TECH LEAVERS STUDY

A first-of-its-kind analysis of why people voluntarily left jobs in tech

FORD FOUNDATION

KAPOR CENTER FOR SOCIAL IMPACT

AUTHORS:

Allison Scott, Ph.D.
Freada Kapor Klein, Ph.D.
Uriridiakoghene Onovakpuri, MBA

CONTRIBUTORS:

Harris Interactive Poll, Study Sampling and Methodology
Elizabeth DeRenzy, M.A, Statistical and Analytical Support
Project Include, Editorial Expertise
Susan Kelly, Design and Layout

April 27, 2017

KAPOR CENTER
FOR SOCIAL IMPACT

TECH LEAVERS STUDY

Unfairness-based turnover in tech is a $16B a year problem.

We have all heard the anecdotes: high profile stories of people leaving jobs in tech and detailing graphic accounts of toxic work environments characterized by bullying, stereotyping, sexual harassment, and racial bias. Although headline-worthy, how common are these accounts across the tech sector? Do these experiences affect retention? Does workplace culture create a revolving door for underrepresented groups? To date, there have been no representative studies of tech workplace cultures or what experiences drive employees out of the door.

The Tech Leavers Study is a first-of-its-kind national study examining why people voluntarily left their jobs in tech. The Kapor Center for Social Impact and Harris Poll surveyed a nationally-representative sample of U.S. adults who have left a job in a technology-related industry or function within the last three years.

While people leave their jobs for a variety of reasons, from the desire to seek career advancement or greater pay to a shorter commute or a change of careers, we found that **unfair treatment is the single largest driver of turnover affecting all groups, and most acutely affects underrepresented professionals.**

What's more, unfairness-based turnover in tech is a $16B a year problem. There is a high cost to bad culture, and this is a self-inflicted wound.

What did we learn: 4 key takeaways

❶ **Unfairness drives turnover**

❷ **Experiences differ dramatically across groups**

❸ **Unfairness costs billions each year**

❹ **Diversity and inclusion initiatives can improve Cculture and reduce turnover—
   if they are done right.**

"The culture was toxic. The CEO clearly lacked respect for women. Inappropriate remarks were made about women interviewing for roles in the case that the founder found them attractive. Inappropriate / sexual remarks about women were made in front of his female employees during off sites. (There was) tons of micro-management and lack of trust in the abilities of the women who worked for his company. After I left, all of the other women quit too. It was not a female-friendly company."

—Latinx, Female, Engineer

❶ Unfairness Drives Turnover. Tech employees from all backgrounds cited unfairness more than any other factor as a key driver of their decision to leave.

- Unfairness or mistreatment within the work environment was the most frequently cited reason for leaving, with 37% of the sample indicating that unfair treatment was a major factor in their decision to leave their company.

- Unfair treatment was nearly twice as likely to be cited as a factor driving turnover than being recruited away by a better opportunity (38% versus 22%).

- Underrepresented men of color were most likely to leave due to unfairness (40%).

- Unfairness is most pronounced in the tech industry: employees in tech companies were significantly more likely to leave due to unfairness than technical employees in other industries (42% vs. 32%).

- Women of all backgrounds experienced and observed significantly more unfair treatment overall than men ($p<.00$).

❷ Experiences Differ Dramatically Across Groups. While employees from all backgrounds left due to unfairness, workplace experiences differ dramatically by race, gender, and sexual orientation.

- 78% of employees reported experiencing some form of unfair behavior or treatment, while 85% witnessed or observed unfair behavior or treatment in their previous company. Women experienced/observed significantly more unfairness than men; Employees within tech companies experienced significantly more unfairness than employees in non-tech companies.

- Nearly one quarter of underrepresented men and women of color experienced stereotyping, twice the rate of White and Asian men and women. Almost one-third of underrepresented women of color were passed over for promotion--more than any other group.

- 1 in 10 women in tech reported experiencing unwanted sexual attention.

- LBGT employees were most likely to be bullied (20%) and experience public humiliation or embarrassment (24%), while White and Asian men and women were most likely to perceive unfairness in management **practices and leadership.**

- Experiencing and observing unfairness is significantly related to turnover, with the experiences most strongly related to turnover (stereotyping and bullying) being those experienced most often by underrepresented groups.

- Experiencing stereotyping and bullying/hostility was negatively related to length of employment; The more stereotyping and bullying experienced, the shorter the length of time that employees remained at their previous company.

❸ Unfairness Costs Billions Each Year, *And That's Just the Beginning.*

- Using conservative estimates based on the percentage of tech employees leaving due to unfairness in this study, unfairness alone will cost tech companies $16B per year in employee replacement costs.

- There are also reputational costs to companies due to unfairness-related turnover. Thirty-five percent of former employees said their experiences would make them less likely to refer others to seek a job at their former employer, and 25% said they would be less likely to recommend others to buy or use products and services from their former employer.

