

At Peace with the PhD

By Troy Batugal

On a typical day in my lab, I'm waiting for some bacterial cultures to grow. This is not by any means an exciting experience, and it is only sometimes made "fun" by the occasional joke from my coworkers or by the smell of autoclaved media that I still find pleasant after working in this lab for 3 years. My lab work comes in waves: a few days of waiting for proteins to express and purify followed by a flurry of activity to test everything. On these calm days, I daydream about seeing the immediate impact of my work, something that has evaded me during graduate school.

I've never felt completely at home as a BioEngineering graduate student. The people around me have made it a fantastic experience, but I have felt out of place since my first year. My peers seem so engaged in their research and I am often left jealous of their singular focus and grit. I have been struggling with this constant tension between wanting to pursue passions entirely different from research and feeling committed to finishing graduate study.

Almost every Bioengineering grad student I have met at Georgia Tech says some sort of variation of "I have wanted to be a scientist since I was a little kid." Ever since I was a little

kid, I've wanted to be a soldier. As I grew older, I enjoyed science, but mostly because that was what I had been taught to expect from myself. Being pigeon-holed into science while having a passion for the military created a dual-persona that manifested in joining ROTC in college while majoring in engineering. When faced with the decision during my senior year to go active-duty or go to grad school for a doctorate while serving in the Army Reserve, I decided with the latter option which gave me the flexibility to pursue multiple passions while fulfilling the expectations of my parents, peers, and self.

Once I started grad school, I quickly learned that I loved working with people much more than I loved conducting experiments. Knowing that I would regret watching my 20s fly by from the inside of the lab, I searched for a way to develop some of my other people-oriented interests such as community service and creating social impact.

Inspiration for a project struck me after reconnecting with an old friend who was starting an internship with the Innocence Project. Part of her job entailed holding one-on-one interviews with inmates on death row to advocate for them. I envisioned her sitting, completely unfazed, in a cramped room across from a menacing looking individual, a situation that would unnerve most people. This perceived fearlessness amid a scenario that I found

incredibly intimidating compelled me to look into how I could help the incarcerated community in Atlanta.

I quickly came across the nonprofit Common Good Atlanta, cofounded by a literature professor, Sarah Higinbotham who had been teaching in Georgia prisons for nearly a decade at that point and was eager for me to assist in teaching.

However, I had two major reservations. Firstly, the prospect of teaching in a prison was intimidating. Fortunately, Sarah reassured me that over a decade of teaching, she has always felt safe and comfortable. Secondly, such an endeavor would be a significant time commitment and would take away from my time in lab.

Despite my reservations, I felt compelled to take on this new challenge.

The discomfort that I felt upon first entering the prison created a barrier that separated me from the men. I felt like this time, in contrast to the lab setting, I was under the microscope. After answering a few math questions, my discomfort quickly melted away. I started to have fun working with the students. The way their eyes would light up when they

independently solved a problem yielded a satisfaction that I hadn't felt in research.

I became quite comfortable in the space and became familiar with the men on a personal basis. My validation had already arrived in how they would try to squeeze in a few more questions and then graciously thank me at the end of every tutoring session. A few weeks after our last class, I learned that all the men had passed the standardized math exam and would be admitted into a college program. This was the immediate social impact that I had been chasing throughout graduate school.

I knew I wanted to stay involved by teaching classes related to my research.

Here's one of the moments that makes this work so satisfying: While talking about how the ethics of gene editing were explored in literary works such as *Brave New World*, I see a hand go up. The student asks if this is similar to the Kryptonian society depicted in the most recent Superman movie. I flash a big smile, before engaging in a fun conversation on science and comic books. The perspective of the men is consistently refreshing and always keeps me on my toes.

Currently, I am teaching every other Monday at the Metro Reentry Facility. I am ecstatic that I am finally able to combine my seemingly unconnected experiences: education in science and engineering, my leadership skills from the Army, and the network I've built through my various extracurricular activities to create a program with tangible social impact.

I love being involved in this program but it has added another level of complexity to the decision of "what I want to be when I grow up" - scientist, soldier, social activist? However, instead of tension between the three, I now feel a sense of ease and comfort, knowing that wherever my path leads, it will be exciting and impactful. I am much happier, knowing that whatever I do after graduate school will be dynamic and people-oriented in some way, and that's the fulfillment I've been looking for.