

# Elizabeth Meckes

Although we never met in person, Elizabeth Meckes made an extraordinary impression on me. I learned a lot from her and I wish to provide some details of our interactions as a testament and memorial to a brilliant, thoughtful, and kind human being.

Back in 2010, at the suggestion of Elizabeth Wilmer, I emailed Prof. Meckes with a request to interview her for a nonprofit math club for girls. The nonprofit was but 3 years old at the time and hardly anyone knew of it even within its hometown of Cambridge. Yet within half a day, Elizabeth wrote back with a cheery “Sure, I’d be happy to...”

For a glimpse of her intellect and huge heart, read her interview. For example, when I asked her to explain one of her favorite results that she proved, she didn’t demur. She answered in a way that is the opposite of patronizing, the opposite of pretentious, inviting and drawing the reader in. An excerpt: “... most of us are used to thinking in three dimensions, and that’s it. But one of the great things about math is that once you turn your intuition about the world (in this case, about three-dimensional space) into a mathematical framework, you can abstract and generalize it without needing to follow any kind of rules that you feel hampered by from the physical world; the only rules you need to follow are mathematical ones. So you can start talking about space of arbitrarily many dimensions, and make sense of it.” Have you ever read so casual a passage that encapsulates so much of what math is about?

Even her short interview hints at her ability to balance career and family. At that time, Peter was yet to be born, but you can read the interview to see what she had to say about her husband and Juliette.

A few years later, in 2014, we were in need of a good explanation of the central limit theorem. So again I wrote to Elizabeth with a special request. Thirteen hours and five minutes later: “That sounds like a great idea, and I’d love to do it.” Her quick, enthusiastic responses had an encouraging, almost healing, effect, especially in this field where, we must acknowledge, it is regarded as normal for a mathematician to be rather annoyed by such a request.

The result is the clearest explanation of the central limit theorem I have ever seen. I wish everyone would read her article. (By the way, the coin graphics were originally of the “HHT”, “THT” style, and I asked her if I could replace those with actual coin images to lengthen the article so that it would snugly fit onto an integral number of pages. She responded with the request that they be Susan B. Anthony dollars.)

The last time I exchanged emails with Elizabeth was for an unusual request: excerpts of her scratch work. We wanted our members to see the mathematical act of creation by presenting a gallery of mathematician’s scratch work. True to form, within seven hours, I received her reply: “That’s a great idea. I’m happy to participate, and I’ll try to find something good.”

In 2011, I had an exchange with Elizabeth on the matter of women role models in mathematics and other gender-related issues. From this, I’ll only quote her concluding sentence:

“I think one of the best antidotes to these archaic attitudes is just for people to see women doing good math.”

And doing good math is just what Elizabeth did.

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December 28, 2020