❹ Diversity and Inclusion Initiatives Can Improve Culture and Reduce Turnover—if they are done right.

- Employees indicate that improving workplace culture can improve retention. 62% of all employees would have stayed if their company had taken steps to create a more positive and respectful work environment. 57% would have stayed if their company had taken steps to make the company culture more fair and inclusive.

- When 5 common diversity and inclusion initiatives are in place, unfair experiences are significantly lower, and employees are significantly less likely to leave due to feeling mistreated.

- Having all 5 initiatives implemented (a comprehensive diversity and inclusion strategy) provided a larger reduction in unfair experiences than any single initiative alone, indicating that one-off initiatives cannot take the place of a comprehensive strategy.

What can companies do? 3 recommendations for addressing unfairness:

1. **Implement Comprehensive D&I Strategies.** Develop and implement a diversity and inclusion strategy that starts with unequivocal leadership from the CEO and executive team, is comprehensive, and implements multiple initiatives, measures the effectiveness of strategies, and allows for course-correct when needed.

2. **Create Inclusive Cultures.** Identify a set of core values, develop a code of conduct, and strive to create and continuously evaluate and improve the culture. Conduct employee surveys at regular intervals, examine data by each demographic group, provide transparency about culture issues and act upon the findings, addressing areas of concern (See: Project Include).

3. **Develop Effective and Fair Management Processes.** Audit performance management and compensation practices for potential biases and implement management training and bias-mitigating strategies (including people operations technology tools) in all stages of the employment lifecycle.

Bottom line: Diversity in tech matters—for innovation, for product development, for profits, for meeting future workforce demands, and for closing economic and wealth gaps. But unfairness, in the form of everyday behavior (stereotyping, harassment, bullying, etc.) is a real and destructive part of the tech work environment, particularly affecting underrepresented groups and driving talent out the door. With a concentrated focus on building inclusive workplace cultures, tech can save billions of dollars in financial and reputational costs, keep great talent, and finally make progress on its diversity numbers.

"I was treated as an other, excluded, and undervalued in my office. I was sat in the back of the office, I was ignored, and it was made apparent that I was a 'diversity hire.' I was told I was 'too sensitive.' I was told that other black and lesbian folks in the office didn't feel as I did, after mentioning homophobic and racist jokes being spewed in work-only chat channels. I left my employer because I was being treated unfairly as a black woman and human being."

—Black, LGBTQ, Female, Developer

For more information about the Tech Leavers Study:

kaporcenter.org/tech-leavers
info@kaporcenter.org
twitter: @kaporcenter

KAPOR CENTER FOR SOCIAL IMPACT   FORD FOUNDATION

TECH LEAVERS STUDY

**tech
leavers
study:
the
intro**

We already know that the technology sector lacks diversity.

Diversity in tech matters—for innovation, for product development, for revenue/profits, for meeting future workforce demands, and for closing economic and wealth gaps.[1] Yet, tech remains a notoriously homogeneous sector, despite billions of dollars spent in recent years to increase diversity. We know that the causes for disparities in tech are complex; biases and barriers exist throughout the tech pipeline from K-12 education through the tech workforce and venture capital. But to what extent does tech culture drive out talent, resulting in a revolving door for underrepresented groups? **The *Tech Leavers Study* is a first-of-its-kind analysis of why people voluntarily left their jobs in tech, using a nationally representative sample of 2,006 U.S. adults who have left a job in a technology-related industry or function within the last three years.**

In the last 3 years, based in part on the external pressure for data transparency and subsequent evidence that the diversity numbers in tech companies are indeed dismal, this issue has become more widely discussed, analyzed, and reported. The tech sector is now paying attention to diversity and inclusion.[2] Companies have spent hundreds of millions of dollars per year on efforts to enhance diversity (mostly focused on recruitment, hiring, and initiatives like "unconscious bias" training), without significantly changing the diversity of their workforce.[3]

- Women, Black, Latinx, and Native American professionals are vastly underrepresented in all occupations within the technology sector, in comparison to both the United States population and to the private sector as a whole.[4]

- Women make up 50% of the U.S. population and only 25% of the tech workforce; African American or Latinx adults combined make up 30% of the nation's population, but just 15% of the tech workforce.[5]

- Among the top revenue-grossing technology companies (like Apple, Google, and Facebook), Black and Latinx employees combined represent only 3-5% of all employees.[6]

- The ongoing debates about whether the lack of diversity is due to a "pipeline problem" or a "tech culture problem" has failed to accurately frame the problem: that there are a complex set of biases and barriers that begin in pre-school and persist through the workplace.[7] These cumulative biases and barriers prevent the tech ecosystem from being more diverse, inclusive, and representative of the United States population as a whole.

