the pharmaceutical industry, because lots of past graduates of the psychiatry program had success there. Eventually I landed a job as an evaluator in AHS, in a primary care–focused quality improvement program. Primary care supplanted addiction/mental health for the next ~10 years of my career, until my recent move to Three Hive.

How did you know that academia wasn’t for you?

The constant competitiveness of academia, the requirement to constantly be writing grant proposals and losing out to the researcher with the most wins wasn’t appealing to me. At the time I didn’t have as much insight as I do now, but now I’m even more disillusioned with the idea of applying to grants – not just in academia. There is pressure to over-promise in order to win the grant – promising to deliver on potentially unfeasible outcomes (in a limited word count!), which puts stress on your funded project. I hadn’t realized until my PhD how truly competitive academia is. I was definitely interested in leaving campus for the first time in my adult life.

Can you tell us more about what you did as an evaluator at AHS?

At AHS I worked as an evaluator with a program called Alberta AIM (Access. Improvement. Measure). AIM worked with primary and specialty care practices to improve their work processes – that is, improve access for patients, improve office efficiency, improve scheduling and appointment times, improve the patient experience, all leading to happier staff and physicians, better patient experiences and quality care, and, often, more fee-for-service payments for physicians. My job was to write the reports to the Ministry of Health to show if AIM was delivering on all those claims: Was the program working? What was working well? What wasn't? How do you measure it? I had the benefit of working alongside a mentor, a retired long-time evaluator doing a little bit of consulting work. That mentor really got me excited about evaluation. He lent me textbooks, he taught me about types of measurement, and he taught me how to create logic models and develop evaluations plans. AIM had a small team (~7 people). We all worked closely to deliver the AIM curriculum to practices, and to measure the outcomes.

I left AHS because of the opportunity at the Alberta Medical Association.

What led you to leave the AHS and move to Three Hive?

I left AHS after only about 14 months to become an independent contractor in evaluation. I had secured a full-time contract with a group called Toward Optimized Practice (TOP) at the Alberta Medical Association (AMA). TOP had a nationally funded grant to implement a screening program in primary care. My job was to use a prescribed framework (called RE-AIM) to evaluate this screening program. I needed to develop a measurement strategy that would answer to our funder about what change the program was making at the individual patient level – > were more patients getting screened? My strategy had to be scalable across our entire province. The grant lasted for about 3 years, at which point I continued my independent contracting with TOP (they had other grants and other projects) and took on a couple of smaller clients as well. After ~6 years as an independent contractor, I accepted full-time employment at the AMA, where I stayed for another 2 years. By that time, my scope of practice had expanded beyond evaluation to more 'generalist project lead', where I was a jack-of all-trades, leading various healthcare quality improvement initiatives.

I left the AMA to move to Three Hive in 2021. I liked that Three Hive was exclusively evaluation focused. I liked that Three Hive would provide me with the opportunity to work in those social service, community-based, not-for-profit organizations that were originally so appealing to me. I liked that it was owned and operated by two women, in my age group, with families. I didn't wait for a job posting. I contacted the two owners and asked if they'd be willing to meet with me. They were.

Around 2016, I decided that I could apply for my CE, credentialed evaluator, designation. This designation is offered by the Canadian Evaluation Society in an effort to contribute to the professionalization of evaluation as a career. Individuals who meet specified years of work in evaluation and experiences may apply for the designation. I mention this because after getting a PhD, it hadn’t occurred to me that I may require additional credentialing or education later on. ‘PhD’ were not the last letters to be added to my signature.

Can you tell us a bit about what day-to-day life is like in your current position?

At Three Hive I am a project lead. I support our CEO in writing proposals in response to organizations that put out requests for evaluation services. When we land a new contract or client, I step in to learn more about the work and kick it off. I facilitate meetings, where we not only seek to understand the client’s needs but also try to build evaluation capacity in new, often not-for-profit teams. I work with clients directly to build an evaluation plan that will answer their questions. I then work with our small but mighty team of evaluation associates to implement those plans: we design data collection tools, administer surveys, do interviews and focus groups, analyse administrative data and synthesise it all together in whatever deliverables are needed – often interim or progress reports, final reports and presentations.

At Three Hive we also build capacity in evaluation through Eval Academy (<https://www.evalacademy.com>), a website with the vision that anyone can evaluate. We aim to provide resources that build awareness and familiarity with evaluation. We are all content creators – creating blog posts, template and tip sheets, with the goal to build evaluation capacity.

What do you like most about your work?

I love my team. I have learned that I thrive in small groups of like-minded folks. My work at the AMA started with a small group of highly functioning over-achievers, which I loved, but as the team and scope of work grew, the office politics grew too. I like that Three Hive is less than 10 individuals all with a vested interest in the success of the company.

I like that my role exposes me to parts of my own city, province and country that I would never know about otherwise. I get to be a point-in-time learner about amazing, often charitable, work being done close to home. I value meeting team members who are passionate about their work.

I like evaluation. It’s not the addiction/mental health–focused career I thought I’d have, although I’m closer to that now than I ever have been before. But evaluation

suits me. It suits my inner data-geek. It suits my love of writing with clarity and purpose. It even suits the reluctant public speaker in me.

And what do you like least about your work?

I heard somewhere that evaluation is the biggest growing field that no one has ever heard of. While it is growing, we still have to explain what we do regularly, and why we're worth spending money on. Even when we are hired, it's disappointing to learn that sometimes we are a box-checking activity because the funder wanted evaluation. I do believe evaluation is valuable, but it's only as valuable as the clients make it to be. Often our reports and presentations are shelved, collecting dust in perpetuity.

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

I think 10 years ago, being young with a PhD made me desirable as a way to add some credibility to the work I was doing. For example, working in primary care where often the end user or client is a physician, having a PhD doctor on the team seemed like an important title. This became less relevant as I grew older and more distant from my PhD.

I credit my PhD with getting some people to pay attention to me when I was new in my role(s) and had less real-world experience.

Having said that though, I actually believe my PhD was more of a career blocker than enabler. I believe that graduating with a PhD, particularly in a discipline that people don't understand outside of medical practice, without any experience made potential employers unsure of what to do with me. While I have no evidence, I suspect they asked, "Will she quit after a short time to pursue something bigger and better?" "Will she be research focused instead of operationally focused?" "What actual skills does she have?" "What does she actually know about what we do and how we operate?" I've often told people that I educated myself out of the job market.

Do you have any advice on how someone who has recently completed a PhD could respond to these sort of questions, given your experiences?

I think the key for using a PhD to gain a non-academic job is really being able to speak to the transferable skills (which I've mentioned). Probably a lot of people (i.e., those doing the hiring) don't actually understand what doing a PhD means or entails, so speaking about things that translate to a work environment may help, such as having deadlines, bosses to answer to, multitasking on multiple projects at

once, teamwork. Then, adding on the more concrete skills that may be relevant to a job: data analysis, writing, reporting. And finally some of the softer skills: dedication, perseverance, and commitment.

Having a PhD doesn’t mean you’ll impress people with your education. It means you have to impress them with how you apply it.

During the interview for the first job I got after my PhD, they asked me to share with them what I understood their job to be. I had done a lot of research about the department and nailed the question. I think that’s what got me the job, because I could prove that I understood operations.

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

Today there are graduate degrees offered in evaluation. Someone with a PhD in evaluation would likely be very employable. But for anyone wanting to get into evaluation, I would suggest that a PhD is *not* required. A master’s, particularly in epidemiology, public health or related fields would be great matches for evaluation.

Evaluation is for those who like the process of research – and the fundamentals of research. That is, identify a problem, pose a question about the problem, determine and develop data collection methods to answer your problem, analyze your data and write up the results. The skills are 100% transferable. The subject matter is not.

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

As I just mentioned, it is much more common now to receive an education directly in evaluation, rather than relying on transferable skills. More organizations are hiring evaluators. Entry level jobs abound. I would recommend completing an undergraduate degree, or perhaps a master’s and applying for evaluation jobs. Work for a couple of years, build some real-world experience and *then* decide if you want to pursue a PhD. Ask yourself, what would a PhD do for you that you can’t do now?

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?

This is not true for my position, but I'm closer than I ever have been. It's been one of my career regrets. I got a PhD in psychiatry and landed in evaluation but instead of pursuing evaluation in a topic I care deeply about (addictions and mental health) I stayed in primary care for 10 years. Only recently did I make a career change that brought me closer to things I care about. That career change (from the AMA to Three Hive) was, at least in part, *because* I wanted to care more about my work. Now, I work with social service agencies. I work in the human sector with many diverse and vulnerable populations. It feels much better and keeps me engaged.

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?

Freedom to choose what I work on? Or freedom with respect to things like work/life balance, answering to a boss, etc.?

I'm lucky in my current role that we're a small company and my boss is collaborative and engaging. She'll often share potential new projects with the team leads and ask us if we're interested in the work. Having said that, we are a contract-based organization, so we need a regular stream of new contracts to stay in business; we can't decline everything if it's not up our alley. So, I have a say, but not total freedom.

However, with respect to freedom in other areas, I used to think a career in academia was ideal: set your own hours, travel for conferences, and work on your passion. I now see the challenges: constantly fighting for grants and writing publications to prove your worth, working your own long hours, and risking your passion becoming laborious. Outside of academia you have freedom to choose a job or career that is less competitive and demanding (which appeals to me).

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

To my surprise, people have asked me about whether they should do a PhD. My answer is always "why". Do you want it for the prestige? Do you think you'll earn more money (how do you know)? Will it get you into more senior positions sooner

(how do you know)? If they answer anything other than a desire to be in academia, my recommendation is to do a master’s, gain some work experience for at least a couple of years, then reconsider the PhD.

I wish that I had gained work experience before completing a PhD. My world-view when I graduated would have been much more realistic.

