Badass Women

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Badass Women

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Synopsis
In this true story, one mathematics major supports another in an unexpected way.

“Where’s Whitney?” I asked one day early in the semester before our writing-intensive History of Mathematics class began.

One of the young women present turned to another, “She’s the one who’s always so ‘put together,’ right?”

“Yeah,” said the other.

I rarely remember conversations verbatim, but this brief snippet stuck. Certainly Whitney, who also taught ballet, exuded poise. Yet I intuited there might be another undercurrent to this conversation, evidence of a social network of interactions among the seven women in my class of fourteen students of which I’d been unaware. I did not react, but my attention had come alert.

This was the fourth class double-major in physics and mathematics Whitney had taken from me. In our first class together a year before, I’d instantly recognized her distinctiveness. As I later learned, since she emailed me “I have social anxiety,” she exhibited an almost vibrating aversion to social interaction, especially small talk and empty banter. Some students in class, not paying attention, mis-interpreted this behavior as haughtiness. When she and I talked, it was usually when she came to my office alone. If in the hall, she stood near to me as though to shut out the intrusive world while we conversed in a bubble of privacy.

Whitney was a young mother with two children, so sometimes, due to inevitable babysitter issues, was late to class. She always sat at or near the back of the room, but when she spoke in class was never shy, flashing sharp observations with no gentle subtlety, preferring the raw blade of honesty.
She was so unusually direct that one of the young men in my class, who’d been in classes with her before, told me he found her attitude refreshing (actually, he said “hilarious”), as did I, though we seemed to be in the minority who reacted that way. In our current writing-intensive class, she once responded out of nowhere to another male classmate, muttering about an assignment, that he should “stop whining.” I could not help but smile.

Last fall, in our second class together, when I asked her to share in writing with her classmates how she studied for the first exam, after the usual intensive review recommendation, she ended with: “a double dose of caffeine and proper anxiety are my key components.” This advice came while she faced the fact that two of her physics-major-required classes were offered at the same time, so she “had to enroll in both and teach myself one while attending the other, showing up only to take exams.” Her final piquant comment: “I still ended up with an A in both classes, so it wasn’t a terrible arrangement.” Yet again this semester she was managing a similar overlapping conflict between a physics course and the other senior mathematics course she was taking from me.

Mid-semester, after everyone had completed their first four to five-thousand-word expository paper on a history of mathematics subject, I assigned peer reviews. I gave each student a different pair of copies of two of the submitted student papers and required them to write a letter to each author by name, ending with their own signature, providing at least two pages of thoughtful criticism, both good and bad, of the papers they received. One of the papers I assigned Whitney was written by Hope.

This was also Hope’s fourth class with me. In contrast to Whitney, Hope liked to sit in the front row every day, genial and easygoing. She was older than the others, coming back to school after raising two children now in their twenties and (mostly) out of the house. This semester outside of class she was enduring some anxiety, spending time when she could with her mother who seemed to be in remission from a cancer diagnosis. She internalized this state of affairs as an unsettling mix of bad and good news which, jittering with tension, she blurted out to me one day in my office.

Like Whitney, Hope’s work in mathematics was excellent. In previous classes, especially on exam days, when I arrived early, she’d often be at the board explaining material to those who’d also come early. It was clear that many of the others leaned on her for her clear understanding and helpful peer-to-
peer teaching. In our second class together last fall, Hope’s ending response, when I asked her to share with her classmates how she studied for the first exam, echoed that before-class behavior: “Reading and doing problems aloud really helps.” Her good humor and maturity more than once anchored our classroom discussions.

As I found out in this first paper, she also wrote well. She constructed one of the two best papers in the class, so good I recommended we submit it to a national contest. By this time, she and Whitney had shared several mathematics classes and so I knew they were acquainted at least by sight. Coincidentally, for peer review I assigned Hope to read Whitney’s paper.

When I read each of the peer review letters submitted a week later, as usual all but a couple of my fourteen students wrote thoughtful letters full of useful, critical comments on the details of the papers they read, remembering my advice to write with the same level of respect they deserved themselves.

Hope’s review of Whitney’s paper praised her work (“I truly had a moment of profound thought!”), ending with

“... as I read it the first time I was sitting with friends, and told them that, with your paper, they would have no trouble reading and following even without any real math or science background whatsoever.”

Whitney’s two reviews reflected her spiky, unflinching style, pulling no punches in either praise or criticism. But, at the end of her positive review of Hope’s paper (“... amazing ... sparks my curiosity ... beautifully composed ... unusually inspiring”), to my surprise she added a final spectacular personal observation, that would also surprise Hope and lift her spirit:

“I have no idea how you accomplished this much with our given time frame (knowing that you have a family). I always feel like I’m drowning and I’m pretty sure my work reflects that. Yours doesn’t show it at all. I hope you know that you are a badass woman. You are capable of anything (and no, this paper isn’t the only reason I came to that conclusion).”

Of course, they’re both badass women, true examples of intense, capable, committed, real women studying mathematics and thriving in the trenches of college today. I’m pleased the circumstances of my class allowed this rare written exchange to emerge.
Afterword (with photos).

After reading this essay, you might be wondering about these two amazing women and their whereabouts today. Let me attempt to satisfy your curiosity.

Hope’s first expository class paper, the one peer-reviewed by Whitney, found publication in the English department’s student journal for writing intensive classes,¹ and her second paper won an Honorable Mention in the Honors Program undergraduate research journal.² Two years later Hope earned an M.S. degree in Mathematics from us.

See below for a family photo from Hope:

![Hope with family, holding grandbaby, 2022 (Source: Hope.)](image)


² Mertz, Pleasance (Hope), “What’s the Difference?,” Lucerna, Undergraduate Research Journal, University of Missouri - Kansas City Honors College, Volume 13 (February 2019), page 9, Honorable Mention.
Whitney’s second expository class paper found publication in that same Honors Program journal issue. After graduation, Whitney has continued her studies as a student in a Biostatistics Ph.D. program at a nearby university. And here is a photo of Whitney, too, so you can associate a friendly face to the story:

Whitney, 2018 (Source: Whitney.)

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