Despite the increased focus on workforce diversity, employee retention tends to be overlooked in the analyses of diversity within tech companies and the ecosystem as a whole. While there are numerous reasons why retention is overlooked—ranging from resistance to self-examine culture, to the multiple factors which can influence retention and create challenges in measuring retention (e.g., equity vesting)—the lack of data create challenges in understanding disparities and addressing them. Recent reports from several tech companies who have chosen to examine retention data have revealed both specific challenges with retaining diverse employees and high rates of turnover among specific subgroups, indicating that these challenges may in fact be contributing to the stagnant diversity data within tech companies.[8] Put simply, the diversity numbers may not be changing at least in part because tech companies have become a revolving door for underrepresented groups. Without a nuanced and accurate analysis of the problem, and a comprehensive roadmap for solutions, these disparities will remain largely unchanged.

But who leaves tech, and why?

Turnover Rates. Companies report headcount data to the federal government, and they are increasingly releasing their EEO-1 reports to the public, but rarely do they report on their retention data.[9] Aside from the anecdotal experiences of employees and demographic data from a few companies, we know very little about turnover across the tech sector by company or by demographic subgroups, and whether employee retention is a major contributing factor to tech's lack of diversity.

Experiences in Tech across Groups. A steady stream of blogposts, articles, and social media conversations in recent years have described a multitude of troubling and disturbing experiences within tech companies among individuals from underrepresented backgrounds. Several studies—with varying levels of rigor and sample sizes—have found that women and underrepresented people of color endure sexual harassment, stereotyping, micro-aggressions, and other forms of mistreatment at tech companies at rates higher than that of their colleagues. [10] Yet, we have not had a representative picture of what tech workplace cultures look like, how workplace experiences differ across employee groups, and how experiences vary within the categories of race and gender.

Factors Driving Turnover by Group. Beyond data about rates of turnover in the technology industry, little is actually known about what factors drive turnover for all employees in tech and what factors drive talented employees from diverse backgrounds out the door. Turnover throughout all fields is typically tied to career and financial advancement, [11] and previous research from the Level Playing Field Institute has linked workplace unfairness and negative experiences to turnover,[12] but we don't yet know how the tech environment and culture is linked to turnover, and what factors or experiences drive individuals to leave tech jobs.

Improving Retention. To improve retention, we must first attempt to fully understand what experiences and factors cause turnover, and develop strategies to intervene. Without this specific information on tech workplace culture, the experiences of different groups, and the factors driving turnover, we have limited information about how to design and implement effective initiatives/strategies that will actually work to improve hiring and retention across all groups.

"There was not enough diversity. The company had excellent benefits including free lunches, massages, and beer Friday's, but I was 1 of only 5 black people at headquarters which felt odd and I felt people looked at us when we got together. Benefits were great but I'd have rather been somewhere diverse."

—Black, Male, Data Science

the tech leavers study: the overview

Building upon on our two previous studies—the Corporate Leavers Survey in 2007 and the Tilted Playing Field: Hidden Bias in IT in 2011—and the research, reports, and personal narratives of numerous other thought leaders in tech, we embarked on the Tech Leavers Survey. Using a nationally representative sample of individuals who voluntarily left a position within tech, this study allowed us to look across companies and identify patterns in experiences and drivers of turnover across the technology ecosystem and by demographic groups. Based on prior research and understanding of complexities in career decision-making, we assumed that decisions to leave a company were not based on a single experience or factor, but rather on a series of cumulative experiences which both push and/or pull employees out of companies.

Therefore, we examined several factors contributing to turnover, the relationship between workplace environment and turnover, and how these factors differ by demographic groups. We wanted to examine diverse and underrepresented groups and look beyond just race and gender, to include intersectional analyses by race, gender, and LGBTQ-identification. We then examined the role that diversity and inclusion initiatives can play in reducing turnover–and whether evidence exists of their efficacy–to contribute data-informed recommendations for companies looking to improve their diversity and inclusion.

This study aimed to contribute to understanding about factors that affect workplace culture, satisfaction, and decision-making related to retention and turnover across all demographic groups. Using information gained through this research, we aimed to establish the importance for all tech employees to have access to fair and inclusive work environments to both improve retention and reduce reputational and financial costs associated with turnover.

the sample

The Kapor Center for Social Impact and Harris Poll conducted an online survey of a nationally representative sample of 2,006 adults who have left a job in a technology-related industry or function within the last 3 years. The sample was weighted to reflect the composition of adults across the United States, including accounting for age, gender, geographic region, race/ethnicity, income, household size, marital status, employment and education. The demographic profile of study participants was:

- **Gender**: Male (63%), Female (36%), Other (1%)
- **Race/Ethnicity**: White (73%), Latinx (11%), Black (7%), South/East Asian/Pacific Islander (6%), Native American/Alaskan Native (1%)
- **LGBTQ-Identified**: Yes (8%), No (91%)
- **Age**: 18-35 (37%), 36-45 (19%), 46-65 (33%)
- **Previous Employer in Tech Industry**: 53% worked within the technology industry (47% worked within a tech position in a non-tech industry)
- **Previous Job in Technical Role**: 68% were in a technical role in their previous company (32% were in a non-technical role)

See Appendix for a full description of the sample and research methodology

research questions

- What factors contributed to turnover among tech employees?