Thank you for sharing your journey with us, Bonnie!

“People Are More Often Willing to Connect and Have a Conversation Than You Might Think”



Yashoda Gopi



Yashoda Gopi

Abstract In our interview with Yashoda Gopi, she shares her journey from a PhD focused on memory rehabilitation after stroke to a lead research consultant at an executive search firm. Initially open-minded about career paths, through a process of elimination Yashoda realised academia was not the right fit long term. She advises starting the career exploration process early, attending relevant seminars, and connecting with people on LinkedIn. Yashoda values the variety of tasks and sectors she works with, though she notes the faster pace compared to academia. She continues to apply research skills like presenting information, taking feedback, and designing processes. Yashoda sees direct impact through placements, while staying connected to topics like education technology.

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Y. Gopi (✉)
Spencer Group, Nottingham, UK

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

Yashoda: My background is in academia, having completed a BA in neuroscience, and a master's in cognitive psychology, I recently completed my PhD in psychology at the University of Nottingham which was focused on memory rehabilitation after stroke. During my PhD, I realised that although I enjoyed all of my academic pursuits, I was ready to move into a different field to take on new challenges.

I am now a lead research consultant at the Spencer Group, an executive search organisation focused on two sectors, clinical technology (e.g., software that is essential in conducting clinical trials) and commercial education (e.g., edtech and pathway programmes), and I am currently looking at branching out into innovation in higher education (e.g., emerging tech in higher education). My role at the Spencer Group involves market intel research, scoping and engaging with potential candidates, and working closely with clients to understand their organisation values, interests, and needs to find the right candidates. I have also recently been involved in various initiatives within the organisation, such as sourcing and evaluating software that can improve team efficiency, developing a process for business development lead generation, and implementing a related company-wide incentive programme. My position involves a different approach to research compared to academia but I find it quite challenging and exciting because my day-to-day work is constantly changing and I get to take on various responsibilities within the organisation.

What was the focus of your PhD?

I started my PhD in 2018 at the University of Nottingham School of Psychology. The focus of my PhD was memory rehabilitation after stroke. The interest in this topic came from my master's where I examined language comprehension rehabilitation using non-invasive brain stimulation with stroke patients combined with an

interest in memory from working at an assisted living facility with Alzheimer's patients. From this, I became interested in finding out what happens with memory after stroke and how we can improve the daily lives of stroke patients and perhaps alleviate some of the memory problems.

My PhD then evolved into three strands of research, the first was subjective memory evaluation, where I examined three types of metamemory questionnaires through a literature review. The second strand was memory rehabilitation, where I conducted a literature review of memory rehabilitation strategies and also examined practices of assessment to treatment of memory after stroke in current clinical practice from the perspective of healthcare professionals through an online survey. Finally, the third strand involved examining mnemonic strategies that can be used in daily life, where I explored face-name mnemonic strategies across several experiments with adults.

As I started in 2018, the COVID pandemic occurred in the second year of my PhD and there was a major shift to online working. This meant I had to stop in-person data collection and refocus some aspects of my PhD; for example, the stroke survey was initially intended to be in-person focus groups with healthcare professionals. Additionally, several experiments had to be reconfigured to be conducted online. This required a lot of considerations to shift the research online and finish the PhD as close to the original timeframe as possible. Along with my supervisor, Chris, and a colleague in the same lab, we shared some benefits and challenges to pivoting to online research in a Sage Research Methods Case Study. While writing this case study and in discussions with my supervisor and colleague, I started to consider how the skills I developed during the PhD could be applicable outside of academia.

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

When I started the PhD, I did not have concrete intention about either continuing in academia or not; but towards the end of my second year, I realised I was happy with the work I had done in academia and was ready to move on to a different challenge. However I was unsure about where I would go next in terms of sectors and career path, so I was quite open to various opportunities. This also involved a process of elimination where I ruled out the potential career paths that were not of interest. At times this meant that while there seemed to be a wide range of opportunities available, they were not the right ones. This led to discussions with career advisors at the university as well as my supervisor regarding potential opportunities and sectors to explore. Additionally, Chris shared several of the interviews with our lab group from the first book in this series, *Academia and the World Beyond: Navigating Life after a PhD*, which helped me to see that there isn't a singular path after academia and starting from 'scratch' in a new field isn't as daunting as it may seem when

trying to determine where you fit. This further led me to applying to a wide range of opportunities, including administrative, project management, and research-based opportunities across different sectors. Ultimately I ended up finding an organisation that was at the intersection of all three sectors, where I still felt engaged with topics of interest to me and also had the opportunity to develop research skills in a different capacity.

How have your career plans changed as you've continued on to your current position?

My career plans are still relatively flexible, and while I am happy with my position at the moment, I don't feel the need to restrict my options. There are two reasons behind this, the first being that working in recruitment has allowed me to see the career trajectory of hundreds of potential candidates that have pivoted across different sectors and positions to find the right place for them. Additionally, hearing from clients who are in executive level positions about their own changes in their career plans and trajectory has allowed me to see that there are always options available. The second reason is that I have been offered various opportunities for development and progression at my current organisation. I have been able to get involved in projects that are not directly related to my research work and I am regularly given the time and resources to pursue side projects that can allow for the development of different skills and potentially a change in position. For these reasons I prefer to keep my options open and continue exploring what might be the right fit for me.

Can you tell us a bit about what day-to-day life is like in your current position?

My day-to-day life in my current position can vary from scoping and evaluating candidate profiles to market research across various sectors to presenting research progress and outcomes to clients. I wouldn't say there is a 'typical' day in my position as 1 day might involve multiple meetings to discuss current assignments whereas another might involve several hours of searching for potential candidates.

As part of my responsibilities as a lead researcher, I can be involved in briefing other researchers on the assignment and delegating tasks to achieve weekly goals. As a researcher, my responsibilities include meeting with clients to get a scope of the candidate profiles they are interested in, finding relevant organisations from which we might find the right individuals, scoping and reviewing potential candidates, engagement with candidates to schedule interviews with my colleagues as well as with the clients, and presenting the progress of research to clients in update meetings. More recently, I have also taken on responsibilities to design and implement new processes regarding business development lead generation which can

involve examining news and social media sites to gather information about current or potential clients and setting up pipelines to evaluate potential leads.

What do you like most about your work?

I enjoy the range of tasks that I can be involved in on a daily basis and being able to have insight into sectors that are of interest to me. On a daily basis I might be required to switch between three to four different projects and assignments which can involve various meetings with colleagues or clients as well as dedicated time for research. I find this type of task switching very engaging and it allows me to stay on top of the projects that I am involved in. I am also able to spend time finding out about very interesting individuals and companies that are crucial to clinical trials, education technology and higher education. Given my background, I find this very interesting because I feel connected to these sectors as I can follow along with the latest market trends and news.

I really also enjoy working with my team. As the company is small and we work remotely, communication is crucial, so we are in contact across group chats and with regular meetings. In doing so, I've found my colleagues to be very supportive regarding training, sector knowledge, and even future career possibilities. Although I'm presented with new opportunities at the company which can at times be daunting, I do not feel that I am left to manage it all on my own as I can always get in touch with someone who might be able to help or advise. We also have monthly office-based, in-person meetup days and quarterly incentive days where we get together for activities (e.g. segwaying, go-karting) if quarterly targets are met. As everyone in the company gets involved, it's a very nice way to connect with each other and celebrate the work we have accomplished.

And what do you like least about your work?

There can sometimes be quite a bit of pressure to get things done quickly. As many others have realised, outside of academia, progress on projects can be much quicker and with tighter deadlines. As there is a responsibility to external stakeholders such as clients, everything can sometimes feel like it needs to be done as soon as possible.

I have often come across the phrase 'this needs to be done yesterday'. This can be very stressful, especially if there are multiple clients or assignments that need to be worked on within a limited time period. For example, within the same week or even day, we might need to present a list of potential candidates to multiple clients which will mean hours of preparation work across the team working on the project to interview the candidates and prepare relevant documentation to share with the clients. However, other projects cannot be deprioritised as we might be meeting with other clients the following week. So I have found that time management and

being able to switch from one task to another even when it feels like something needs to be completed are very important to stay on track.

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

I think the skills I learned during the PhD have been very beneficial in this position. Being able to research and present potential ideas, within my first few weeks at the company I was able to find and present a new tool that could be used to improve efficiency within the research team. Although this is a different type of research compared to academic research, I can definitely appreciate how being able to work independently to find, analyse, collate, and present information has been transferred from what I learned during the PhD. Additionally, I am able to take feedback constructively and improve on processes or my own approach to research while learning about these sectors.

I also think that my academic background has allowed me to connect with several of our clients across the sectors and understand not only the language but also their companies purposes and values. In particular, I have been involved in several eClinical assignments where our clients provide software to allow clinical trials to be conducted efficiently and safely. When discussing some of the details of the clinical trials process, I have been able to understand and engage with this information as I was involved with the Stroke Research Group at the University of Nottingham where individuals involved in designing and implementing stroke clinical trials presented their work. I have also worked with some edtech companies and programme providers that work with universities where my own experiences have helped me understand their visions and how their products or services impact students' lives. Understanding clients and their needs is crucial to conducting the research necessary for finding the right potential candidates and my experiences during my PhD have been a key factor in helping me succeed in this role.

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 suggest that they look at the companies they might consider for potential employment and ensure the companies belong to the sectors of your interest. It would be very difficult to engage with clients and candidates if you don't like what they do! It's also important to examine the difference between executive search and contingent recruitment as your day-to-day work with clients, candidates, and colleagues will vary widely.

