



A Winding Road to a Happy Academic Career

by Elaine Tobin

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Growing up in Louisville, Ky., during the 1950s, there were no role models for me to become a scientist. My parents had come of age during the Depression and went to work right after high school, although one aunt did go to university. However, a few good teachers and our family doctor, who arranged for me to volunteer in a lab at the medical school one summer, made a difference for me.

I enjoyed my high school science courses, and I even took Chemistry II, a small class in which I was the only girl. What a different world it was then! My math teacher let me learn trigonometry with him after school, and I spent class time working on the school newspaper or going to the university to audit a class. At graduation, the chemistry teacher awarded me a book with the inscription “To Elaine, a fine scientist and a girl at that.” This, of course, was long before “women’s lib,” a time when girls went to college to “get” a husband if they hadn’t managed to find someone to marry after high school.

My high school counselor (the “girls’ counselor”) thought that given my wonderful standardized test scores, maybe I could aspire to go to the University of Kentucky. However, through a friend of the family, I knew about Oberlin College, where he had gone. And because a substitute math teacher once brought her Radcliffe alumni magazine to class for me, I knew about Radcliffe (then considered to be the “girls’ Harvard”). In any case, I won scholarships and was thus able to go to college at Oberlin, which I chose after visiting both Oberlin and Radcliffe. I remember thinking that I wasn’t yet sophisticated enough for Radcliffe.

Oberlin was a good choice. The college’s motto is “Learning and Labor,” and the professors were dedicated, exciting, and chal-



Elaine Tobin

lenging teachers. I was not the only female chemistry major at Oberlin; there was one other, but there were still no examples of women in academic chemistry.

I greatly enjoyed biology courses and thought that I would go to medical school with the aim of discovering a cure for cancer. (Yes, I was really that naive!) One of the

enjoyable biology courses was taught by Tom Scott, who had been one of Winslow Briggs’s first graduate students and who got me excited about the recently discovered plant photoreceptor phytochrome. Imagine: You could use light to cause a chemical change in a molecule that then affected so many processes in the plant. When I asked Professor Scott to write me a letter of recommendation for medical school, he said “No! You mustn’t go to medical school, because that will ruin you for research. You have to go to graduate school.”

When I arrived at Stanford, I discovered that the faculty in the biochemistry department, who gave marvelous lectures in the biochemistry course, thought that they were too good to waste their time on female graduate students. (I kid you not—they thought they should be training Nobel Prize winners, and women “obviously” couldn’t achieve at that level!)

However, luckily for me, I took a plant physiology course with Winslow Briggs and worked one quarter in his lab. In him, I found a mentor who was interested in the science for itself and who was doing fascinating science. Moreover, he didn’t think that being female disqualified one from doing science. In fact, he made me feel that the experiments I was doing were important! So when he moved to Harvard the next year, I followed him with enthusiasm.

Winslow continued to be supportive of me throughout my graduate career. During the first year at Harvard, I met and married a man who was just finishing his PhD and wanted to do a year of postdoctoral work at the Weizmann Institute in Israel. Winslow managed to find a fellowship for me to spend a year there.

Israel at the time was quite different from the United States in that it was normal for women to be scientists. Seeing for the first time not only female scientists, but female scientists having babies and returning to work, made a difference in my view of my own possibilities. And before I completed my PhD, I had my first child.

After a brief postdoc at Brandeis and the birth of our second son, we managed to secure two positions at the University of California Los Angeles, in the biology department. My offer was managed as an affirmative action appointment, which meant that initially I wasn’t treated in quite the same way as my husband in terms of resources made available to me. There was no lab for me when I arrived, but sitting at a graduate student’s desk that I could use while the student was off doing fieldwork, I wrote my first grant proposal to NIH.

The suggestion to approach NIH for funding came the previous year during a dinner with Lawrence Bogorad and a seminar speaker he was hosting. Laurie told me when we were walking back from dinner that NIH was willing to fund basic plant research and that I should apply for a grant. NIH funded my first proposal (and has funded work in my lab continuously ever since), and because NIH grants are generally larger than those from NSF, Laurie’s advice has made a great difference in my career.

With funding in hand, I appealed to the head of the “space committee,” whose response was, “Identify space for yourself,

continued on page 14

WIPB

continued from page 11

and we will approve it.” I was very lucky to be helped during my first year by the kindness of Karl Hamner, who was about to retire and who even used some of his last grant money to hire a technician for me. So I was able to move into his laboratory, just below that of Sam Wildman, who also treated me as a scientist from the very beginning.

Despite the problems of establishing child care, teaching a large class for the first time, and getting my research off the ground dur-

ing the first year, I was doing exactly what I wanted to do and was thrilled to be able to do it. The fact that throughout my career I have had wonderful postdocs and students, as well as continuous grant support from NIH, meant that I have been able to enjoy research and, I hope, make lasting contributions. I can't imagine a better way to have spent my life!

