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# Harvard Business Review



OCTOBER 2014  
REPRINT R1410H

## Hacking Tech's Diversity Problem

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companies should try a lean start-up approach.**  
*by Joan C. Williams*

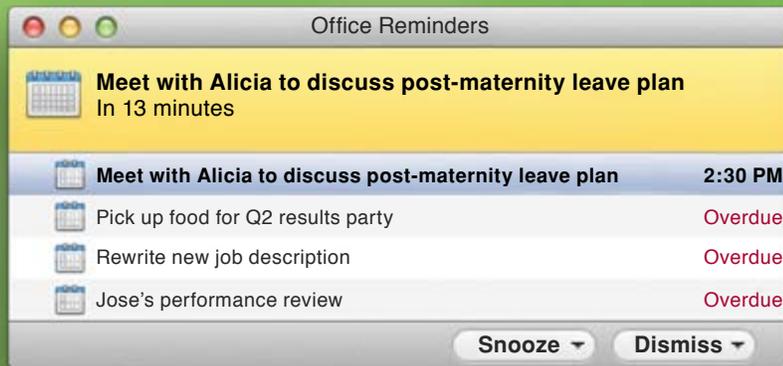


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When Google, Yahoo, LinkedIn, and Facebook disclosed their woefully low levels of female employment in the summer of 2014, admitting that they had a lot of work to do to improve them, they signaled a shift for the technology industry. It's remarkable that the sector is finally stepping up to the plate on diversity—and refreshing that its focus is on metrics rather than rhetoric.

Make no mistake: Improving those metrics will be challenging. A key feature of the tech culture—the shared belief that it's a meritocracy—may work against change. An important study by Emilio J. Castilla and Stephen Benard has shown that when an organization's core values state that raises and promotions are “based entirely on the performance of the employee”—in other words, when a company sees itself as a meritocracy—women are actually more likely to get smaller bonuses than men with equivalent performance reviews. Subtle biases against women are clearly at work here. Moreover, 40 years of social science have taught us that such biases will be perpetuated unless they're *intentionally* interrupted, and people who think they work for meritocracies are less likely to do what it takes to interrupt them.

On the other hand, if tech's senior leaders are serious about gender diversity, they could be perfectly positioned to lead change. As they so often remind us, they're not about business as usual. They're out to change the world, with corporate mottoes like “Don't be evil” and “Move fast and break things.” One thing I hope they'll break with is the “diversity industrial complex”: the standard approach of making token hires, offering sensitivity training, setting up mentoring networks, and introducing other incremental changes that focus on altering women's behavior to, say, make them better negotiators. When an organization lacks diversity, it's not the employees who need fixing. It's the business systems.

This article is intended to help tech companies—and others—fix those systems. It describes a new metrics-based approach that pulls from the lean start-up playbook: Collect detailed data about whether gender bias plays a role in daily workplace interactions; identify company-specific ways to measure its effect; create hypotheses about what “interrupters” might move those metrics; and then

throw some spaghetti at the wall and see what sticks. Measure what happened, adjust your hypotheses, and do it all over again until you get it right.

### What's a Bias Interrupter?

While much of the social science research is still devoted to “admiring the problem”—demonstrating the same patterns of gender bias over and over—some studies have begun to explore how to interrupt bias effectively. In one, researchers Andreas Leibbrandt and John A. List posted two versions of announcements for administrative assistant jobs in stereotypically masculine businesses—NASCAR, football, and basketball. One version said nothing about salary; the other said “salary negotiable.” Leibbrandt and List wanted to investigate the well-documented phenomenon that women are less likely to negotiate their salaries than men, which contributes to the pay gap between the sexes. Could a simple two-word phrase interrupt that pattern?

It could. In fact, not only did the “salary negotiable” language close the negotiation gap between men and women, it closed the pay gap between the male and female hires by 45%.

This experimental approach is a classic example of a bias interrupter: It changed the basic business system in a way that stopped a pattern of bias in its tracks. And it did so without talking about bias at all (or even raising it). It also highlights three advantages that bias interrupters have over the sweeping cultural change initiatives that researchers who study organizational bias tend to recommend. Such efforts can be effective, but they're expensive—and often abandoned when a new CEO arrives with different priorities. Recently, for instance, Best Buy's new CEO eliminated the company's much-ballyhooed Results Only Work Environment, despite rigorous data documenting its business benefits.

**Idea in Brief****THE CHALLENGE**

The technology industry has a well-documented diversity problem. But previous efforts to fix it—through sweeping cultural change initiatives or well-intentioned mentoring programs—have failed.

**THE ANALYSIS**

Biases that hold women back include prove-it-again!, the tightrope, the maternal wall, and the tug-of-war. Forty years of social science research have shown that biases like these will persist unless they are interrupted.