Another important factor is if you would like to be involved in research or delivery which differs in terms of the level of engagement with candidates. For example, researchers are generally involved in market insights, sourcing and reaching out to candidates, preparing documentation for clients, and presenting research progress to clients. On the other hand, delivery consultants are involved with conducting multiple interviews with candidates, presenting candidates to clients, preparing candidates for interviews with clients, and managing candidate and client expectations. These roles therefore require different skills: a researcher might spend their day finding information; a delivery consultant might spend the same day in interviews and client calls.

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

I would suggest they start by researching the sectors that are of interest to them (e.g., education, fintech, edtech) and then find which companies belong to those sectors. This will not only be of interest to you but will also give you an important talking point in interviews if you can come prepared with some recent market information. LinkedIn is crucial in recruitment, it is often a first point of call where recruiters often look when hiring for their organizations. I would recommend updating your LinkedIn profile with as much detail as possible, especially with keywords for skills and information about what you have accomplished in previous roles. One of the biggest issues when determining if an individual is approached for a role is the information on their LinkedIn profile and this will factor in if applying for a research position within recruitment.

If possible, I would recommend speaking with someone in recruitment about their day-to-day activities and hours as these are very different to academia and it is important to understand if this is something that you can manage. If you secure a meeting or interview with someone in recruitment, it is crucial to come prepared with the understanding of the company and also with questions about the company culture. To prepare for this, I would recommend speaking with the careers service at your university. This was a very helpful part of my process in searching for a position outside of academia.

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?

I think in recruitment there is a degree of removal from direct influence in a particular sector. I still feel I have the opportunity to work in sectors that I care about and I am grateful to be able to see them from a different perspective. In academia, the

focus was on contributing to the literature and finding answers to questions whereas my role here is more clearly defined in searching for candidates that will have an impact in a particular organisation. For example, having been involved in a search for an executive within a commercial education organisation that works with universities in international student recruitment, I was able to see the direct impact of individuals we place on the lives of students. Having been an international student myself, I really connected with this search as I could understand how any individual we placed in that organisation might help or hinder the opportunities for students like me.

In another capacity, while working on market intel for business development across eClinical, commercial education, and higher education sectors, I have been tracking various companies and universities and I am able to stay in touch with relevant updates. For example, this has allowed me to stay connected to the impact and conversations around technology such as ChatGPT in higher education as well as developments in stroke clinical trials. While I may not be actively engaged in the same way as I would in academia, I appreciate the ability to stay connected to the sectors and topics that I care about.

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 think I have a good balance of freedom to explore my own interests and also a structure to follow. In terms of structure, we have a standard process for assignments that has been developed and refined over the years and has been found to be effective. As I moved into this new field, I think this was very beneficial for me to work with an established process because it gave me the opportunity to learn about how our clients work and how we fit into their hiring process while being able to contribute to assignments. I think one aspect of moving into industry that was quite different for me was that a lot of the training was ‘on the job’ and I was effectively implementing what I learned in a training session on assignments in my first week. Coming from a PhD where a lot of time is spent preparing and reviewing prior to running experiments or publishing articles, that seemed like a major shift. At times, this can seem daunting but it means that there is a different level of flexibility required as changes can happen more quickly than we might be used to coming from academia.

I do still feel as though I have enough opportunities to work on what’s interesting to me. For example, I have now been involved in several efficiency projects that have either already been implemented or are being designed. These have been particularly interesting to me because I have been able to evaluate current processes which involved gathering information from colleagues about what is working and

what is not and then assessing various options to make changes, designing a potential solution, implementing it, and then collating feedback for improvements. To some extent it feels a bit like running experiments which for me was one of the most interesting aspects during my studies. The difference here is that when a new process or programme is implemented as a result, I can see the direct impact on the team and can have feedback in real time which can allow me to make changes relatively quickly. Overall, I think that this mix of structure, flexibility, and freedom works quite well for me.

Have you thought about returning to academia?

At the moment, I have not considered returning to academia although I have not entirely ruled it out as a possibility. As I didn't initially have a set plan to either stay or leave when completing my PhD, my experience has been different from individuals who intended to stay in academia and then shifted paths. I also don't feel too far removed from academia yet as I have only been in industry for less than a year, so I think there is still quite a bit of exploring for me to do. As I mentioned before, I think that it's best to keep various options in consideration.

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

I would recommend starting early in considering your options. Attend seminars or webinars from individuals who have left academia and find out about the path of those who have stayed so you are well informed before making a decision. Make a list of sectors or companies that you might be interested in and find out more about them and the career and progression opportunities you might have. I would also recommend looking at LinkedIn profiles of individuals from interesting companies so that you can have an idea of their career progression, especially those who have come from similar backgrounds.

I often felt that I left it too late in my last year to start actively applying because balancing the PhD, a part-time job, and searching for a job was a lot to manage. It can sometimes be several weeks or months between sending an application and receiving a response so it's best to start early. A start date can be negotiated but an application deadline is likely automated. It is also important to not rule yourself out from a potential opportunity if you think you do not meet all of the criteria. There are many factors taken into consideration when screening and interviewing job candidates and as an applicant you are likely only seeing a small part of that process.

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

Everyone has a different experience but I found it helpful to discuss my options with my supervisor. I appreciate that not all supervisors may be supportive of leaving academia but I would recommend speaking to someone within the department or the university to get advice or suggestions on where to look, apply, or even to network. Common advice when searching for a job is to reach out to your network, but if you are an international student or have been working remotely that might be difficult, I would recommend setting up or updating your LinkedIn profile and starting to connect with relevant people as soon as possible to expand your options. People are more often willing to connect and have a conversation than you might think. Also, it is important to have a method of tracking your applications and interviews as well as the documents you have submitted for each application. This can be particularly helpful when interviewing so that you can refer back to something you mentioned in the application or when applying for similar roles where you can use some previous relevant information. In general, I would recommend keeping your options open as you might find something very interesting that wasn't on your radar in the beginning.

Thank you for sharing your experiences with us, Yashoda!

“Your PhD Could Serve as the Most Potent Intellectual Exercise, Fuelling Your Entire Career’s Journey”



Ahmed Salhin



Ahmed Salhin

Abstract In our interview with Ahmed Salhin, he shares his journey from modelling investor behaviour to developing machine learning (ML) solutions. Ahmed valued the analytical aspects of his PhD and focused his career plans on deployable machine learning. He acquired broader software skills through collaborations and experience. A rewarding aspect of Ahmed’s work is uncovering meaningful insights through data science, as well as the constant learning inherent in this rapidly evolving field. However, he notes that dealing with messy, uncooperative data can be frustrating. Ahmed credits his PhD with instilling the advanced technical skills necessary to work through these challenges and develop effective machine learning solutions. To help determine if data science is a good career fit, he suggests reflecting on one’s curiosity, passion for problem-solving, collaborative spirit, and communication abilities. Ahmed advises preparing for post-PhD life early, expanding your network, and embracing the PhD journey.

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

Ahmed: I am Ahmed Salhin. Currently I work as a principal data scientist at Sage AI focusing on building machine learning solutions that integrate with Sage's business management applications. The Sage AI team is a cross-functional team building the future of cloud business management by using artificial intelligence to turbocharge our users' productivity. We build capabilities to help businesses make better decisions through data-powered insights.

What was the focus of your PhD?

I completed my PhD research on behavioural finance at what is now called Edinburgh Business School at Heriot Watt University in 2017. The research focused on modelling the relationship between investor sentiment, managerial sentiment, and stock market prices. It included developing predictive models of stock prices using risk as well as quantified behavioural factors.

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

I enjoyed the empirical part of my PhD research where I built and utilised a mix of econometrics, machine learning, and programming skills. That led me to focus my career in the area of data science, particularly, deployable machine learning.

How did you choose this as your career focus?

Upon completing my PhD, I found myself in the midst of the increasing popularity of the data science field. My active involvement in managing an R programming language user group throughout my doctoral studies had already provided me with valuable exposure to this arena. It was also through engaging in numerous industry events and making connections with professionals in the sector helped solidify my intention to become a data scientist. I became increasingly certain that data science was the perfect pathway through which I could utilise my technical skills and contribute meaningfully to software development.

How have your career plans changed as you’ve continued on to your current position?

Initially, my primary objective was to develop machine learning models that would provide meaningful benefits to users. However, at that time, I lacked the necessary experience in deploying these models effectively to enable users to reap their full value. Over time, as I acquired the skills required to deploy machine learning solutions at a larger scale, I found myself becoming more involved in the entire workflow, from ideation to deployment, and even maintenance of machine learning solutions.

How did you go about acquiring these skills, and knowing what skills you needed?

I acquired these skills through a strong drive to understand the complete process of deploying a machine learning service. Along the way, I encountered both failures and successes, but eventually everything fell into place. I later collaborated with machine learning engineers and software engineers, actively engaging with them to expand my knowledge, improve my skills, and gain practical experience. This collaborative effort significantly bolstered the development of my data science and machine learning applications, making them more resilient and adaptable to different scenarios.

Can you tell us a bit about what day-to-day life is like in your current position?

A bit of a cliché but true; no day is exactly the same as another. It mainly depends on the stage of the project. If we are talking about the majority of days, it will start checking GitHub and Slack to catch up on what has been happening overnight by other team members in different time zones, prioritise or continue on a task I started before, launch JupyterHub and code. The day will involve meeting stakeholders, reviewing other people's work and getting up to date with what has been happening in the AI community.

I would say that meetings take about 20% of my time, fortunately. The rest of the day is very focused on thinking, coding and closing off tickets I created to break down the task at hand.

What do you like most about your work?

Seeing models I contributed to being used and making a positive impact on customers' work and life. One of the most fascinating aspects of data science is the ability to uncover patterns and trends that may not be immediately apparent. The enjoyment of uncovering those patterns is enormous. I could be the first one to see and discover interesting facts about the data and the behaviour it represents. This is very rewarding.

Another aspect I enjoy most about my work is the continuous learning. The field of data science is constantly evolving and there is rarely a day passing by without learning something new. That ranges from new methods, techniques, advancement, code, reading an article, and more.

