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When You Love Physics, But Physics Doesn't Love You

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When You Love Physics, But Physics Doesn't Love You

Abstract

I am a physics major. Or at least, I was. My class year was an average-sized group of majors; mostly cis men, mostly people I do not feel comfortable around. Jokes straight out of a Big Bang script were constantly being cracked; and though I tried to join in on the fun, I never seemed welcome in the conversation. I could act exactly like my male classmates, but something about my voice, my body, the way I carried myself, was not enough for them to accept me into the boys' club. If I tried to be my authentic self rather than change myself to fit in, I was stared at or straight up ignored. Eventually I learned I should just be quiet. Having to spend five days a week with these classmates was not a great experience, but I had always been passionate enough about physics that I powered through. It was draining. Yet, up until last fall, I felt that I had to keep fighting through these difficulties and get a physics degree. [excerpt]

Keywords

Physics, Gettysburg, Physics Department, Mansplaining, Discomfort, Inequality

Disciplines

Civic and Community Engagement

Comments

Surge is a student blog at Gettysburg College where systemic issues of justice matter. Posts are originally published at **surgegettysburg.wordpress.com** Through stories and reflection, these blog entries relate personal experiences to larger issues of equity, demonstrating that –isms are structural problems, not actions defined by individual prejudice. We intend to popularize justice, helping each other to recognize our biases and unlearn the untruths.



WHEN YOU LOVE PHYSICS, BUT PHYSICS DOESN'T LOVE YOU

March 29, 2019

I am a physics major. Or at least, I was. My class year was an average-sized group of majors; mostly cis men, mostly people I do not feel comfortable around. Jokes straight out of a Big Bang script were constantly being cracked; and though I tried to join in on the fun, I never seemed welcome in the conversation. I could act exactly like my male classmates, but something about my voice, my body, the way I carried myself, was not enough for them to accept me into the boys' club. If I tried to be my authentic self rather than change myself to fit in, I was stared at or straight up ignored. Eventually I learned I should just be quiet. Having to spend five days a week with these classmates was not a great experience, but I had always been passionate enough about physics that I powered through. It was draining. Yet, up until last fall, I felt that I had to keep fighting through these difficulties and get a physics degree.

This fight became substantially harder when sophomore year rolled around and I found myself in a flipped classroom, forced to complete group work each class with my physics peers. Our class was structured so that we read theoretical material on our subject for homework, and then spent all of our class time practicing relevant problems in groups. We were expected to learn from each other, having each group present their work at the end of class. If you have never taken physics, it is important to remember that unless you work on practice problems, you will not learn the material. You will, without doubt, fail a physics class if you do not work extensively on practice problems. Imagine my dismay when I realized I would only have the chance to work on problems in groups, with people whose behavior already felt discriminatory.

Each day in class I was either talked over, having my knowledge discredited, or left to do all the work by myself. By the end of the first week I was so upset that I completely shut down during class. I was trying so hard to fit into this picture of a perfect class that works and learns together, but my classmates did not feel a similar pressure. After all, the professor laughed at their jokes and modeled similar behavior of the quirky, culturally incompetent scientist that we all think of when we think of physicists. Playing into these stereotypes earns you laughs and friendships; deconstructing these stereotypes for the sexist, racist messages they are earns you disapproving silence and stares. Even choosing not to constantly validate my classmates' behavior with laughs and smiles was enough for them to stop talking to me. Being

exposed to this behavior every day was soul-crushing. When I was supposed to be learning crucial concepts that would build the foundation of my physics career, I was breaking down and trying not to let everyone see I was crying.

Within a week I was already terribly behind, unable to absorb any of the class materials due to stress and a lack of adequate practice. Knowing I would fail unless I could work on problems independently during class, I went to my professor's office hours to ask for some other arrangement. I told him what I have explained above: I cannot work in these groups, I do not feel comfortable in this class, and unless we worked something out, I was going to drop.

My cry for help was met with skepticism and mansplaining. My professor told me that to work out a separate arrangement would be a huge inconvenience to him and the other students. He told me that I needed to learn how to work in groups if I wanted to be a physicist (note that he worked right down the hall from me a mere month prior as I completed group research in physics over the summer). He didn't understand why it was so difficult for me to work with my classmates. When I tried to explain why, I began to cry out of anger. My tears were met with pity that I did not need or want. At the end of the conversation, my professor told me he needed time to think about my request; he said he was sorry I was having such a difficult time, and that he hopes I find peace one day.

I would be able to find peace if my intelligence and personal space were valued. I would be able to find peace if my professor worked to create a respectful classroom environment. I knew I would not be able to find peace so long as I was in a class that saw me as a problem to be solved rather than a human to be respected.

That conversation took place on a Friday. I didn't show up to Monday's class because I knew I was going to cry again and could not handle any more discomfort and empty pity. That week I went to my professor's office and told him I was going to drop his class, no matter what he proposed. He responded as though I were mentally ill, as though my inability to remain in a hostile environment was indicative of fragility rather than self-respect.

I am no longer a physics major. In my class year, the physics major is entirely male. I used to love physics. Now, I love myself. I have switched to an Africana Studies major, and am in a department that listens to me when I speak and works tirelessly to create an environment in which all are respected.

There is inequality in our society and there is inequality on this campus. There is a silent conflict between the members of our classrooms, whether we are aware of that or not. Unless a professor actively works to dismantle this inequality within their classroom, they are reproducing it. I do not leave my identity at the door of the physics classroom. I carry it with me—whether I want to or not—when I interact with my peers, when I listen to my professor speak, when I read the textbook. I am a political being because I live in a world that politicizes my gender, my race, my looks, my socioeconomic status. Society likes to ignore this, and thus we let asymmetrical power dynamics continue to thrive. Professors ignoring this results in more of the same.

I was treated as a student with deficits, a student ill-equipped to become a physicist. Professors that do this fail to realize that the problem is not the students, but rather the schooling process. I do not require

some special form of instruction; my experience highlights fundamental flaws in the ways we set up our classrooms. If my classmates do not work respectfully, I shouldn't have to quietly endure while waiting around for them to behave differently.

And, if a teacher isn't modeling this respect, they are never going to change anyway.

Anna Perry '21 Contributing Writer