**THE SOLUTION**

Leaders need to design “bias interrupters”—changes to essential talent management systems that stop patterns of bias in their tracks. By redesigning how rewards and assignments are handled, managers can be sure they’re retaining their best and brightest.

First, bias interrupters are based on objective metrics, whereas cultural initiatives tend to rely on earnest conversations. Second, interrupters are iterative, so they allow companies to try small interventions and then scale them up. Last, interrupters build change into the basic business systems that perpetuate bias, so they are less likely to disappear when a new CEO decides that diversity is not an imperative.

While the evidence of the effectiveness of interrupters is growing in social science literature, the effort to systematically pilot and test them in companies is just beginning. I’ve started to work with several companies, including Twitter and the Silicon Valley law firm Fenwick & West, on a model for building bias interrupters. With Jennifer Berdahl from the University of British Columbia, I’m also forming a working group to explore interrupters with other social scientists. It’s still early days, but here’s the approach I’m using to help companies identify, measure, and address diversity-related bias.

**STEP #1****Determine Whether There’s a Problem**

The first step is to find out whether women in your organization are encountering one or more of the four basic patterns of gender bias. Here’s a quick primer:

**Prove-it-again!** Women often have to provide more evidence of competence than men do to be seen as equally capable, a problem documented in scores of studies on double standards, attribution bias, leniency bias, recall bias, and polarized evaluations. About two-thirds of the 127 professional women that I and Erika Hall, now a professor at Emory’s Goizueta Business School, interviewed for the book *What Works for Women at Work* reported

prove-it-again problems. Our interviews additionally suggested that women in tech often get promoted but don’t get the title or salary that typically accompanies the new job, and that women’s technical expertise is dismissed the minute they are no longer in technical roles. “We’re constantly asked ‘if you write any code’ when speaking about technical topics and giving technical presentations, despite just having given a talk on writing code,” note the authors of the widely circulated “Open Letter on Feminism in Tech.”

**Tightrope.** This is the kind of bias faced by the female salary negotiators. High-status jobs are seen as requiring stereotypically masculine qualities, while women are expected to be modest and self-effacing, so women must walk a tightrope between being seen as too feminine to be effective and too masculine to be likable. Nearly three-fourths of the women we interviewed reported tightrope issues, with twice as many reports of “too feminine” as “too masculine” problems. Classic “too feminine” problems are large loads of “office housework”—which includes fetching documents, planning parties and conferences, and cleaning up messes, literally and figuratively—and assignments to do undervalued tasks. In tech, power and prestige lie with those who “own the code”; even very talented women end up in marketing or project management roles instead. Yet a woman risks being seen as “not a team player” if she turns away work that men are rarely asked to do. (See the sidebar “‘Housework’ vs. ‘Glamour Work.’”)

In addition, when women are direct, outspoken, competitive, or assertive—rather than “nice”—they often face a backlash, including what one researcher called “the sexual harassment of uppity women” in a study showing that dominant women actually experience the most harassment. There’s an avalanche of sexual harassment in tech, ranging from “angry e-mails that threaten us to leave the industry,

because “it doesn’t need any more c\*\*\*s ruining it” to “booth babes” and networking events held in strip clubs. This “brogrammer” culture has pushed many women out of the field. In 1985, 37% of computer science degrees were awarded to women; in 2012 only 18% were. In 1991 women held 37% of all computing jobs; today they hold only 26%. Forty-one percent of women leave tech companies after 10 years, as opposed to 17% of men.

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**Maternal wall.** Bias triggered by motherhood has dramatic effects. In one famous study subjects evaluated pairs of equally qualified candidates, one of whom was a mother. The subjects received identical résumés, but the candidate who was a mother varied. The researchers found that mothers were 79% less likely to be hired, half as likely to be promoted, offered an average of \$11,000 less in salary, and held to higher performance and punctuality standards. Another study looked at mothers who were considered indisputably competent and committed. Because of their dedication to the job, they were seen as bad mothers and bad people. As a result, they were disliked and held to higher performance standards.

A common take is that the long-hours culture drives mothers out of tech, but often what drives them out is sexism. As one woman told me, “Women...29, 30...were hitting the glass ceiling that I’ve been hitting for a long time. And if they could [afford to]..., they would just start having babies and drop out because they wanted to have kids anyway, and it’s hard to show up every day and fight and fight and fight.” While many women in tech have praised the industry for allowing flexible hours and remote working arrangements, mothers remain suspect. Take the recent flap when Marissa Mayer, the CEO of Yahoo, was late to a meeting. The only reason that story made the news is that it confirmed the stereotype that mothers aren’t suited to be CEOs. Fifty-nine

percent of the mothers Hall and I interviewed reported experiencing maternal wall bias.