And what do you like least about your work?

What I like least about my work is when I encounter challenges with the data. In many cases, the data does not align or cooperate as expected, and this can be quite frustrating. However, I choose to view these challenges as opportunities for growth and improvement. When faced with difficult data, I see it as a personal challenge to find ways to make it work and behave according to our needs. It requires additional effort and problem-solving skills, but ultimately overcoming these challenges can be rewarding. So, while it may not be my favourite aspect of the work, I see it as an opportunity to learn and refine my abilities.

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

My PhD helped me develop advanced technical skills that support me every day I work as a data scientist. The extensive coursework and research of my PhD programs provided a deep understanding of advanced topics in statistics, mathematics, computer science, economics, and finance. This comprehensive knowledge base proves to be immensely valuable when tackling complex projects. Developing machine learning applications involves encountering numerous challenges, each demanding a combination of this acquired knowledge and skill. It allows me to identify the root of the challenge and subsequently apply the most effective approach to address it. This integration of knowledge and skill significantly contributes to overcoming obstacles and achieving successful outcomes in ML application development.

I also benefited more from the specialisation in finance where it makes me a domain expert when dealing with projects that consume financial data or support users who consume it.

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 say ask yourself these four questions:

1. Do I enjoy solving technical problems using data?
2. Am I curious about what is under the hood of techniques and methods I use and what the data is trying to say?
3. Do I enjoy collaborating with people in solving a problem?
4. Can I simplify my findings and communicate them in an effective way?

If the answer to those questions is yes, most probably you would be a very good fit to consider data science as a career.

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

Start by having confidence in what you have achieved so far during your PhD. You then need to start thinking about collaboration, collaboration, collaboration. If you felt lonely during your PhD, it is the time to go and find small projects where you collaborate with other people on a data science problem. Kaggle, a data science competitions platform, is a good example of where you can meet like-minded people who are also looking for people to collaborate with to solve a challenge.

Your technical, alongside collaboration, skills will be the core capability you need to start your career in data science. Everything else you need will flow naturally.

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?

Not always. This may be a disadvantage to work on the data science field within the business community compared to academia. The reason I say ‘not always’ is that you might land a career in the industry where you continue what you have been doing in academia but with the purpose of supporting the business achieving its objectives. These kinds of opportunities are much fewer than working on projects that you do not necessarily care deeply about, especially when the number of data science projects being developed at businesses is enormous.

In short, you would be lucky to work in the ‘area/field’ you are passionate about. You would be extremely lucky if you work on a specific ‘topic’ you deeply care about.

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?

It depends on the type of freedom we are talking about. In terms of time flexibility, I would vote for industry every single time. It could be my only experience with it, but academia has that fake sense of flexibility where you end up working on research, exam script marking, and course work preparation on your weekend or at 2 am during week time.

If we are talking about flexibility of choosing the topic you want to work on, I do agree that academia has that advantage compared to the industry setup.

Have you thought about returning to academia?

Not really. I am still passionate about doing research about behavioural finance but nothing prevents me from doing so outside academia apart from finding the time. I miss many aspects of academia though, for example, debating and collaborating with academics on a challenging topic.

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

Spare the time to prepare for what comes next after PhD. You will find it very challenging if you give yourself the time to cool down after finishing the PhD before you start firing up the engine to prepare for the next move. Widen your network and reach out to people who can support you in landing the career you are interested in. Look for someone who can become your mentor, they will save you a great deal of time finding the right path and help you navigate the challenges and obstacles that you may encounter along the way.

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

If you are reading this while you aren’t yet close to finishing your PhD, please enjoy the journey. While enjoying it, remember that the process of pursuing a PhD is not just about getting the degree, but also about developing skills that you can utilise and transfer to other domains. Your PhD could serve as the most potent intellectual exercise, fuelling your entire career’s journey. So, while you work towards completing your PhD, be sure to savour the learning experiences, celebrate your successes (no matter how small), widen your personal network, and embrace the challenges as opportunities for growth.

Thank you for your advice, Ahmed!

“It Is Rewarding to Read Books and Journals Before They Are Published and Get Them Polished for Publication”



Karen Ette



Karen Ette

Abstract In our interview with Karen Ette, she tells us about her journey from PhD into working as an editor and proofreader, as well as a university chaplain. Her academic work was in studying Great War fiction. Karen’s roles are varied, encompassing the editing of fiction and non-fiction works, plus PhD theses, providing pastoral and bereavement support at the university, and maintaining the chaplaincy library. Karen offers practical advice for those considering a similar path, including details of proofreading and copy-editing training, seeking career guidance, and discussing factors that drew her to her current roles. Finally, Karen highlights the importance of being true to oneself when considering career paths and maintaining personal happiness in the chosen work.

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K. Ette (✉)

Freelance Editor and Proofreader and Lay Chaplain, University of Loughborough, Loughborough, UK

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

Karen: I am Dr Karen Ette and work in two different areas: I am a professional member of the Chartered Institute for Editors and Proofreaders and work freelance as a copy-editor, proofreader and development editor. I also work with a hybrid publisher (Goldcrest Books). My work is with both fiction and non-fiction authors, publishers and research students.

My undergrad, post-grad and PhD were all undertaken at Loughborough University and I am now on the chaplaincy team as a methodist lay chaplain (which means I haven't been ordained). In this role I support students and staff at the university whether they have a faith or none.

What was the focus of your PhD?

I began my PhD in 2011 having gained an MA in English and creative writing. My PhD was also in English, contemporary and modern, and my focus was on Great War fiction. Its title is *Heroism in the Abstract* and examines social history as well as military history. Using unpublished, unseen resources, such as soldiers' diaries, letters and postcards, together with archived documents, PhD theses in the British Library, non-fiction accounts and published Great War fiction, I concentrated on Leicestershire in the Great War, especially the Leicestershire Regiment. There had been no Great War fiction about Leicestershire and that was the lacuna I needed to fill.

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

My first priority was to write a novel from the writing and research I had done for the PhD. Having completed the teaching qualification I also continued to teach undergraduates on the publishing module, and a few part-time, bought-in sessions for creative writing MA students. When addressing the minor corrections post-viva, I realised that many of them would not have been needed had the thesis been professionally proofread. Shortly after that I began training in proofreading with the Publishing Training Centre and qualified in March 2017. Following on from there I did a copy-editing course and qualified in December 2017. Development editing courses followed in 2020.

I had also joined the university chaplaincy, initially just to cover staff absence, but then became a chaplain in 2016, the same year that my PhD was conferred.

Can you tell us more about the proofreading and copy-editing training? What did these entail?

My interest is in line- and copy-editing, but to gain the necessary qualification it was essential to take the proofreading course, which was 50 hours (over 12 months) via distance learning. This involved six independently marked modules:

- Techniques and good practice.
- Proofreading or proof-editing?
- Working on PDFs I.
- Working on PDFs II.
- Working for publishers.
- The BSI symbols (British Standards Institution symbols for editing, such as to denote the insertion or deletion of letters).

The copy-editing course was more taxing and was 70 hours (over 18 months), distance learning. There were seven independently marked units, which covered:

- Fundamental copy-editing skills to work on fiction and non-fiction, and on many styles of text and websites.
- The particular aspects of copy-editing that are relevant mainly to books and journals, giving you the tools needed to work in the either field.
- Working on-screen and on paper.
- Managing more complex non-fiction projects.
- Dealing efficiently with detailed tables, technical drawings, figures and end matter.
- Briefing an illustrator and editor.
- Covering the requirements of the wider business world as well as publishing.

The development editing courses I took were for fiction, one was theory and the other in practice. I completed these in May 2020. I work in all three areas although the most in-demand is copy-editing.

When joining the Chartered Institute for Editors and Proofreaders (CIEP), I began as an intermediate member as I had the necessary qualifications for this. Their membership grades reflect the high standards of professional competence and conduct that the Institute upholds. As part of their mission to promote these standards, they expect each member to progress to the professional grades as they build up their training, skills and work experience. Each grade carries its own requirements.

Upgrading to professional membership required further training and a minimum of 500 hours of editing work (as well as a timed test). I achieved this in July 2020.

What do you do as a university chaplain?

My main area of work within the Chaplaincy at Loughborough University is pastoral and I head up our bereavement and loss support. I qualified as a bereavement counsellor with Cruse Bereavement Care in 1999. Another responsibility I have is that of the chaplaincy library, and although not a librarian, I do love books and so was asked to take on that role too.

Within such a large organisation, students and staff may have to wait a while before they can access counselling. We work with the counselling and well-being services and often receive referrals from there. Where support is required, we often ‘stand in the gap’.

Can you tell us a bit about what day-to-day life is like in your current role?

In the Chaplaincy we support students and staff alike; we are fully inclusive, non-judgemental and support those with no faith equally with those who are people of faith. We never proselytise. I also support special services, both religious and non-religious, including plaque dedications and remembrance. We have a large number of faith groups who use the building and chaplains and are often invited to events, or even just to speak to the students about our role. We welcome visits from local scout groups, schools, etc. Our strapline is: Here to help, here to listen, here to care.

What do you like most about your work?

As a chaplain giving support to someone in distress, it is rewarding over the weeks and months to see them grow and flourish. Bereavement and pastoral support is satisfying when you are effectively made redundant. It's always good to see someone who has struggled come into the Chaplaincy just to say hello, tell us their news, or maybe have a cup of tea with you in the cafe. Another joyful occasion is that of graduation. It's so good to see students achieve their goals. This year, during Lent, we gave out 'random acts of kindness' which were small hearts impregnated with flower seeds – and we always have chocolate. At certain times of the year, pre-exams, Lent, Open Days, for example, we will have a stand in the university library and this gives us an opportunity to informally chat with students.

