Leaping into the unknown

By the end of my senior year of high school, I knew only that I was more fascinated by the natural world than by business or politics. That was all. But 3 weeks prior to the start of my freshman year of college, I took an elective course in biological anthropology. I became fascinated with human variation; ancient hominin fossils; and the behavior of our closest living relatives, the great apes, and ended up earning a degree in anthropology.

For my undergraduate thesis, I investigated differences in circulating hormones between musicians and nonmusicians and how musical ability might be related to differences in physiology. After this experience, I felt the itch to look deeper into the molecular and cellular mechanisms of behavior. The next step, I decided, was graduate school in neuroscience—a subject in which I had not taken a single course.

Quite a pickle I'd gotten myself into! How was I going to make the jump into this new field? I wrote my graduate school applications to showcase how I had arrived at the decision to pursue neuroscience research without a neuroscience background and my genuine interest in the mechanisms of behavior. The next step, I decided, was graduate school in neuroscience—a subject in which I had not taken a single course.

Quite a pickle I’d gotten myself into! How was I going to make the jump into this new field? I wrote my graduate school applications to showcase how I had arrived at the decision to pursue neuroscience research without a neuroscience background and my genuine interest in the mechanisms of behavior. I emphasized that I was trained in how to think about complex subjects and use the scientific method—skills I could apply to any topic. To improve my chances, I applied broadly to programs with an emphasis on behavior: anthropology, psychology, and—as a reach—neuroscience. To my relief, it worked! After a gap year spent as the assistant project director for a chimpanzee field site for ecological research in western Uganda, I began graduate school in my first-choice neuroscience program.

Since entering my new field 3 years ago, I’ve found that a key obstacle to overcome is the lingo. Few things in academia are scarier than walking into a room, listening to a lecture, and having absolutely no idea what just transpired. Early on, I would break out into cold sweats at the thought of having a neuroscience-based conversation. I had to quickly pick up on words like “orthodromic” and “deacetylation” to communicate with my peers. My anthropologist self had to adjust to my new intellectual environment, which I did by reading—a lot.

A cycle emerged: A feeling of severe stupidity would be followed by intense reading, followed by another period of feeling stupid as I realized that, no matter how much I read, new gaps in knowledge would keep popping up. Even now that I feel relatively comfortable identifying myself as a neuroscientist, that cycle continues.

Finding my way in a new discipline helped me realize that being a researcher, no matter the field, is about adaptation. Good scientists need to be able to recognize imminent paradigm shifts and adjust hypotheses accordingly. They should be prepared to explore new experimental approaches when original tactics don’t work. And they should be comfortable examining questions from alternative angles, as sometimes the best way to tackle a problem may be hidden in an unfamiliar area. Because of my experience changing fields, I feel equipped to do all of these things, and although it was scary and difficult at times, I believe the experience will make me a better scientist in the long run. I anticipate that my passion will shift again as new discoveries are made. Overcoming the challenge of transitioning fields in graduate school has prepared me for whatever direction my research takes me.

Jeremy C. Borniger is a Ph.D. candidate in the neuroscience program at Ohio State University, Columbus. Send your story to SciCareerEditor@aaas.org.

Passion is not something you can plan for. When I was in elementary school and someone would ask, “What do you want to be when you grow up?” I would shout something along the lines of “a pirate astronaut” or “a Tyrannosaurus rex” because those were the things that piqued my interest at the time. As I’ve aged my passions have changed, and though sometimes I still think it would be fun to be a pirate astronaut, these days I aspire to a career in neuroscience. But it hasn’t been a direct path, and changing fields during my training, though challenging, has provided a valuable perspective that has improved my research and, I believe, will continue to serve me well throughout my career.
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