

Career Paths beyond the Tenure Track for Cognitive Scientists

Carissa L. Shafto (carissa.shafto@gmail.com)

Brightfield, LLC
New York, NY 10018 USA

Vanessa R. Simmering (vanessa.simmering@gmail.com)

Doctrina Consulting, LLC; Accessible Teaching, Learning, and Assessment Systems (ATLAS), University of Kansas
Madison, WI 53705 USA

Keywords: professional development; career paths; industry; non-profit; government; non-academic

Objectives and Scope

Cognitive science research has far-reaching implications, but many graduate students are trained solely for tenure-track faculty positions. Academic training develops a wide range of skills in behavioral research, literature reviewing, data analysis, scientific publishing, grant writing, teaching, and student mentorship. These skills have direct application in many other careers, but training within academia typically neglects to address how these skills translate to other work environments and career paths. As growth in the number of doctoral trainees continues to outpace permanent academic positions (Kolata, 2016; Larson et al., 2013; Lederman, 2016), more doctoral recipients have been seeking employment beyond faculty positions and academia (National Science Board, 2018). Those who are interested in exploring alternative career paths may not know where to turn for guidance. Our goal in this professional development workshop is to offer such guidance and an opportunity to network with scholars in similar situations.

The session will be led by two scholars with doctoral degrees in psychology who have worked in a range of academic and non-academic positions. Vanessa Simmering began her career as a tenure-track professor, then worked as a research scientist and consultant for two non-profits before joining a university-affiliated research center as permanent non-faculty staff. Carissa Shafto held multiple staff positions in academic schools and colleges before working as a data scientist then senior director of data and analytics at Brightfield, a SaaS company in the HR analytics space. They will draw on their individual experiences navigating from academic to non-academic positions to guide the activities and discussion. Additionally, they will solicit contributions from other scholars with a diverse range of backgrounds and career paths to increase the breadth of experiences that participants will learn about. Since 2019, the workshop leaders have presented variations of this topic to diverse audiences at five conferences and more than a dozen academic departments or other programs. Through these presentations and discussions with past participants and contributors, they have gained a broad understanding of the types of questions, concerns, and interests that participants bring to the workshop.

Workshop Schedule

The half-day session will be divided approximately in thirds, beginning with a presentation by the leaders, followed by interactive activities among participants, and closing with time for open questions and discussion, with additional presentation by the leaders as relevant. Participants will complete a short anonymous survey at the beginning of the workshop to indicate their career stage and interests in career path options in order for the leaders to tailor the examples and discussion to the audience.

Part 1: Introduction of Contributing Scholars and Different Career Paths

The leaders will begin with an overview of the goals of the session, followed by a series of narrated slides in which scholars (the leaders plus additional contributors) describe their backgrounds and employment. Specifically, we will ask all contributors to list the discipline of their degree and the general area of their research training, followed by (when relevant) any academic and non-academic positions they held before their current position, then a description of their current job, ending with a comment on what motivated them to seek out a non-academic career. Each contributor's description will be brief (3 minutes or less) to maximize the number of examples included. We have agreements to contribute from fourteen participants to date (see Table 1) and will invite more contributors to ensure diverse representation of backgrounds, interests, and employment types.

Part 2: Developing Your Pitch

Participants will be given time to work individually and then in small groups on two related activities developing "elevator pitches", which are brief but persuasive speeches designed to spark the listener's interest to learn more. The first pitch will be focused on what the participant is looking for in a career. The second will focus on what the participant has to offer to an employer. The leaders will scaffold this activity by highlighting successful strategies (e.g., focusing on skills over content, considering opportunities rather than obstacles) and potential individual considerations (e.g., whether one is leaving a temporary versus permanent position, whether relocation is possible). As relevant, these activities may include brainstorming a wide range of potential employment opportunities, or focusing on a specific position the participant already has in mind. The intended outcome of this

activity is to give participants a structure for determining their career interests and options.

Part 3: Questions, Discussion, and Resources

Following the activity, participants will have time to ask questions, seek feedback, and discuss concerns with the group. The leaders will structure the time of the final third of the session based on interest from participants, including references to resources participants may want to use as they pursue non-academic career paths. For example, a number of consulting services can be found online (e.g., The Professor Is In, Cheeky Scientist, Beyond the Professoriate) but each varies slightly in their scope (i.e., some cater more to “hard” sciences, others to social sciences and humanities) and therefore their potential utility for participants with different backgrounds. These online resources also vary in the amount of information offered free of charge and services provided at a cost. Social media sites offer more informal support, through discussion and peer mentoring, and can help participants expand their networks for no cost. The leaders will describe specific experiences to help participants evaluate what approaches could be of most use to them.

Conclusion

We aim for this workshop to give participants an entry point to explore a wide range of career options and knowledge of the necessary resources to learn more about those options to pursue their goals. The experiences our contributors have shared and resources we have collected provide us with relevant advice for scholars in varied stages of their training and career paths with different interests and goals, which

allows us to tailor to the workshop participants. Participants will also gain a network of similar scholars with whom they can maintain contact after the workshop. Slides and resources from both current and past workshops will be available online (<https://sites.google.com/view/beyondtheivorytower/career-paths-home>).

Acknowledgments

Thanks to Alexa Romberg for helping to organize a prior version of this workshop, and to Shevaun Lewis for permission to adapt and use materials she developed for a professional development workshop at the University of Maryland.

References

- Kolata, G. (2016, July 14). So many research scientists, so few openings as professors. *The New York Times*.
- Larson, R. C., Ghaffarzadegan, N., & Xue, Y. (2014). Too many PhD graduates or too few academic job openings: the basic reproductive number R_0 in academia. *Systems Research and Behavioral Science*, 31(6), 745-750.
- Lederman, D. (2016, December 9). The new Ph.D.s. *Inside Higher Education*.
- National Science Board. (2018). Academic Research and Development. In *Science & Engineering Indicators 2018*. National Science Foundation: Arlington, VA. Pittsburgh, PA: Carnegie Mellon University, The Robotics Institute.
- Shrager, J., & Langley, P. (Eds.) (1990). *Computational models of scientific discovery and theory formation*. San Mateo, CA: Morgan Kaufmann.

Table 1: Contributors who have agreed to provide a narrated slide for the workshop

Name	Position	Institution / Company / Agency
Brandon Abbs	Senior Director, Clinical Development and Operations	MapLight Therapeutics
Aimee Arnoldussen	Innovation and Commercialization Specialist, Discovery to Product	University of Wisconsin - Madison
Megan Brown	Director of the Global Center of Excellence for Research, Analytics, and Data Science	Starbucks
John Lipinski	Chief Research and Innovation Officer	Paradigm Personality Labs
Katherine McEldoon	Senior Fellow for Learning Innovation	Institute of Education Sciences, US Department of Education
Mariko Moher	Director of Donor Relations and Stewardship	Connecticut College
April Murphy	Director of Learning Engineering	Carnegie Learning
Libby Pier	Chief of Staff	Education Analytics
Maggie Renno	Director of Analytics and Research	Wisconsin Department of Children and Families
Julia Rutledge	Program Director, MS in Educational Psychology - Learning Analytics	University of Wisconsin - Madison
Matthew Schlesinger	Staff Data Scientist	Proofpoint
Christina Schonberg	Senior Research Scientist	IXL Learning
Amanda Siebert-Evenstone	Efficacy Researcher Research Scientist	Age of Learning Siebert-Evenstone Research Consultants, LLC
Tim Wifall	User Experience Manager	Samsung Research America