



UNDERGRADUATE REFLECTIONS

"I think I'm really going to like living in Oakland!" That was my thought while exiting Lawrence Hall after freshman orientation one sunny September day in 1973. The bustling excitement of an Oakland afternoon must have been contagious—my friend Lynne, leaving Lawrence Hall with me, said exactly the same thing at the same time! Not only were my undergraduate days at Pitt lots of fun, they also furnished me with knowledge and insights that continue to shape my life as a mathematician, as a teacher, and even as a parent.

Math Is for Everyone

From my roommate Janet, an English major, I learned that mathematics affects all of our lives on a daily basis. Janet was very intelligent and an excellent student, but she avoided math after graduating from high school. When we went grocery shopping I usually unpacked the food into the freezer. I was better at figuring out how to take best advantage of the shrinking space as the ice layer grew and grew.

One day I saw Janet wearing bright red socks with holes so large that both of her big toes were poking out. I asked "Isn't that uncomfortable? Wouldn't you be more comfortable wearing the holes by your little toes instead of the big ones?" (Buying new socks or mending the old ones were less attractive options.) She said that it didn't matter how she put on her socks because her big toes would poke out in any case. It took me the longest time to get her to take her socks off and switch feet! But I think I eventually managed to convince even Janet that geometry is everywhere.

Collaboration

Lately educators tout the value of "cooperative learning," but I discovered the value of collaborating with peers while I was an undergraduate at Pitt. My friend Kathy and I took honors analysis together during my junior year. First we worked hard on the problems individually, then we discussed our solutions. We often learned something from the other's approach, but we always felt more confident about the material after our conversations. Talking to Kathy made the math more fun!

In fact, collaborations with women were important to me throughout my days at Pitt. I worked with Fran as a sophomore, with Marie as a senior, and I had a woman lab partner in basic chemistry and physics. As a freshman I once dropped a difficult course after the only other female student dropped it. I realized later that I would probably have done well, but at that time I guess I wasn't able to "reach for the stars" without the support of someone like myself.

Encouragement

In high school I sought the strongest possible background in math and science, and I knew that I would have a technical career. As a Pitt freshman I was planning a pre-medical curriculum with a double major in physics and chemistry and a French minor. But when I tried to find a schedule that would include all of this, I ran out of space for mathematics. This caused me some serious consternation. At about the same time my Calculus II professor, David Lutzer, pulled me aside and said "You're really good at this. Have you thought about majoring in math?" Lutzer's comment stayed with me as I pon-

dered my plans and goals that summer. In the fall I switched to a major in mathematics (keeping minors in physics and French), and I've been a mathematician ever since.

Final Thoughts

My professors may know that they taught me lots of mathematics, but some of the other things they taught me might be a bit surprising.

My ignorance about career options for mathematics majors was solved by Gene Deskins's timely encouragement that I should consider earning a doctorate in mathematics. I told him that I didn't think I could afford to go straight to graduate school and that I would probably have to work for awhile. He then told me all about teaching assistantships. The news that one could put oneself through graduate school as a teacher was a complete surprise. I wonder who I thought all those graduate TAs *were*?

During my junior year I had weekly meetings with Deskins for a reading course. He smoked a cigar, and I generally spent the hour coughing, sneezing, and wiping my watery eyes. One day I had a job interview so I wore a skirt and high heels. When I started blowing my nose, as usual, he asked with surprise, "Is my cigar bothering you?" and promptly put it out. I wondered for months about why he hadn't noticed before.

Best wishes, Gene, on your retirement!

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