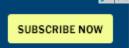


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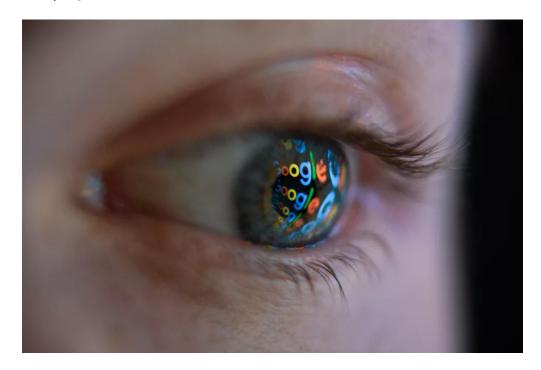
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I'm a woman in computer science. Let me ladysplain the Google memo to you.

Updated by Cynthia Lee | Aug 11, 2017, 10:20am EDT





Outside contributors' opinions and analysis of the most important issues in politics, science, and culture.

I'm a lecturer in computer science at Stanford. I've taught at least four different programming languages, including assembly. I've had a single-digit employee number in a startup. Yes, I'm a woman in tech.

I have known, worked for, and taught countless men who could have written the now-infamous Google "manifesto" — or who are on some level persuaded by it. Given these

facts, I'd like to treat it — and them — with some degree of charity and try to explain why it generated so much outrage.

At the outset, it must be conceded that, despite what some of the commentary has implied, the manifesto is not an unhinged rant. Its quasi-professional tone is a big part of what makes it so beguiling (to some) and also so dangerous. Many defenders seem genuinely baffled that a document that works so hard to appear dispassionate and reasonable could provoke such an emotional response. (Of course, some see that apparent disconnect not as baffling, but as a reason to have contempt for women, who in their eyes are confirming the charge that they are more emotional and less quantitative in their thinking.)

The memo, for instance, begins by listing "biases" of people on both the "left" ("compassion for the weak") and "right" ("respect for the strong/authority").

And, indeed, the concerns the manifesto articulates about imbalance in political leanings at Google are easy enough to nod along to. ("Alienating conservatives is both non-inclusive and generally bad business") Much of the science it cites, too, has at least some grounding in peer-reviewed research, even if the author's conclusions are not justified by the findings, failing to adequately account for sociological and other factors.

The author, James Damore, even precedes his now-notorious list of biologically driven "personality differences" with this caveat: "[Y]ou can't say anything about an individual given these population level differences."

But then he continues: "Women generally ... have a stronger interest in people rather than things, relative to men"; and that this may "in part explain why women relatively prefer jobs in social or artistic areas." He suggests that female extraversion tends to be "expressed as gregariousness rather than assertiveness," which helps explain why women have a harder time "asking for raises, speaking up, and leading."

Why do women report higher levels of anxiety at Google, according to the manifesto? Because of their gender's higher levels of "neuroticism." The stress of being a minority demographic in a sometimes-hostile environment is not acknowledged as a contributor.

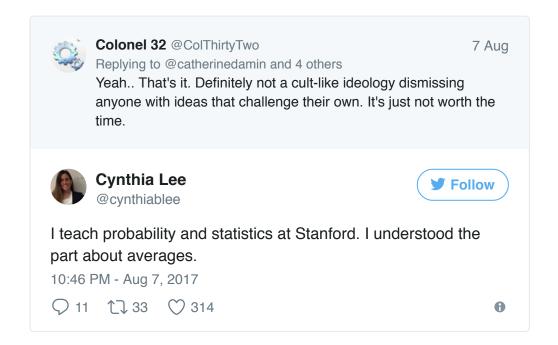
"Note that these are just average differences," the manifesto reiterates, soothingly, "and there's overlap between men and women." Here again, this studious dispassion and showy air of reasonableness create cover for the memo's defenders. They have been vociferously

arguing online that women at Google are not "average" and so they should not be offended by the manifesto's litany of citations to studies of the "average" woman's deficiencies.

So why all the outrage? A few reasons:

1) Fatigue

It's important to appreciate the background of endless skepticism that every woman in tech faces, and the resulting exhaustion we feel as the legitimacy of our presence is constantly questioned. I could fill a memoir with examples just from my own life, but the manifesto led to a few more instances. After one man on Twitter repeated that it was irrational for any one woman to take offense at a discussion of women's characteristics "on average," I responded:



That tweet captures a lifetime of being a woman in tech. (A subsequent tweeter said that, my CV notwithstanding, the "jury's still out" on whether I'm qualified.)

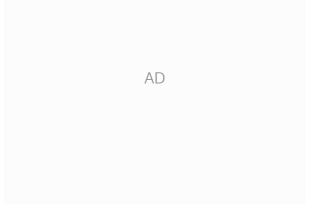
To be a woman in tech is to know the thrill of participating in one of the most transformative revolutions humankind has known, to experience the crystalline satisfaction of finding an elegant solution to an algorithmic challenge, to want to throw the monitor out the window in frustration with a bug and, later, to do a happy dance in a chair while finally fixing it. To be a woman in tech is also to always and forever be faced with skepticism that I do and feel all those things authentically enough to truly belong. There is always a jury, and it's always still out.