As a freelance editor, it is rewarding to read books and journals before they are published and get them polished for publication. Editing helps improve writing and support writers. It's pleasing when an author comes back again to have their next book edited. An author said to me recently that they didn't know an editor could enjoy a book while working on it, and I assured them that it is definitely possible, and believe me, I've seen some shockers, but they were much improved when they left my desk. After publication, I will add the book to my website.

It's really pleasing when a PhD student whose thesis I have proofread makes contact after their viva to let me know that they have passed.

And what do you like least about your work?

To be honest, as a chaplain I don't think there is anything to dislike. Data gathering for university statistics isn't a particularly pleasurable activity, but a hoop that has to be jumped through. You can't quantify chaplaincy and admin isn't particularly enjoyable.

As a freelance editor, working on screen for a long time can be taxing as concentration has to be one hundred percent at all times. I also dislike doing the admin: quotes, invoices, booking forms, and tax returns. Website updating is also something I don't particularly enjoy.

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

Having a PhD certainly helps when working in an academic institution. As an unordained female chaplain there can be a degree of unconscious bias, but having Dr as a title does help. I completed my undergraduate studies, master's degree and PhD at

the institution where I now work and therefore can have empathy with other students, both undergraduates and postgraduates, plus staff on campus in both my pastoral, and academic roles.

When working with PhD students on their theses, I will only proofread a thesis, not copy-edit, and always ask for, and adhere to, the guidelines from whichever university the student is at.

On completion of my PhD, *Heroism in the Abstract*, I turned my research into a novel, and filled that lacuna of Leicestershire in the Great War. My book, *Don't be Late in the Morning*, was published in December 2019 and the book launches were held in the Leicestershire village of Syston, where the home front setting was, and Loughborough's Carillon Tower and War Memorial. The book is still selling well. I am often asked when the next one will be published.

During the PhD years I also set up a writing group, Rulers Wit (an anagram of LU [Loughborough University] Writers), which is still going today. We have our own website and have published six books to date.

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

First of all, consider whether or not they want to stay in academia or move into a different environment. If they are looking to work in a pastoral role, then academia is probably not the way forward.

Undertaking some voluntary work to experience what it might be like is always useful, but not always affordable, if a student loan needs to be repaid.

For editing, read and explore websites such as the Chartered Institute for Editors and Proofreaders, the Publishing Training Centre, and traditional publishers, to gain as much background knowledge as possible before making any decisions.

Becoming an author does not pay well, but there are other ways of finding income from writing and copywriting, which is a good alternative, while you write your bestseller.

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

More training would be required if, for example, counselling might be a good fit. The same applies for anyone wanting to move into the publishing world. Many publishers send their editorial assistants to the Publishing Training Centre to gain the desired qualification. As I said, read and explore as many relevant websites as possible.

A careers adviser at the university is definitely worth having a meeting with as they are trained to signpost you in the most suitable roles. You may not agree with their findings, or their advice, but the interviews can help with self-reflection to equip you with a clearer idea of where you would like your career to take you.

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, I do, but perhaps not in a conventional way. My role within academia is pastoral, although as I mentioned earlier, it did begin as a lecturer in creative writing for masters' students and for a final year module of the publishing course in the English department at the university, which was entitled Publishers, Authors and Agents. This experience gave me an understanding of what I didn't want to do, but working with students who wanted to move into that field gave me the incentive to help writers in a different way – editing.

As an editor, when proofreading theses, I understand the constraints, what is required, what isn't, how to use different referencing systems, and to some extent, what examiners are looking for. I also think that PhD candidates feel that they are in safe hands with someone who has undertaken and achieved a PhD themselves.

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 have lots of freedom in my role; some days I'm a chaplain in the morning and an editor in the afternoon, depending on the workload. However, when the demand is high in both areas, leisure time is almost non-existent, but it's – cliché coming up – swings and roundabouts. Term time is obviously busier when the undergraduate students are not on holiday.

I mentioned writing a sequel to *Don't be Late in the Morning* but haven't had time to do that, so while I have the freedom, I don't have the opportunity yet.

Have you thought about returning to academia as a lecturer?

No, I prefer to work within a caring, supportive environment – although as a lecturer I would be caring and supportive – without the pressures and constraints that an academic career brings. Preparing lectures, delivering them and then marking

assessments steal so much time that could be spent in a more rewarding way. I am able to help students, both undergraduates and postgraduates, in times of need, bereavement, for example, and to polish their theses so that they can be the best they can before submission.

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

Be true to yourself. If academia isn't for you, don't try to fit the mould. Take time out; you can always come back to it later. If, however, academia is definitely your intended career path, start looking for suitable opportunities as soon as you feel ready; you don't always have to wait until after your PhD has been conferred. Working in an academic environment doesn't have to be lecturing; there are many other opportunities within academic institutions.

As I mentioned earlier, see a careers adviser to help plan and navigate life after viva.

If your university doesn't have a PhD support network, led by PhD students, think about setting one up. It's a legacy you can leave in support of PhD students who follow. It doesn't have to be exclusively academic; it can give PhD students a social opportunity with other like-minded people too.

In my pastoral role, students sometimes tell me that they are not being supported by their supervisor(s). You need knowledgeable, supportive supervisors; and if there is a problem, address it as soon as you are able, and never be afraid to request a change. Sometimes people just don't get on, and it's no one's fault, but something that can be remedied.

A tip for the viva: take a bottle of water with you in case none is provided (although it should be) and a notepad so that if you are unsure of a question, write it down; this gives you 'thinking time'.

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

Be happy in whatever you choose to do, and if you need your thesis proofreading, you now know who to contact.

Thank you so much for sharing your experiences and advice, Karen!

“One of the Big Values of a PhD to an Industry Role Is the Proven Ability to Tackle a Substantial Project Largely Independently”



Vijay Iyer



Vijay Iyer

Abstract In our interview with Vijay Iyer, he shares his journey from neuroscience microscopy to a role supporting neuroscience users at MathWorks. Vijay values independence, learning, and collaborations in his cross-functional industry position. He continues leveraging his specialized expertise and project management abilities from his PhD. He encourages mixing in reading, networking, and participating where possible (internships, freelancing) in the more innovative corners of the business world to help cultivate a vocabulary that bridges the worlds of academia and industry. Vijay advises embracing unplanned chances and focusing on transferable skills.

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V. Iyer (✉)
Academic Discipline Manager (Neuroscience), MathWorks, Natick, MA, USA

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

Vijay: Hello! I'm Vijay, a fellow (he/him) from the US Midwest originally. I'm working as a "principal academic discipline manager (Neuroscience)" at MathWorks, the makers of MATLAB®. MATLAB is an interactive programming language and computing environment aimed at scientists and engineers. Neuroscientists began to use MATLAB in the 1990s and adopted it for many key computing workflows, including brain imaging analysis and behavioral experiment control.

My role would perhaps most closely translate to a "vertical marketing manager" if you were to look on job boards. "Vertical" is business-speak for focusing on a specialized application area from the customer's perspective versus any set of products/technologies from the company's perspective.

What was the focus of your PhD?

I completed my PhD at Rice University in Houston. It was through the Electrical Engineering Department (where I also got my undergraduate degree), but my research work was across the street in the Texas Medical Center, in the Neuroscience departments of the Baylor College of Medicine and UT Health Science Center at Houston. I fell into neuroscience accidentally by looking for an applied optics project. Laser scanning microscopy for neuroscience became the primary focus of my PhD. While my approach (the 'RAMP' dot in Fig. 1 from Lecoq et al., 2023, *Cell Reports Methods*) never took the field by storm as hoped, variations of it are still used for niche experiments today, which is neat to see. More importantly, I became as fascinated by neuroscience (and the adventurous culture of neuroscientists) as I was by the technology challenges which drew me in originally.

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

If you had asked me about a year prior to completion, I would have said that all options were on the table. My supervisor and I had different ideas for the next steps from the work I was completing, so the ‘direct’ academic path seemed unclear. But one thing my supervisor and I agreed on and spoke about was that completing a PhD was a lot like running a small business. Meaning you get to wear many hats! Of course there’s the scientific/technical work itself, but in the process of publications, conferences, presentations, budgeting, and engaging colleagues, you’re picking up skills associated with many other job functions (marketing, finance, even sales).

About 6 months prior to my end date, there was news of a new research institute (HHMI/Janelia) opening at the intersection of optics and neuroscience. That convinced me I should give it a try to go further in the same general niche since it was poised to grow. So for me another takeaway is to keep one’s eyes open at key junctures and be ready to adapt.

What happened next? How did you end up working at MathWorks?

Soon after arriving at the new research institute, I got diagnosed with an eye condition (keratoconus) that soon made optics work in the dark impossible to sustain. At that time, I was spending more time on microscopy software aspects, so I had the opportunity to join a newly forming scientific software team. We were software engineers with PhDs, i.e. one of the first research software engineering groups, although that term wasn’t yet in use at the time.

Most of my projects were in MATLAB, so I engaged regularly with MathWorks from the customer role. I joined several usability studies and interacted with several MathWorks engineers that way, especially for app building. With the encouragement of our local representative, I helped coordinate a visit for several of the MATLAB research software engineers to MathWorks early on. During those first 3 years, I also took a Python course from Enthought, one of the first companies from the Anaconda founder, and did at least one project in that emerging scientific language. In the last 3 years, I’d become the lead developer for *ScanImage*, an open-source app for laser scanning microscopy control. I was supporting nearly ten labs internally and nearly a hundred externally (the latter with grant funding). After exhausting some grant funding from the financial crisis stimulus funds, it became clear small business funding was the most viable funding source to support a broad community. After starting the company (Vidrio Technologies) on paper, I applied and got the notice of award a few months later. Then I transitioned full-time to the company, recruited and led the team, and enlisted co-founders. The effort was successful, but unfortunately I had disagreements with my co-founders (it happens). So

I left after the company was operational and had completed a major technological upgrade to the software.

