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"We see these stories, 'Why aren't there more women in computer science and engineering?' and there's all these complicated answers like, 'School advisers don't have them take math and physics,' and it's probably true. But I think there's probably a simpler reason, which is these guys are just jerks, and women know it."

— Lauren Weinstein, a man who has spent four decades working in tech

The tech industry's man problem

Elissa Shevinsky can pinpoint the moment when she felt that she no longer belonged.

She was at a friend's house Sept. 8, watching the live stream of the TechCrunch Disrupt hackathon on her laptop and iPhone. Entrepreneurs were showing off their products, and two young Australian men, David Boulton and Jethro Batts, stood behind the podium to give their presentation. "Titstare is an app where you take photos of yourself staring at tits," Boulton began, as photographs of women's chests on a cellphone flashed on the screen behind him.

After some banter, Batts concluded, "This is the breast hack ever."

The crowd — overwhelmingly young, white, hoodie-wearing men — guffawed. Something in Shevinsky's mind clicked. If ever there was proof that the tech industry needed more women, she thought, this was it.

Elizabeth D. Herman / New York Times News Service

Elissa Shevinsky ended her working partnership with Pax Dickinson after he tweeted in defense of an app called Titstare. The pair reconciled after Dickinson wrote a public apology.

Shevinsky, 35, wasn't the only one who was disgusted by the presentation. Twitter lit up with outrage. She joined in, writing a blog-post manifesto: "I thought that we didn't need more women in tech. I was wrong."

Then things got worse. The next day, Pax Dickinson, who was her business partner in a startup called Glimpse Labs, as well as the chief technology officer of the news site Business Insider, took to Twitter to defend the Titstare pair against accusations of misogyny. "It is not misogyny to tell a sexist joke, or to fail to take a woman seriously, or to enjoy boobies," he wrote.

Shevinsky felt pushed to the edge. Women who enter fields dominated by men often feel this way. They love the work and want to fit in. But then something happens — a slight or a major offense — and they suddenly feel like outsiders. The question for newcomers to a field has always been when to play along and when to push back.

Today, even as so many barriers have fallen — whether at elite universities, where women outnumber men, or in running for the presidency, where polls show that fewer people think gender makes a difference — computer engineering, the most innovative sector of the economy, remains behind.

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Sexism

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Many women who want to be engineers encounter a field where they not only are significantly underrepresented but also feel pushed away.

Tech executives often fault schools, parents or society in general for failing to encourage girls to pursue computer science. But something else is at play in the industry: Among the women who join the field, 52 percent leave by midcareer, a startling attrition rate that is double that for men, according to research from the Harvard Business School.

A culprit, many people in the field say, is a sexist, alpha-male culture that can make women and other people who don't fit the mold feel unwelcome, demeaned or even endangered.

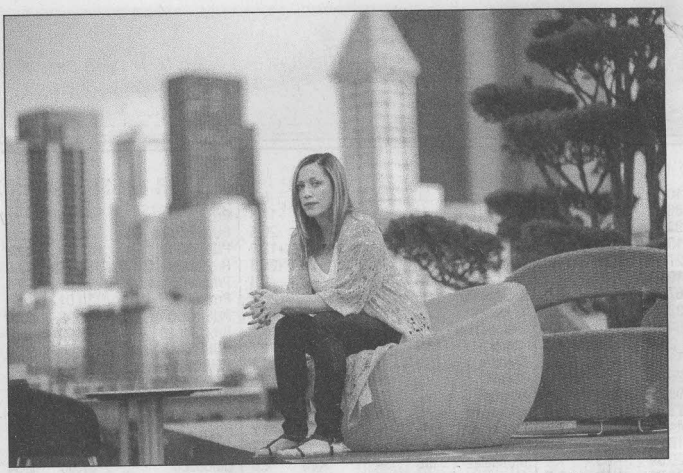
A few days after Dickinson's "It is not misogyny" tweet, Shevinsky quit Glimpse. She had been aware of earlier cringe-making tweets in which her business partner had joked about rape or questioned even the most basic feminist precepts. ("Women's suffrage and individual freedom are incompatible. How's that for an unpopular truth?") Still, she admired Dickinson's technical skills and work ethic. Married and then 40, he was more experienced and serious about work than many other tech types she knew, and she said he always treated her with respect.

But after the Twitter controversy, she decided that she just couldn't work with him anymore.