**Tug-of-war.** This pattern, reported by 45% of the women interviewed, occurs when gender bias against women fuels conflict among women. Research shows that women who encounter discrimination early in their careers tend to distance themselves from other women, refuse to help them, or even align themselves with men at other women’s expense. Distancing oneself from complaints against sexism becomes an emblem of loyalty. “I’m not a girl at Google; I’m a geek at Google,” was Marissa Mayer’s standard response to questions about what it was like being one of the few female programmers at the company. Today, when asked how we can encourage more women to become engineers, Mayer responds that her focus is getting more men and women to become engineers. The Open Letter protests that its authors have been “paraded around by men in the industry for how nice we’ve been in trying to address the social problems in tech as a way to discredit more vocal, astutely firm feminist voices. We don’t like this, we’ve never liked it, and it needs to stop.”

Organizations need to find out how, if at all, these four patterns affect women’s careers internally. A good place to start is with confidential interviews or focus groups conducted by an expert in the patterns of bias. Obviously, the people in a focus group have to trust one another not to disclose who said what. One organization I’m working with has so few women that they all know one another—and already agree that there’s a problem. The idea that the women in their company already discuss these issues freely with one another often surprises male senior executives—and so do the focus group results.

## STEP #2 Identify Key Metrics

Your internal research will often bring to light ways to measure the problem, which you can use to identify a baseline and track the results of changes. In one organization in which internal referrals play a major role, women suggested an elegant metric: Ask both men and women if they got their last five opportunities from inside or outside the firm. In this organization and many others, senior men typically staff their teams with people they feel comfortable with—people like themselves. (It’s called “in-group



## “Housework” vs. “Glamour Work”

In many companies, women are expected to do disproportionate amounts of “housework,” which includes both domestic tasks, like planning parties, and undervalued tasks, such as those listed below.

INDUSTRY	HOUSEWORK	GLAMOUR WORK
High tech	Managing projects	Writing the code
Law firms	Being a “service partner” who does the actual legal work	Bringing in clients
Consulting	Managing projects, delivering work, mentoring colleagues	Developing new business, managing C-suite relationships, serving as subject matter experts
Investment management firms	Handling logistics on pitches, working for low-profile clients	Making investment decisions, executing high-profile deals, managing key client relationships
Academia	Being dean of students or on the admissions committee	Publishing in prestigious journals
Architecture	Detailing bathrooms and elevators	Visiting sites, pitching to clients, being the lead in design competitions
Surgery	Managing patient care outside the operating room	Performing surgeries
Science	Organizing and executing lab work	Strategic planning of future research direction, publishing in prestigious journals

favoritism.”) Assumptions that “men have families to support” and that “mothers do not want stretch assignments” also play a role; examining how assignments are distributed can surface some of these.

If the problem’s office housework, the metric will be different. One organization that identified this as a major issue proposed setting up a list of low-profile tasks (List A) and high-profile ones (List B). The plan was to ask men and women what percentage of their time was spent on tasks from List A versus List B.

With maternal wall bias, it’s key to track how women’s assignments differ before and after maternity leaves. At the Center for WorkLife Law, which I direct, we frequently hear that women returning from maternity leave get fewer or poor-quality assignments. (The result, of course, is that they quit.)

The right metrics will differ from organization to organization, depending on the types of bias uncovered and the strategic goals of the firm. But it does make sense to be systematic. Any firm undertaking this work should think carefully about four processes: how people are hired, how work is assigned, what happens during performance evaluations, and how compensation is determined. In addition, it should look for cultural markers that exclude outsiders. In tech, that’s the oft-celebrated “brogrammer” culture. Companies should go beyond the classic “body counts,” which simply note the number of women but don’t tell you why women didn’t get hired, why they don’t get promoted, or why they leave sooner than you want them to (if they do).

## STEP #3

### Experiment, Measure Success—and Keep Trying

Once you’ve assessed bias and identified key metrics, the next step is to interrupt the bias, see whether the metrics improve, and then—if no improvement occurs—ratchet up to stronger interventions. The ideal interrupter is like the one in the Leibbrandt/List experiment: easy to do and not requiring training on, or even a discussion of, gender bias.

Another good example of a successful interrupter comes from Google. The company’s analytics showed that women were being promoted less often than men because, to be promoted at Google, you needed to nominate yourself. Fewer women did so, presumably because modesty is so associated with

femininity that women who advocated for themselves often encountered pushback, just as with negotiation. Google’s response was to include female leaders at workshops on when and how to put yourself forward. This signaled to women that they were expected to self-promote. So they did, and the gender difference among Googlers nominating themselves all but disappeared.