As I was looking towards next steps, I included a call with one of the MathWorks contacts I had established as a customer. While it was an ideas call, to discuss some scientific hardware computing trends I had been noticing, this contact (now a senior manager) realized I was a ‘free agent’ as she put it. She offered to refer me to internal positions. Eventually I got routed to the vertical marketing team, which was seeking to expand into the sciences. At some point, I said if they would create a role for neuroscience, I would make the move to MathWorks. They ultimately created something close enough, so I took the plunge; and the role formally became neuroscience-focused after about 6 months there.

How have your career plans changed as you’ve continued on to your current position?

Most of my career plans have been unplanned! Being open to various possibilities has been key for me. This has steered me to embrace unique opportunities when they arose, like a new research institute, a new team forming within that institute (networking with the director establishing that team at an event), a new team being formed at an established company (via a referral that arose from providing user feedback to that company years prior), and the chance to found a spinout company from some of my work (being willing to write grants and take a risk when my circumstances were favorable). It’s also helped me adapt when I’ve had significant and unexpected health challenges, which led me towards positions with somewhat lower risk where I could continue to incubate things I cared about.

Can you tell us a bit about what day-to-day life is like in your current position?

Every day is different! Many companies have ‘cross-functional’ roles for individuals to fill in gaps between their larger team structures (functions), and I’m in one of those roles. So a typical day can include working with folks across very different departments. Primarily I work with colleagues in three buckets: product/technology-focused, marketing/communications-focused, and user/customer-focused. On top of that, I’m user-facing, so I’m bridging with users and customers in many fields of neuroscience, from human brain mappers to neural simulators.

The key to remaining grounded is to have an annual plan. As much as possible, every working moment of everyday ties back to the annual plan, whether it’s pre-planned projects or something opportunistic that fits into the plan framework. For this year, two of my biggest projects are MATLAB community toolboxes and

cloud-based workflows, so I’m spending much of my time helping open-source projects to improve or get off the ground, and proving out newer workflows (newer for both my company’s tools and its users). When I can find opportunities to accomplish multiple goals at once (‘double word scores’ I call them), I tend to jump at those for efficiency’s sake! So, for example, working on an open-source project that’s testing and proving out cloud workflows. One example is the BIDS Toolbox, a new open-source project aiming to facilitate accessing, inspecting, and working with cloud-based datasets following the BIDS (Brain Imaging Data Structure) standards, such as the datasets on the OpenNeuro data archive.

What do you like most about your work?

Independence, the opportunity to learn about a broad range of technologies and scientific areas as part of my job, and the chance to interact with many smart, motivated, and inspiring folks, both inside my company and among the users I support.

And what do you like least about your work?

As much as I know that it helps, I will never enjoy annual planning, which is a staple of larger companies. Every year, I develop an annual plan for my area, listing out usually about 20 projects for the year, including how highly each is prioritized, how much time each approximately takes, and any collaborators lined up for that area. It’s quite helpful when done, but while I’m doing it, my mind constantly gravitates to thinking about the projects I want to be actually working on. At least planning reminds me what I do enjoy most, so I appreciate it better!

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

My role is neuroscience-focused, so the specific PhD experience (plus postdoc and staff research experience) in neuroscience was integral to obtaining and having success within my current role. My employer also hires many neuroscience (and other) PhDs for positions outside that field. Certainly many general (e.g. critical thinking, writing) and more specific (e.g. programming, statistics) skills are honed through PhD training. But what I believe most makes PhDs (mine included) attractive and formative for industry roles is the proven ability to take on a substantial, complex project in a largely independent fashion. As such, my company regards PhDs as equivalent to several years’ work experience and I believe many others do the same.

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

There were points during PhD and early post-PhD years that I saw an interesting industry position, so I went ahead to apply and interview. While I ultimately chose to continue on the academic path, these were interesting and informative experiences for me. I'm noticing more industry internships among scientists these days, which I think is very healthy. Another pattern I'm seeing is recent graduates taking a gap year to do short contracts as a freelancer, including some or all with industry. This can be a great way to build up experiences and connections, and in some cases (e.g. open-source projects) a visible portfolio of contributions/accomplishments.

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

I recall that during my graduate school years, I mixed up my reading to include some books about business innovation. Some books I read back then were *Open Innovation* (by Henry Chesbrough, about the changing landscape of how companies treated IP, towards greater cooperation alongside competition) and *Re-Imagine: Business Excellence in a Disruptive Age* (written by a consultant Tom Peters, who spoke glowingly about the inherent entrepreneurial nature of academics). I think reading a few business innovation books can be helpful towards building a set of ideas and vocabulary that feels familiar to academics and also helps to understand and communicate ideas in an industry/corporate context. These days, LinkedIn can also be a good source of information and perspective, with more scientists active there than I originally expected.

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?

I think deep care-about can arise in several ways. They can arise from values, fascination, and curiosity, which are likely some of the biggest drivers earlier in one's career. In the course of the journey through a PhD in academia, I believe these drivers can start to evolve in a few (healthy!) ways. With growing familiarity with the intricacies of a given field, one may find specific areas or aspects they particularly care about, which at some level is intuition that there is *untapped value* in that

specific realm. Additionally, one begins to care about their colleagues in the field. These can become drivers for successfully staying within academia, but I also believe that maturation can be transferred to other realms if one steps back.

In my current role, I continue to pursue what I believe is untapped value in interactive programming interfaces made by and for scientists (something *designed*, beyond what ChatGPT or another LLM could ever do in my view). And I continue to interact with the neuroscience colleagues I came to care about and admire. At the same time, by joining a company team, I enjoy getting exposed to many other specific areas my colleagues care and teach about, and of course I've grown to care about a new set of colleagues.

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 think it's important to distinguish between freedom to work on what one wants and independence in how one pursues that work. Continuing on a theme from above, one of the big values of a PhD to an industry role is the proven ability to tackle a substantial project largely independently. My role not only affords considerable independence, but it's expected from me and most other PhD-level roles. In terms of freedom, I find it's roughly equivalent but a bit different timing-wise, in terms of the accountability demands that (inevitably) accompany relative freedom. In more academic roles, many spend considerable time (I certainly did) pursuing grants to sustain working on what's most interesting to them. These are fairly intense but time-bound efforts. In my current role, I do twice-a-year presentations on big picture directions and various smaller-scale business-case proposals year-round for things I find interesting or important; it's more frequent but not quite as intense.

Have you thought about returning to academia?

I have thought about returning. I've been noticing a number of boomerang academics lately, especially in neurotechnology. I think it's a healthy trend, both for the individuals and for the academic departments, and I hope it starts to occur more in other fields. It seems especially a natural fit for individuals who want to dive deeper into one or a few projects and/or who enjoy mentoring early-career scientific professionals. Both of these often appeal to me!

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

If I were to recap some of the takeaways above, they'd be: keep your eyes and options open while focusing on doing solid independent work in your role. That's the best foundation for a career with the most freedom possible, regardless of which side of the 'divide'.

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

Along my journey, one pattern has sometimes occurred to me. While academia is geared towards researching lots of highly novel and specialized areas (I envision highly branched cerebellar Purkinje neurons), many of the dynamics in the field are about the goals of greater standardization. While industry is geared towards turning the crank on mainstream and mature knowledge (I envision less branched cortical pyramidal neurons), many of the dynamics are about how to efficiently reach into more specialized areas. Sometimes it seems to me like each is moving towards the other, which reinforces for me that the same individual can find themselves at home in either environment at different times.

Thank you for sharing your advice with us, Vijay!

“I Like Thinking About the Best Way to Word Something so That It Is Clear and Concise”



Teresa Esch



Teresa Esch

Abstract In our interview with Teresa Esch, she tells us about her role as a features editor at *The Journal of Neuroscience*. After PhD and postdoctoral work working with cell culture and electrophysiological recordings, Teresa sought to focus more exclusively on writing about scientific research. She has now worked as an independent contractor for *The Journal of Neuroscience* for over 15 years. For those interested in a similar career path, she offers practical advice on enhancing their writing and editing skills, and on broadening their scientific knowledge base. Moreover, Teresa candidly discusses the on-going changes in the world of scientific publishing, including the shift towards open-access journals and the potential impact of artificial intelligence on the field. Lastly, she provides valuable advice for PhD students, encouraging them to critically evaluate their passion for their work and explore diverse career paths.

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

Teresa: I have been the features editor for *The Journal of Neuroscience* for the past 15.5 years. For the first 15 years, I worked full time, writing summaries of 2–4 articles published in the journal each week, reviewing and editing Journal Club submissions, and soliciting and editing review articles. Because I had to write summaries every week, I could not take a few days off (and as an independent contractor, I did not get paid vacation or holidays). I could take vacations, but I needed advance warning, so I could secure someone to fill in for me. Beginning this year, I stopped writing the weekly column, so I now work only about 10 hours a week, editing Journal Clubs and Reviews. In addition, I have begun doing contract work writing documentation for scientific software at HHMI's Janelia Research Campus.

What was the focus of your PhD?

I graduated in 1998 from the University of Virginia Neuroscience program. I worked under Gary Banker, studying how extracellular molecules influence the development of polarity, specifically, which neurite became the axon, in hippocampal neurons grown in culture. To do this, I followed the growth of neurons on coverslips coated with stripes of different molecules using time-lapse microscopy and staining for axonal and dendritic proteins. I showed that when the growing tip of a neurite contacted a new growth-promoting molecule, it started growing rapidly and acquired axonal characteristics. This work was published in *The Journal of Neuroscience*.