Shevinsky's epiphany, however, wasn't just about Dickinson or a couple of engineers. It was about computer-engineering culture and her relationship with it. She had enjoyed being "one of the bros" — throwing back whiskey and rubbing shoulders with MIT graduates. And if that sometimes meant fake-laughing as her colleagues cracked jokes about porn, so be it.

"For years, all I wanted to do was work and code and make software," she said in an interview. "That's why I didn't care about feminism. I just wanted to build stuff."

"But Titstare showed me that was no longer a viable option," she said. "We had to address our culture, because something was really not working."



Stuart Isett / New York Times News Service

Julie Ann Horvath, a software designer and developer, quit her job at GitHub last month, saying there was a culture of intimidation and disrespect of women.

Two days after the TechCrunch show, Business Insider forced Dickinson to resign. The Australian entrepreneurs and TechCrunch each apologized. But incidents like these aren't exceptional.

"We see these stories, 'Why aren't there more women in computer science and engineering?' and there's all these complicated answers like, 'School advisers don't have them take math and physics,' and it's probably true," said Lauren Weinstein, a man who has spent his four-decade career in tech working mostly with other men and is currently a consultant for Google.

"But I think there's probably a simpler reason," he said, "which is these guys are just jerks, and women know it."

A bright beginning

When Shevinsky was introduced to engineering culture at Williams College, she got no hint of sexism. A political theory major, she learned to code from a boyfriend, and she described their engineer friends as "forward-thinking feminists."

She worked in product development for a number of startups and was a co-founder of a dating site. She settled in New York, where she got to know Dickinson at tech meetups. When she had a new business idea — a kind of Snapchat for adults that prevents people from taking screen shots of private pictures — she sought out his advice.

Last spring, they decided to build the app together. At first, they conceived it as a sexting product, but later they shifted to a service that could be used by anyone concerned about keeping their messages safe from prying eyes. They called it Glimpse.

By August, Shevinsky had closed her dating site to work on Glimpse. Dickinson, who had his full-time job at Business Insider, helped when he could.

"I remember thinking just that I was so lucky that Pax was going to work with me," Shevinsky said. "At the time I was still relatively unknown, and he was one of the best technologists I'd met."

Computer science wasn't always dominated by men. "In the beginning, the word 'computers' meant 'women,'" says Ruth Oldenziel, a professor at Eindhoven University of Technology in the Netherlands who studies history, gender and technology. Six women programmed one of the most famous computers in history — the 30-ton ENIAC — for the U.S. Army during World War II.

But as with many professions, Oldenziel said, once programming gained prestige, women were pushed out. Over the decades, the share of women in computing has continued to decline. In 2012, just 18 percent of computer-science college graduates were women, down from 37 percent in 1985, according to the National Center for Women & Information Technology.

This lack of women has become of greater concern in the industry for a number of reasons. For one, the products that the tech industry creates are shaping the future for everyone. "Women are increasingly consumers; they're not going to like products that don't work for them," said Londa Schiebinger, a Stanford professor who runs the Gendered Innovations project, which encourages engineers and scientists to consider gender when developing new products.

Perhaps more fundamentally, there are simply more jobs than can be filled by available talent. Some 1.2 million computing jobs will be available in 2022, yet U.S. universities are producing only 39 percent of the graduates needed to fill them, the National Center for Women & Information Technology estimates.

Tech's biggest companies say that recruiting women is a priority. "If we do that, there's no question we'll more than double the rate of technology output in the world," Larry Page, the chief executive of Google, said last spring. Yet at Google, less than a fifth of the engineers are women.

That's a typical figure. Twenty percent of software developers are women, according to the Labor Department, and fewer than 6 percent of engineers are black or Hispanic. Comparatively, 56 percent of people in business and financial-operations jobs are women, as are 36 percent of physicians and surgeons and one-third of lawyers.

Startup culture

At tech startups, often considered the most desirable places to work, the number of women appears to be even lower. The companies generally don't release these numbers publicly, but an engineer at Pinterest has collected data from people at 133 startups and found that an average of 12 percent of the engineers are women.

Sexism exists in many places, but startup companies have particular qualities that can allow problems to go unchecked. The lines between work and social life are often blurry, because people tend to be young and to work long hours, and the founders and first employees are often friends. And startups pride themselves on a lack of bureaucracy, forgoing big-company layers like human resources departments. They say they can move faster that way, without becoming bogged down in protocol.

