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Breaking Free of the Cultural Biases that Surround Women (+ Math)

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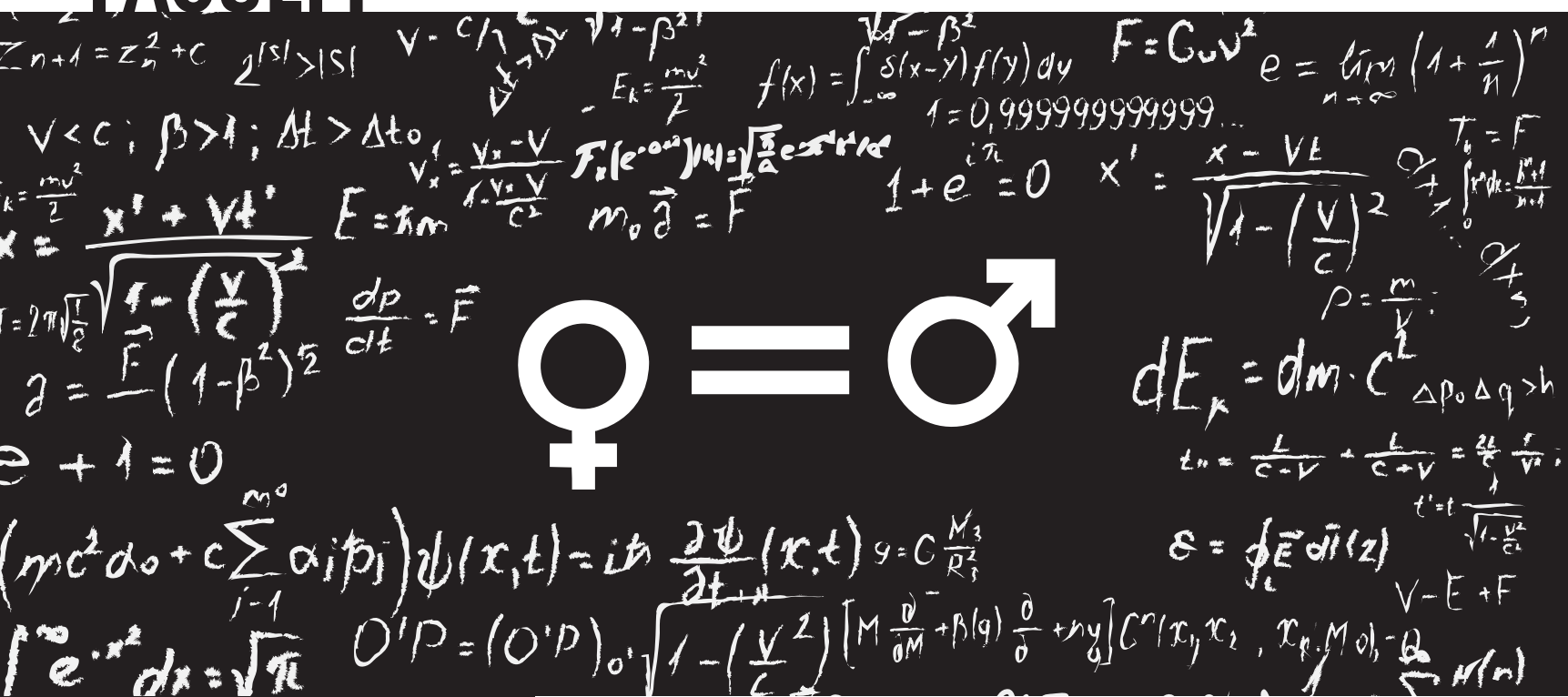
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FACULTY



BREAKING FREE OF THE CULTURAL BIASES THAT SURROUND WOMEN (+ MATH)

By Gerry Boyle '78

Kayla Freeman '19 was used to being in the gender minority in honors and AP math classes at her high school in central Massachusetts. But a particular incident stands out. “One time someone found out that I got the highest score on the final,” she said, “and all the guys in my class were shocked.”

That cultural bias, one that assumes men are better at math than women—and undermines women in the classroom and the discipline—wasn’t just a high school thing. It carries over to college—and beyond. “I think what we have to do here is not only teach women to be strong in a place where they’re a minority,” Freeman said, “but also teach the men how to be allies to women as they leave Colby and go into the workforce.”

It’s a national problem. According to a recent survey by the American Mathematical Society, 43 percent of the mathematics degrees conferred at small private colleges in 2015 went to women. “All of us are aware of the gender issues in mathematics,” said Associate Professor of Mathematics and Statistics Scott Taylor.

Mirroring the national trend, women have historically been in the minority in mathematics at Colby, though numbers vary significantly from year to year. For the Class of 2010, women broke 50 percent (16 of 30 majors) but dropped to just 18 percent four years later (4 of 22 majors). Numbers have rebounded to more than 40 percent for the Class of 2018 but have dipped slightly for the two subsequent classes.

“For the math class I took my freshman spring, for the first week and a half I was the only female in the class,” said Allyson Redhunt ’17. “And then one other joined.”

In recent years, the department has undertaken a sustained effort to turn the numbers around—and to change the math culture for all involved.

To that end, the Runnals Dinner for Women in Mathematics, established three years ago, was continued as part of an effort spearheaded last year by faculty. Taylor and Assistant Professor of Mathematics and Statistics Lu Lu landed a Tensor Women and Mathematics grant, and, with assistance from Clare Boothe Luce Assistant Professor of Mathematics Nora Youngs, the department has sponsored a series of events and programs aimed at bringing more women into mathematics.

Chantal David, a leading number-theory researcher, was brought to campus to speak. Two alumnae, Ann Miller Crumlish '98, an actuary, and Malia Kawamura '14, who is in graduate school for engineering, ran workshops for Colby students on the demands of being a woman in a male-dominated workplace and discussed the kinds of mathematical work they do in their careers.

Colby math majors have run workshops for area high school students, and a Colby math mentorship program has been established that matches advanced math students with students beginning their work in the discipline. While the program isn't gender specific, the last five mentees were women math students, Taylor said.

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—Kayla Freeman '19

Redhunt was one of those mentors, trained through the Goldfarb Center for Public Affairs and Civic Engagement, and she advised first-year students considering a math major but curious to get a major's take on the department. A coxswain on the men's crew team, she said she frequently fielded questions from her fellow rowers—all male. “I had three different male teammates texting me, saying, ‘What do you think I should take [for math]?’” she said.

One benefit of the program, beyond the mentoring itself, Taylor said, is putting out the word that there are senior women math majors. Those seniors are headed for the workplace and will be able to offer advice even after graduation.

Freeman, who switched her major from pure math to math science, linking that with a computer science major, said she's been happy with her experience at Colby and doesn't often run into gender problems. “I do sometimes question if it will be worth it in the long run,” she said, “if I end up in a career where my gender puts me at a disadvantage. But I get enough support from women who are older who tell me it will be okay.”

Redhunt said she had coffee with a first-year who had completed her first semester in Dijon and had been told by some students it would be difficult to major in pure math. “She was feeling pretty frustrated so I told her I didn't take a single math class when I was abroad, and I'm still graduating on time with a math major—and I finished all my pre-med requirements without a problem. So she definitely benefited from the voice of someone who had a similar track.”

The pep talks will continue. Freeman said plans for the fall were shaping up, as the Women in Mathematics and Computer Science became an official Colby club. “We're going to hit the ground running,” she said.