As part of my coursework at the University of Virginia, I met a professor who studied how specific neurons in the leech spinal cord control swimming. I found this work fascinating, so as a post-doc, I went to UCSD to study more about leech swimming. I set out to find neurons in the head brain that triggered a shortening reflex when the leech is poked in the head, using intracellular electrophysiological recordings in a leech with brain exposed and body intact. Instead I discovered a neuron that could evoke either swimming or crawling behaviour, depending on the depth of water in the recording chamber. This work was also published in *The Journal of Neuroscience*. So *JNeurosci* has been a friend to me throughout my career!

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

I went on to a post-doctoral research position, intending to continue in academia.

How have your career plans changed as you've continued on to your current position?

By the time I finished my post-doc, I had decided that I didn't want to do any more experiments. I never really wanted to do experiments: I looked forward to the time when I would just write grants and papers, give talks, and direct others' experiments. But that still seemed too distant.

In addition, when I was in graduate school, I learned that I had inherited from my mother a rare retinal dystrophy, first described the year before I started my graduate work. I began having trouble reading slides and posters at meetings. All my work involved microscopy, which was also difficult given my vision. Given that my mother was legally blind (although not progressing further), I figured working in the lab would become even more difficult for me, maybe to the point of not being able to succeed in academia.

These two factors led me to decide to pursue a different path. My vision did in fact decrease to the point of legal blindness within 5 years of leaving my post-doctoral position. I think I probably could have used technology to overcome these issues if I had been passionate about doing research, but I wasn't.

Because writing papers and grants was what most appealed to me in academia, I decided to pursue work as a writer. I worked for several years for a manufacturer of PCR machines, writing manuals and other materials. I loved that job and felt like I could stay there for the rest of my career. But it became less enjoyable after the small company was bought by a larger one.

My job as a features editor was really the ideal job for me: getting to write about new research and always learning new things, but not having to face experimental failure myself.

How did you go from wanting to be a PI to working for a PCR manufacturer?

As I said earlier, I wanted to write, not do experiments, and I didn't want to do any more experiments. Plus, my vision was deteriorating, not only complicating experimental work, but also hindering interactions at conferences. My husband was starting a post-doctoral position outside Boston, MA, so when we got there, I looked in the local newspaper for job openings for science writers. I was hired by a small company run by people with PhDs, and they wanted people with PhDs to work in the marketing department, writing manuals and explaining the science of PCR. Although marketing was not what I wanted to do, I applied just for the experience and the money. The ad was placed by a headhunter that was hired by the company. Working through the headhunter was great because she gave tips for performing well on interviews and generally cheered me on. I would recommend using an agency for people looking for a job.

How did you go from this position to working for *The Journal of Neuroscience*?

Although I initially thought of the position as temporary, I was surprised to find I liked it a lot: I even looked forward to getting back to work after vacation. Although I didn't think I would like marketing, the PCR instruments the company made were considered the best available, so I did not need to 'sell' them, but rather just inform customers what the machines could do. Moreover, I felt respected and valued by the people I worked with and was deferred to on all writing. That changed when the company was sold. The head of marketing at the new company was a graphic designer and cared little about writing. Consequently, graphic designers would sometimes work for weeks on a piece of literature, then give me 1 day to edit/write the text. Furthermore, product managers did most of the writing and asked for 'minimal editing'. Basically, I felt like I was being asked to do a poor job.

I did earn people's respect after a while and was asked to do more writing for the company's magazine. But after returning to work from an unusually long vacation, I realized I no longer looked forward to getting back to it. That prompted me to look for a new job. As it happened, *The Journal of Neuroscience* had an ad in the newspaper for a features editor. It sounded like the perfect job for me: exactly what I wanted to do. At the time, one editor-in-chief was leaving and a new one was

starting, and the incoming EiC created the position. The outgoing EiC happened to work at the institution my graduate advisor had moved to after I graduated, so I contacted him, and was put in touch with the incoming EiC. The incoming EiC was near the end of the search and was getting ready to hire someone, so I was very fortunate to have happened to look in the paper that first day back from vacation. The time between when I saw the advertisement and accepted the position was less than 2 weeks.

Can you tell us a bit about what day-to-day life is like in your current position?

As I mentioned previously, I am only working a few hours a week currently. During those hours, I will typically answer emails concerning possible submissions, discuss the pre-submission inquiries with other editors, and let the authors know if we want the full submission. When Review articles are received, I assign them to a reviewing editor, who handles peer review and then makes a recommendation about whether to accept the article. Before final acceptance of Review articles, I read through the manuscript and make suggestions regarding organization and content, as well as editing grammar, etc. I evaluate Journal Club submissions myself (they are not peer reviewed), and I do the same sort of editing as for Review articles. Because Journal Clubs are written by trainees, however, they typically require much more editing than Review articles. Plus, we get lot more submissions of Journal Clubs. Therefore, most of my time is spent on editing these pieces.

When I was working full time, in addition to these tasks, I would go through the articles slated for an upcoming weekly issue of the Journal and choose 2 to highlight. I would then read those articles (plus a few other articles for background) and write ~350-word summaries of them. That took up the bulk of my time.

How do your vision difficulties affect your current work?

I use a large monitor and large type, so I can do my work fairly well despite my visual impairment. I have trouble distinguishing some letters, so when I am writing to someone, I usually copy and paste to avoid misspelling. I have the Zoom feature enable on my Mac, so I can zoom in when I have difficulty. So there is some impact, but not too great a challenge. I only go to one scientific meeting a year, and at that I generally do not go to posters because the ones I most want to see generally have crowds keeping me from getting close enough to read. At lectures, I use small binoculars. I should note that most people don't notice that I am visually impaired, because it doesn't affect most of my daily activities. I generally tell people I will see frequently about my impairment, so they don't think I am rudely ignoring them when in fact I just can't recognize them.

What do you like most about your work?

I enjoy writing and editing. I like thinking about the best way to word something so that it is clear and concise. I also like continuing to read about new neuroscience research. And I like helping others explain their ideas more clearly. I also like the fact that I can work from home and set my own hours.

And what do you like least about your work?

Up until this year, I disliked the fact that I couldn't really take a vacation. The journal puts out 50 issues a year, and I typically wrote something for 48 of them. On the 2 weeks per year someone else wrote the summaries, my other work would pile up. This past January was the first time in 15 years that I didn't bring my laptop with me on vacation (although previously there were a few times I just brought it along to work on the plane). It was quite stressful. As an example, one time it poured while we were camping, and I was glad to have the opportunity to read some Journal Club articles so I would not get so behind.

But the thing that I have really liked least is the fact that some of the higher-ups at the society that publishes the journal undervalue me. The four editors-in-chief I have worked with (who are all academics that serve for an honorarium) have stressed how valuable I am to them, but some people at the society don't seem to agree. They tried to cut my hours or eliminate my position a couple times over the years, relenting only when the EiC at the time insisted on my staying. Still, I did not get a raise for the last 8 years of full-time work.

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

Having post-doc-level experience is required for most jobs in scientific publishing. The training exposed me to multiple areas of neuroscience, allowing me to understand most of the papers published in the journal. Beyond learning mere facts, learning to gather information rapidly from papers was tremendously helpful. When I first started grad school, reading a scientific paper was extremely difficult, in part because I felt the need to understand every sentence. But after reading numerous papers, I've learned that things are not clear at first will become clear later. Moreover, I've internalized the standard template for scientific articles, making it easier to know where to look for information.

Perhaps most importantly, while I was writing one of the papers based on my graduate work, my advisor and a couple post-docs in the lab went through the paper with me sentence by sentence, explaining why changes were needed and basically teaching me how to write a scientific paper.

Finally, there is a culture of academic science, and understanding that culture I think has helped me communicate with scientists and gain their respect.

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

To me, the most important thing is caring about good writing enough to consult dictionaries, thesauri, and style guides regularly, aiming to write the clearest possible sentence. In addition, you must be interested in helping others learn to write well. And you must have a desire to learn sufficiently about diverse areas of science to explain them accurately. In scientific publishing, you have to be willing to work with constant deadlines looming, and be able to manage your time to get the work done by the deadline. It is also necessary to be diplomatic, so authors are not defensive or angry when you suggest edits. And you have to be willing to serve others, rather than insisting on doing things your way.

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

I would suggest they do post-doctoral work in a sufficiently different area to expand their knowledge base. They should look for opportunities to write and to edit others' work. Pay attention to how papers are written, and what makes a paper clear and convincing. Ask mentors to include you when they review papers for journals, and perhaps write up the review for the journal. If someone in your department is recognized as a good writer, ask them to edit your work and explain why they make the edits they do. I should also note that there are few positions like mine: editors at some prestigious journals have greater workloads, more stress, and fewer opportunities for writing. I feel very fortunate to have gotten this position.

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 and no. If the topic is 'neuroscience', then yes. When I was working full time, I had great freedom to select the articles I wanted to highlight. I often chose to write about things that I knew little about, but wanted to learn. In contrast, most people in academia focus on a fairly narrow topic. When I was in graduate school and

working as a post-doc, I was happy with the work I accomplished, but I felt like the gain in knowledge was too small given the time taken to get there. I felt it would be dissatisfying to spend my entire career focussed on one topic.

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?

As I mentioned, I had a great deal of freedom during most of my tenure as a features editor, because I chose which articles I would write about each week. I still have some freedom in deciding what articles we will invite. But it probably helps that my interests are broad and I would often prefer to learn about something new than write about something I know a great deal about. It should also be noted that academics don't have that much freedom, since they still need funding, which is becoming harder to come by.

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

So many grad students are encouraged to do experiment after experiment without analyzing and thinking about the results and what experiment they should do next. And many move on to their next position before completing the papers from their graduate work. I often see this reflected in papers submitted to the journal: they often describe a kind of hodgepodge of experiments with some obviously important ones left out, rather than following a clear logical path. If students have moved on by the time the paper is submitted, they often cannot do the extra experiments requested by reviewers and thus must submit to a less prestigious journal. Not only that, but they have missed the opportunity to learn the most important lesson of grad school, i.e. how to plan and conduct a logical series of experiments.