But a result can be an anything-goes atmosphere, said Julie Ann Horvath, a software designer and developer who publicly quit her job last month at coding website GitHub, saying that there was a culture of intimidation and disrespect of women. GitHub, founded in 2008, hired a senior HR executive only in January.

"If there is no structure, that's actually more harmful to marginalized people," Horvath said in an interview while she still worked at GitHub. "It's just unprofessional. Tech needs to grow up in a lot of ways."

At GitHub, Horvath, who was the only female developer at the company when she started, said she once declined a romantic relationship with one of her co-workers. Then, she said, she discovered that code she had written had disappeared. The man, she said, had ripped it out.

Horvath eventually decided that it was worth the risk and quit. She said the people who mistreated her included a founder of the company.

Chris Wanstrath, GitHub's chief executive and another co-founder, apologized to Horvath in a blog post and said the co-founder she complained about was put on leave and the company was investigating what happened.

Owning the code

At bigger companies, women say harassment may be easier to stop but that other, subtler forms of sexism persist.

Women often take on the role of product manager, which entails the so-called soft skills of managing people and bridging the business and engineering divide. Yet even though this is an essential job, it's the purely technical people — not the businesspeople — who get the respect in the tech industry.

"In engineering, whoever owns the code, they have the power," said Ana Redmond, a software engineer. When she worked as a senior engineer at a big company, Expedia, she was constantly underestimated by male colleagues and suffered because she was not willing to leave her children to work the hours needed to "own the code," she said.

In a statement, Expedia said Redmond had not raised these concerns during her tenure. The company added that it now has programs to develop and retain female talent; it also has a goal to double the number of women in roles at the vice-president level and higher by 2020.

In 2011, Redmond quit to start her own company, Infinut, which makes educational apps for children, and to teach computer science at the University of Washington — largely, she said, to mentor female students. "For me, what worked best was changing the context," she said, "not conforming to it."

Still on the defensive

After she quit Glimpse, Shevinsky began looking for a job outside the startup world. Dickinson, no longer at Business Insider, made it his mission to persuade her to return. Glimpse had no office and little money, so they met at TGI Friday's and at a dive bar that served $5 beer.

The conversations started at a deadlock.

"There was the one where Pax said, 'I got to keep tweeting, I got to keep tweeting,'" Shevinsky recalled. "I wasn't going to come back to Glimpse if we both weren't going to be taking it seriously. I remember telling Pax that his tweets were going to be very expensive for us."

Social media, where people carefully build their public personas, often become bullhorns for offensive comments.

"Many women have come to me and said they basically have had to hide on the Net now," said Weinstein, who works on issues of identity and anonymity online. "They use male names, they don't put their real photos up, because they are immediately targeted and harassed."

Late last fall, Shevinsky and Dickinson flew together from a tech conference in California back to New York. When Shevinsky awoke from a nap, Dickinson asked her to look at a letter he had written on his iPad about the Titstare episode and his comments on Twitter about women.

"It was a lapse in judgment and I'm entirely responsible for that," he wrote. "I sincerely and unreservedly apologize to anyone I offended."

For both of them, the letter was the turning point. "The biggest thing was Pax realizing he was a public figure and the responsibilities that came with that," Shevinsky said. "He wrote the apology letter, and it was very genuine and moving and impactful for me."

Dickinson sent his letter to VentureBeat, a tech blog, for publication.

Shevinsky returned to Glimpse in December. But first Dickinson had to make some promises. Shevinsky would be the chief executive and the public face of the company. She would have to sign off on what he said on social media and in press interviews — as she did when he was interviewed for this article. And the company would add a second mission statement supporting women in tech, including through hiring.

"I have come to realize there are problems with sexism in technology through all this," Dickinson wrote in an interview over email.

Nonetheless, he wasn't retreating from his public tweets. Rather, he said, the media had portrayed him in a way that didn't capture his full personality.

"I am not just my tweets, and I never was," he wrote in the email interview. "The caricature that's been painted of me isn't accurate. I realized after all this that many of my tweets came off mean-spirited in a way I never intended, hence my apology."

At Glimpse, Shevinsky's title is "ladyboss" — which she likes because, she said, it embraces the idea of women being in charge. Three of the six people who work at the company are women, as are two of the three board members. The pair raised a small amount of money, mostly from New York angel investors, and introduced the Glimpse app at the South by Southwest conference in Austin, Texas, in March.