One organization I’ve spoken with is concerned about whether gender bias is affecting performance evaluations. The Center for WorkLife Law proposed reading its performance evaluations to spot patterns of bias. The company’s executives sensibly suggested starting off with a staff meeting explaining that they’re committed to improving the quality of performance evaluations, and introducing the four patterns. Great idea: Accountability causes more people to interrupt automatic bias more often.

What happens if you find bias—how should you present it to the people involved in the relevant processes? Obviously, it’s important to design feedback

This work grows out of the research I did for *What Works for Women at Work: Four Patterns Working Women Need to Know* (cowritten with my daughter Rachel Dempsey), which examined whether the kinds of gender bias documented in social psychology labs shows up in real workplaces. My team interviewed 127 professional women, including 63 in science, technology, math, and engineering, and 71 women of color. Our finding: Virtually all the women interviewed (96%) reported experiencing one or more of the patterns documented in experimental studies. Only five women had not, and three of them had founded their own companies.

loops very carefully, so people don't feel they are on a forced march into political correctness. Just as the metrics and the interrupters will differ from firm to firm, so will the feedback loops. But the best tone is judgment free and evidence based: "I'll bet you're not aware that there's an inconsistency in the way you're evaluating women and men; here's a study that explains why this is common."

Where should companies begin experimenting? Again, by looking at the same core processes they examined in Step 2. Though research on and experiments with interrupters are relatively new, they suggest the following brief template:

**Hiring.** Develop job-advertisement guidelines that advise steering clear of masculine-gendered words like "competitive," "assertive," and "ambitious." Track whether those guidelines are followed. To the extent possible, give hiring managers blinded résumés, so they can't tell whether the applicant is a man or a woman. Track whether this practice changes hiring numbers. Agree in advance on standard interview questions, watch for subtle biases, and adjust the list of questions as you learn which ones work well for all candidates. A seemingly harmless question like "Tell me about a personal or professional accomplishment that best shows your strengths" can be problematic. Since women are wary of bragging (the tightrope problem), they'll often answer this question by telling you how proud they are of their kids (women are allowed to brag about their children); men will give a work-related answer and advance their cause more effectively.

**Assignments.** The gentlest interrupter is one that documents that men and women are getting different kinds of projects and offers a training on how the four patterns of bias commonly affect assignments. If that doesn't work, more robust interventions are needed, up to and including a formal assignment system. As Louise Roth points out in her study of high finance, a huge problem is the channeling of women into groups with lower revenue potential. "These firms develop mathematical models for all sorts of other things," says Roth, "so why not for dividing work evenly?"

**Performance evaluations.** Having someone who is trained in the literature on gender bias read through all performance evaluations, which Ernst & Young has done for years, can help if your analysis shows that bias is affecting them. Be sure to track whether praise differentially translates into high overall evaluations for men but not women.

Check, too, whether similar evaluations translate into greater rewards for men than for women.

**Promotion and compensation.** Systems that require people to brag will push women out onto the tightrope—disliked but respected if they do, and liked but not respected if they don't. In fact, any hiring, evaluation, or other process that requires self-promotion should take a hint from the Leibbrandt/List experiment and the Google example. Self-promotion should be cabined into formal contexts in which both men and women are sent the message that everyone is expected to tout his or her accomplishments.

Compensation systems based on objective metrics that are not easy to game offer a strong control on gender bias and give managers insight into who their most valuable players actually are. Roth's study of bankers confirmed what I've also found: Women fare best in jobs where performance is measured by objective metrics. Objectivity often suffers, however, when compensation is set by a powerful group of insiders. Law firm compensation systems, in which pay depends heavily on back-room negotiations over credit for bringing in clients, are a petri dish for bias. In a 2010 study about 30% of women in law firms reported being bullied out of receiving such credit.

**THE PROMISE OF BIAS INTERRUPTERS IS** that they allow for institutional learning and build on a critical, consistent finding: Doing anything once will not change organizational culture forever. You need to continually interrupt bias. And you need to be empirical: Keep throwing spaghetti at the wall until some sticks. Tech companies are used to spaghetti flinging, which makes them a perfect fit for an iterative process rather than one grand gesture.

What a company can't do is establish metrics, document bias, and then do nothing. That's a recipe for legal liability. But as long as companies that find bias try in good faith to remedy it, interrupters promise to be both more effective, and probably cheaper, than elaborate cultural change initiatives. And they will work a whole lot better than the other standard tools of the diversity industrial complex. Unlike women's initiatives, which often seek to fix women, and unlike stand-alone bias training, which can make diversity metrics worse, interrupters do something novel. They identify how bias is playing out in real time. And then they short-circuit it. ♥

HBR Reprint R1410H