I would encourage anyone who thinks they want a career in scientific publishing or writing for a scientific audience (or in academia, for that matter) to seek a post-doc position that will allow them to learn about something different than what they did in grad school and something that is widely used or clinically relevant. Learn how to write grants too, because it might be easier to find work as a grants writer than as a science writer in the future. When it is time to find a job, consider using a headhunter company to help you find positions. And don't rule out marketing, even if you think you hate marketing: it isn't all what you think.

In addition, I would encourage all grad students to ask themselves if they really like doing experiments. If not, they might want to consider a career that doesn't require them to do them!

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

People should be aware that scientific publishing is undergoing many changes as more countries demand grantees publish their work in open-access journals. What many people don't realize or don't seem to care about is that this means either publication fees will have to go up substantially or there will not be paid editors. One reason that top journals like *Nature Reviews* have such good articles is that they have paid editors and illustrators that greatly improve the submitted work. I am not sure that will be around for long.

AI might also eliminate some jobs for science writers. Although current tools don't do a great job, this will likely change. Moreover, often the people managing content do not have PhDs in science, so they can't tell if something is accurate or well written.

Thank you so much for sharing your journey and insights with us, Teresa!

“Having a Broad Set of Responsibilities Is Energizing Because I Hardly Ever Get Bored”



Helena Ledmyr



Helena Ledmyr

Abstract In our interview with Helena Ledmyr, she shares her journey from genetics research to co-director of an international neuroinformatics organization. Initially planning for more lab work, Helena moved into science administration and communication roles. She values interacting with the research community and having a variety of responsibilities. Helena continues applying project management and relationship-building skills honed during her PhD. While sometimes constrained by limited time and funding, she remains dedicated to furthering open and reusable neuroscience data. Helena encourages taking courses in areas like communication, marketing, or project management. Helena finds fulfilment in the meaningful mission of her organisation. Drawing on her experience working with academic volunteers, she stresses the importance of appreciating researchers’ time and going above and beyond to support their efforts when coordinating scientists.

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

Helena: I'm Helena and I am currently one of the co-directors of INCF (the International Neuroinformatics Coordinating Facility), a member organization and an international non-profit that aims to facilitate data sharing in neuroscience through the development and uptake of FAIR standards and best practices. FAIR stands for Findable, Accessible, Interoperable and Reusable, and basically all adds up to researchers being able to use each other's data! If the field of neuroscience were more open and FAIR, that would mean that data, such as brain scans, EEG or physiological data are collected, processed and stored in a way that makes them as useful as possible for other groups: i.e. more research could be done with less time and money spent. There are challenges at every step of this – for example, not all labs might use the same methods or the same hardware or software. And even if those things were all standardized, people might not find the data if they don't know where to find the data repositories, rendering all those other efforts useless. These are all points where an international organization like INCF can be particularly useful: we coordinate efforts around standardization and FAIR training for the global neuroscience community to facilitate data sharing. As for my job, my main responsibility is business development and communications, and I also manage our governing board and our industry advisory council. The business development part includes finding potential collaborators and maintaining relationships with members, funders, and sponsors. Communications includes everything from our website to newsletters, social media, and outreach events.

What was the focus of your PhD?

I did my PhD at the Karolinska Institute in Stockholm, Sweden, in 1999–2004. I studied the effect of certain genetic variants on cardiovascular disease and found some really interesting connections between genetic function, protein folding, and

risk of cardiac events. I looked at five different genetic variants, and it turned out that one variant in the promoter region (this region controls, for example, the activity on/off switch and level of activity of the gene) is linked to a variant in the resulting protein of the gene: meaning that the variant caused a change in amino acid in the final protein structure. I did several large cohort studies and found that these variants were associated with higher risk of death, so the next step was naturally to try to find out why? Could it have something to do with the change in amino acid in the protein? As it turned out, when we expressed this protein in bacterial cells, the change in amino acid also caused a decreased folding function of the protein. While I did not have enough time left to prove it, we speculated that this faulty folding led to a decreased binding of the protein to cholesterol particles in the blood. The protein in question is a lipid-binding protein with the purpose of transporting lipids out of cells, and we hypothesized that the variant led to faulty transport and thus increased levels of lipid in the cells, which could be one of the reasons these individuals had a higher risk of having a cardiac event.

I was lucky to have both an interesting topic and also be able to do methods development, which is my favourite thing to do in the lab. After having been out of the lab for 18 years, I can still miss setting up a PCR or running a gel sometimes!

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

At that point I still wanted to be active in the lab, so I did a postdoc on gene therapy for cardiovascular disease. Again it was a really interesting topic and another chance to develop a new method, this time for delivering genetic elements into human cells. It was really rewarding to have a project where the theory built on my PhD project where I could apply a lot of my knowledge in genetics to this new question. It was also exciting to think about the possibilities to ‘fix’ the risk of cardiac events that I had discovered during my PhD with this new gene therapy method. Unfortunately that didn’t happen, since I, for various reasons, moved on to an administrative position after about a year. But it was still a fun time!

My next position was at the Royal Swedish Academy of Sciences (you might have heard about the Nobel Prizes), where I worked with science administration and communication. It was great to work with all the academic members on various projects that served to promote science to society. I was lucky to have a wide variety of committees to work with: mathematics, astronomy, chemistry, biology, medicine, education, energy, and public health. This gave me a broad insight into the Swedish science community and a network that has proven useful once I moved on to the next job.

How have your career plans changed as you've continued on to your current position?

In my current role, I still do science administration and communication but I've also moved into business development, which I enjoy very much. If I had to choose between communications and business development, now I would probably go with the latter, mainly because there are still things for me to learn in that area. (Sure, there are still things I can't do with regard to communications, but I have by now lost all hope that I'll ever be able to draw things.) I'm still very happy to be working science-adjacent and I will probably always strive to work with or around the life sciences.

Can you tell us a bit about what day-to-day life is like in your current position?

A regular day for me is split between preparing or following up on internal committee meetings, talking to potential new INCF members, overseeing INCF outreach, and managing HR or other internal administrative tasks. We are two co-directors at INCF and to simplify it a bit we usually say that the director for science and training manages the scientific resources and activities, and I (the director for development and science) manage outreach and awareness, and recruitment of new members.

What do you like most about your work?

Interacting with our fantastic community, and the variety of my tasks! Our community consists of neuroscience researchers and tool developers, all working to promote the uptake of FAIR data management practices in neuroscience through the development of standards and best practices that support open, FAIR, and citable neuroscience. It's great to be able to facilitate the volunteer work that our community is doing in order to make neuroscience more open and FAIR (Findable, Accessible, Interoperable, and Reusable – the magic words to make data sharing easier!). Having a broad set of responsibilities is energizing because I hardly ever get bored – there's always a new aspect to a task I've done a hundred times before, since our activities are always evolving and our community continues to expand.

And what do you like least about your work?

That we never have enough time or funds to do everything we want to do! It can be very frustrating when we can't offer the level of service to our community that we want to – I'm going to get up on the soapbox here for a second and say that it's great

that funders are putting out data sharing mandates but somebody needs to fund the development of the resources needed in order to share your data! Yes, that’s us (at least for neuroscience).

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

While genetics methodology hasn’t helped me all that much, knowing how academia and academics work have helped a lot! Knowing what drives academics and what struggle they go through makes it easier for me to be effective in facilitating volunteer work in the INCF network. Of course, experience in project and relationship management can be applied to pretty much any job and has been very helpful to me. I also believe the actual title ‘PhD’ gives me a certain amount of credibility in the eyes of our community since it means that I know what the life of a research scientist is about: challenges and motivations.

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

For my job you need to be service-minded, flexible, proactive, and patient. If you’re looking at positions in organizations that deal with volunteers, you need to understand and respect their time and go the extra mile to support their work. For my position there’s also a fair amount of international travel, more often than not on weekends, to consider whether it fits into your life or not. With regard to compensation I think there’s a wide range of salaries in scientific non-profits considering the just as wide range of funding situations, but I’m guessing it’s usually lower than industry.

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

Take some courses in the specific areas you’re interested in! Communications, business development, marketing, finance, project management, relationship management... there are so many online courses available, and many of them are free. Also try to find a mentor early on! I really wish I’d had someone to bounce ideas off and get advice from at the beginning of my career. I’ve mentored four people in the past 5 years or so and it’s been really rewarding for myself but I’ve also gotten really nice

feedback from my mentees and it seems like they've benefitted from our discussions. If you'd like to find a mentor, usually universities have some kind of alumni network you can use, or even a mentorship program in place.

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?

Absolutely I'm very passionate about making research interoperable and data reusable so we can get more science done faster and for less money. There are so many scientific questions that need solving, across all fields, in order to make life better for all humans, and research funds are not easy to come by so it's important that we come up with solutions for increasing the ROI on research funds.

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 have a certain degree of freedom, but probably not as much as if I were a PI. However, having less freedom doesn't mean that you won't enjoy what you're working with! For me at least, enjoying your job includes many other things such as having a meaningful goal or mission, learning new things, and being appreciated by the people you work with and for. Freedom to choose your own topics or issues to work on does not necessarily equal happiness, in my opinion.

Thank you for sharing your journey with us, Helena!

Correction to: “I Am More Passionate About Supporting Researchers Than with Any Research I Did During My PhD”



Andrew Rowe

Correction to:
Chapter 19 in: C. R. Madan (ed.), *Academia and the World Beyond*, Volume 2, https://doi.org/10.1007/978-3-031-47980-9_19

A spelling error in the title of this chapter has been corrected after the initial publication.

The updated version of this chapter can be found at
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