

ESSAY

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Influences: Life lessons from Anita Zimmerman

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I joined Anita Zimmerman's laboratory at Brown University as an undergraduate, almost exactly 30 years ago, and ended up staying for 5 years so that I could remain under her supervision for my PhD. In the 30 years since we first met, Anita has influenced every aspect of my personal and professional life. Most importantly, she has taught me resilience. As I have faced challenges including sexism, funding crises, and personal and family health issues, Anita's example has inspired me to move forward with gratitude and optimism. The stories that I relate here are told as I remember them, with no assurances that my recollections are faithful to the events as they occurred. My memories are knit into a long story that represents who I am today, so although the sequence of events may be imprecise, the appreciation and joy that I feel when thinking about them is unquestionable.

The first time that I met Anita, I walked into her laboratory to find her sprawled underneath an imposing 12-inch-thick vibration isolation table. At that time, tables did not come preplumbed, so she was under the table to connect the compressed air lines between the tree trunk-sized legs. Anita was a new Assistant Professor at the time and was just beginning to build her laboratory. She was also pregnant with her first child, and her five-foot frame was dwarfed by her belly as she maneuvered herself among the table legs. She had long, hippy hair and wore a denim tent dress that just about swallowed her body. I had never seen a pregnant woman working in science, and the sight blew my mind.

When Anita interviewed me, she noted that I hadn't done very well in the introductory neuroscience course. She had spoken with Leslie Smith, who directed the course and in whose laboratory I had worked the previous term. Leslie told her that my course performance reflected a greater interest in laboratory work than in course work. For some reason, Anita thought that ignoring my course work was a smart move and accepted me into her laboratory in spite of this shortcoming.

Anita soon discovered another shortcoming that she found much more disturbing: I was prissy. As we found and sealed leaks in the plumbing connecting the vibration isolation table legs, she told me that I had to spit on the tubing junctions to locate any bubbles that would signify a leak. I just couldn't do it. Anita was raised in rough-



From the beginning, Anita was a role model for how to be a scientist and a person. From left, Joe Zimmerman, Anita Zimmerman, Ma'ayan Gordon, Sharona Gordon. Credit: Willie Kantrowitz, May 25, 1992.

and-tumble Jacksonville, Florida, and did not relate to my Ivy League reluctance to hock a loogie onto the tubing junctions. I did what I thought was my best, producing just enough spittle to cover about one quarter of the junction. It was then that I first experienced Anita's wonderful, warm-hearted laughter. She laughed and laughed as I tried harder and harder to spit. By the end of the afternoon, we were both exhausted from our merriment, an oft-repeated experience during my years in her laboratory.

I also discovered the joy of doing experiments while working with Anita. We played cassette tapes of Kenny Rogers and Elvis Presley while patch-clamping amphibian rods, singing along until we finally got a seal, and then communicating via whispers because the patch-clamp amplifier picked up our voices and added them as noise to the recordings. Using software written by Toshi Hoshi in BASIC 23, it was all too easy to accidentally erase data on our eight-inch floppy disks, and Anita would sigh with exasperation every time I did so. A phone call to Bill Zagotta, to whom Toshi pawned off the job of supporting our use of his software, would follow. Bill spent hours with us trying to restore the data, but my errors were typically irreparable. Although he could not perform miracles with data, Bill's

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30 years later, Anita is still my mentor. Credit: Ira Kantroutz-Gordon, December 18, 2017.

enthusiastic efforts to do so forged another lifelong friendship, and my postdoctoral training in his laboratory marked the beginning of a 25-year collaboration.

When Anita was busy grading exams or carrying out administrative work, I would occasionally pretend to struggle with getting seals. She smiled from ear to ear as she emerged from her office, rolled up her sleeves as she walked through the laboratory, and then schooled me in how it was done. Thinking about her passion for laboratory work and disdain for the isolation of office duties motivates me to continue doing experiments to this day. I am, as Chris Miller once said of himself, almost equivalent to half a bad postdoc. Experiments are a gift that I learned to treasure in part from Anita's love of experiments and in part from her misery when parted from them.

One of the most important lessons that I learned from Anita was how to face sexism. Some of the sexism that Anita experienced was of the casual, day-to-day variety. For example, the summary statements for her first National Institutes of Health grant were laudatory, but the reviewers stated that, as a young woman, Anita was "not ready" to supervise someone. Upon reading this critique, Anita swore like a truck driver for what seemed like hours. She explained to me that "not ready" was code for "female" and that she had no

intention of accepting NIH's judgment of her ability to supervise a trainee, much to my relief. She taught me to "not give a shit" about other people's opinions of me and to keep moving toward my goals. With that in mind, I successfully applied for a National Science Foundation graduate fellowship, which allowed me to stay in Anita's laboratory despite the pronouncement of NIH that she was not ready to be a mentor.

Anita's lesson of resilience was even more critical when I faced sexual harassment. At a small summer conference that I attended without her, one of the luminaries in our field made an unwelcome advance toward me and was aggressive in pursuing what he wanted. The conference was held at a small New England boarding school with no locks on the doors. I spent a night hiding in the woods, full of shame and guilt that my behavior must have invited his. I called Anita the next morning to explain what had happened and that I was afraid to rejoin the conference for the last morning of talks. I was worried that she would blame me for inviting trouble, but she emphasized that my behavior was not the issue. Although it might be natural for me to feel responsible, Anita said, this was not my fault. She also told me that this individual would not harm me in front of others and that I should not let him rob me of the scientific experience I deserved. Then she drove from Providence, Rhode Island, all the way to the middle of nowhere in New England to pick me up and drive me home. Although her advice might not have worked for everyone, it was exactly what I needed to hear. Anita's encouragement and belief in my worth galvanized my own sense of belonging and sparked my commitment to creating a more welcoming, inclusive scientific community.

Anita taught me that setbacks can be transformative, offering opportunities to see myself, others, and the systems in which we work from a new perspective. I found confidence in the realization that, after an initial period of hurt, I could move beyond setbacks as a stronger, wiser person. I believe in the power of individuals to effect change because Anita, and many others, demonstrated their power to change my life for the better. Anita's example inspired me to dedicate myself to effecting positive change in my community through leadership roles in professional societies and journals, by developing programs for early-career scientists, and by reaching out to individuals in need. Hillel the Elder's words from the ancient text *Pirkei Avot* (1:14) capture my feelings well (my translation): "If I am not my own advocate, who will advocate for me? If I advocate for myself only, what kind of person am I? If not now, when?"

Lesley C. Anson served as editor.