

Why women in science are lonely – and shouldn't be



By Marcia Bartusiak

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Marcia Bartusiak is a professor of science writing at the Massachusetts Institute of Technology. Her latest book is “Black Hole: How an Idea Abandoned by Newtonians, Hated by Einstein, and Gambled on by Hawking Became Loved.”

Current (and future) women in science should be immensely grateful. In “The Only Woman in the Room,” an accomplished creative-writing professor at the University of Michigan, who also happens to have a bachelor’s degree in physics, has chronicled her travails as an undergraduate at Yale some 40 years ago, offering an engrossing look at the barriers still facing women in science. Rather than dwell on the dry statistics found in so many essays on this topic, Eileen Pollack draws attention to this important and vexing problem with a personal narrative, beautifully written and full of important insights on the changes needed to make those barriers crumble.

If Pollack had been a boy, she would have faced no obstacles at all in nurturing her math and science talents in elementary and high school. Boys less skilled than she were promoted to accelerated classes, but she was barred from taking them. “A girl who got skipped ahead in math might find her social life had been destroyed,” she writes about the philosophy of her Upstate New York school. It didn’t help that she was the smartest person in the room; her teachers were annoyed by her “unladylike” behavior of asking too many questions in class. Under social pressure to hide her accomplishments, she developed the habit of making self-deprecating jokes about herself. “At first, I didn’t believe what I was saying,” she confesses. “After a while, I did.”

Pollack overcame her course deficits by self-study in her senior year to prepare for four Advanced Placement exams, doing so well that she made it into Yale. But once there she found another mountain to climb. Her course load “was the equivalent of a novice weight lifter attempting to bench press a refrigerator above her head,” she writes. The male students persevered by banding together to work on problem sets. But as the only woman in class at times, she was usually excluded, a decided disadvantage. When the male scientists invited the physics undergraduates to an outdoor barbecue, she felt pressure to keep company with the wife in the kitchen, while out in the back yard her male colleagues acquired “a list of researchers they could contact when they applied to grad school. . . . These incidents may seem trivial, [but] the obstacles I faced were mainly psychological.” There were the crushes on the younger male professors, the lack of men interested in dating a woman majoring in physics, the fear that the guys in her labs saw her as a “clumsy broad.”

She graduated summa cum laude, yet no professor greatly encouraged her to apply to graduate school. Also adept at writing, she instead found encouragement — and a far deeper camaraderie with her classmates — in the English department, which led to her eventual decision to make that her career.

Not until 2005, when Harvard University's then-president, Lawrence Summers, infamously asked why so few women achieved tenured positions in the hard sciences — physics, mathematics, engineering and computer science — did Pollack reexamine her story to find answers. She started by conducting a sort of academic “autopsy,” going back to her old haunts at Yale. She learns from one of her past professors that her senior thesis was “exceptional.” But he never directly said that at the time, a validation she had vitally needed in deciding between science and the humanities. What she desired more than anything else was a virtual pat on the back. Another professor honestly admitted that he wasn't equipped to mentor at the emotional level, that encouragement wasn't in his nature. He figured those truly passionate about physics would persevere on their own.

Pollack discovered in her visit that the Yale physics department has made vast improvements in supporting undergraduates who might otherwise abandon science. Gender equality in the major is on the rise. More tutoring is available to all, and women are now on the faculty — one even heads the astronomy center. Yet Pollack's personal talks with female students indicated that not much has changed in the United States in preparing women for the hard sciences. Many high school guidance counselors are still steering girls away from difficult science and math courses. Female students still worry mightily about the social repercussions of majoring in physics or math (this factor diminishes appreciably in all-girl schools). They still fear that professors will interpret their need for encouragement as a lack of seriousness or skill in their chosen field. And once out and married, many still bear the major responsibility of juggling their research with child care and housework.

What is needed is nothing less than a cultural rewiring, similar to that which has led to national acceptance of same-sex marriage. In many other countries, there is no social backlash if a woman is smart or science-savvy. Some men even consider it a coup if they can attract a female PhD. In this country, meanwhile, there is a growing atmosphere of anti-intellectualism and a fascination with celebrity looks that puts even more pressure on women to focus on their makeup and clothes over the content of their minds. Perhaps we need more role models like the ones Pollack found at Yale who call themselves the “women who don't give a crap” — four post-docs who knit, think, program, talk girl talk and don't care what men might inappropriately expect.

Though Pollack set out to investigate why science is still a boys' club, the riveting tale of her years at Yale handily serves another purpose altogether. Any young woman or man on the way to college to major in science will find great lessons in this book — not only preparing them for the rigors of the degree but reminding them of the explosions of joy along the way whenever a puzzling law of nature at last becomes comprehensible.

THE ONLY WOMAN IN THE ROOM

Why Science Is Still a Boys' Club

By Eileen Pollack

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