When men in tech listen to the experiences of women in tech, they can come to understand how this manifesto was throwing a match into dry brush in fire season.

2) Women's resistance to the "divide and conquer" strategy

The manifesto's sleight-of-hand hand delineation between "women, on average" and the actual living, breathing women who have had to work alongside this guy failed to reassure many of those women — and failed to reassure me. That's because the manifesto's author overestimated the extent to which women are willing to be turned against their own gender.

Speaking for myself, it doesn't matter to me how soothingly a man coos that I'm not like *most women*, when those coos are accompanied by misogyny against *most women*. I am a woman. I do not stop being one during the parts of the day when I am practicing my craft. There can be no realistic chance of individual comfort for me in an environment where others in my demographic categories (or, really, any protected demographic categories) are subjected to skepticism and condescension.



3) The author cites science about "averages." But Google isn't average.

I called the manifesto's citations to findings about "average" women a "sleight of hand" for a very specific reason: While he dutifully includes that limiting language when making the citations, the policies he goes on to advance in the memo have no mathematically rigorous connection to those averages. He is deploying these dispassionate facts to argue for ending Google's attempts at creating a fair and broadly welcoming working environment.

(I cannot judge what the author's motives might be in adopting this rhetorical strategy: It could be cynical and strategic, or, as I suspect, the author may simply be very, very naïve.)

The author was not simply listing various items of scientific news at random, for the reader's information only. He was building a case for ending specific, real programs that affect very real people. If his proposals were adopted, it wouldn't be some abstract concept of "average" that doesn't get a scholarship, it will be an actual individual woman. It will be an actual female Googler who doesn't get to attend the Grace Hopper Conference,

which provides many women with their first experience of being in a majority-women tech conference space.

If, as the manifesto's defenders claim, the population averages do not have anything to say about individual Googlers, who are all exceptional, then why is Google the subject of the manifesto's arguments at all? What do averages have to do with hiring practices at a company that famously hires fewer than one percent of applicants? In the name of the rational empiricism and quantitative rigor that the manifesto holds so dear, shouldn't we insist that it only cite studies that specifically speak to the tails of the distribution — to the actual pool of women Google draws from?

For example, we could look to the percentage of women majoring in computer science at highly selective colleges and universities. Women currently make up about 30 percent of the computer science majors at Stanford University, one key source of Google's elite workforce. Harvey Mudd College, another elite program, has seen its numbers grow steadily for many years, and is currently at about 50 percent women in their computer science department.

Yet Google's workforce is just 19 percent female. So even if we imagine for a moment that the manifesto is correct and there is some biological ceiling on the percentage of women who will be suited to work at Google — less than 50 percent of their workforce — isn't it the case that Google, and tech generally, is almost certainly not yet hitting that ceiling?

In other words, it is clear that we are still operating in an environment where it is much more likely that women who are biologically able to work in tech are chased away from tech by sociological and other factors, than that biologically unsuited women are somehow brought in by overzealous diversity programs.

4) Race

It is striking to me that the manifesto author repeatedly lists race alongside gender when listing programs and preferences he thinks should be done away with, but, unlike gender, he never purports to have any scientific backing for this. The omission is telling. Would defenders of the memo still be comfortable if the author had casually summarized race and IQ studies to argue that purported biological differences — not discrimination or unequal access to education — explained Google's shortage of African-American programmers?

5) The author says he's open to diversity, yet no real-world diversity-enhancing program meets his standards

Many defenders of the manifesto have eagerly, and, as far as I can tell, earnestly, pointed me to the manifesto writer's frequent claims to support diversity in the abstract, as if these are supposed to be reassuring. ("I value diversity and inclusion, am not denying that sexism exists. ...") They are not reassuring. The object of his memo is to end programs at Google that were designed, with input from a great many people who are educated and focused on this issue, to improve diversity. If those programs are killed, absent a commensurate effort to create replacement programs that have plausible ability to be at least as effective, the result is to harm diversity at Google.

He does make some recommendations, but they range from impotent ("Make tech and leadership less stressful") to hopelessly vague ("Allow those exhibiting cooperative behavior to thrive") to outright hostile ("De-emphasize empathy").

In the end, focusing the conversation on the minutiae of the scientific claims in the manifesto is a red herring. Regardless of whether biological differences exist, there is no shortage of glaring evidence, in individual stories and in scientific studies, that women in tech experience bias and a general lack of a welcoming environment, as do underrepresented minorities. Until these problems are resolved, our focus should be on remedying that injustice. After that work is complete, we can reassess whether small effect size biological components have anything to do with lingering imbalances.

For today -- given what women in tech have had to deal with over the past week — try pouring a cup of coffee for a female coder in your office, and asking her about the most interesting bug she's seen lately.

Cynthia Lee is a lecturer in the computer science department at Stanford. She founded **peerinstruction4cs.org** to support educators in flipping their computer science classrooms using peer instruction. She has a PhD in high-performance computing.

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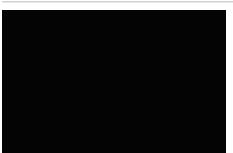
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