- What were tech employees' workplace experiences, and how did those experiences relate to turnover?

- Do professionals from diverse backgrounds have unique experiences and/or factors contributing to turnover?

- What are the financial and reputational costs to employers due to voluntary turnover?

- What practices can reduce turnover and retain tech professionals from diverse backgrounds?
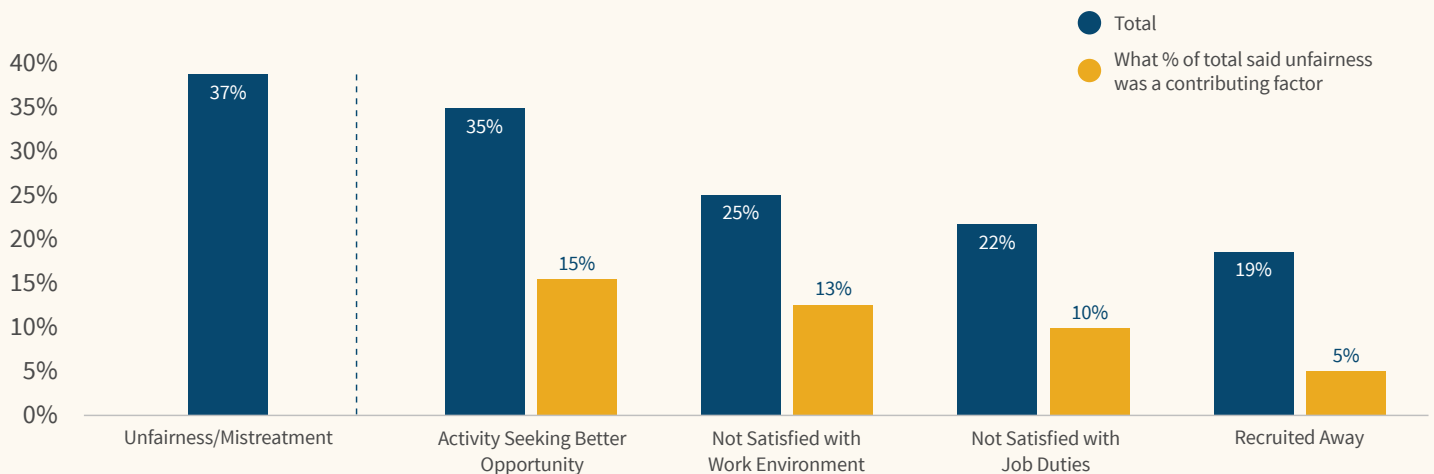
Why People Left

To examine the reasons for voluntary turnover among tech leavers, we asked employees to describe their reason(s) for leaving their employer, from a list of factors that either "pushed" or "pulled" them out of their previous workplace.[13] Here is what we found:

- Unfairness or mistreatment within the work environment was the most frequently cited reason for leaving, with 37% of the sample indicating that unfair treatment was a major factor in their decision to leave their company. (Figure 1).

- Unfair treatment was cited more frequently as a reason for leaving than actively seeking a better opportunity (35%), dissatisfaction with the work environment (25%), being recruited away (22%) or dissatisfaction with their job duties/responsibilities (19%). In fact, individuals were almost 2x as likely to leave due to unfair treatment than to be recruited away from an employer (Figure 1).

- Among the individuals who left their previous employer for other reasons, a portion also cited unfairness in their decision. 15% of the 35% of employees who left to seek a better opportunity indicated that unfairness contributed to the decision to leave. Roughly 25% of those who were recruited away indicated that unfair treatment played a role in their decision (Figure 1).

Figure 1. Which of the following describes the reason(s) you left your previous employer?

- Total
- What % of total said unfairness was a contributing factor

	Total	Unfairness contributing factor
Unfairness/Mistreatment	37%	
Activity Seeking Better Opportunity	35%	15%
Not Satisfied with Work Environment	25%	13%
Not Satisfied with Job Duties	22%	10%
Recruited Away	19%	5%

"I was uncomfortable with several aspects of the work environment…There was a 'boys club' mentality and lots of discrimination against women. I liked my team a lot, but another company reached out with an ideal position that seemed like a better work environment and had better career opportunities."
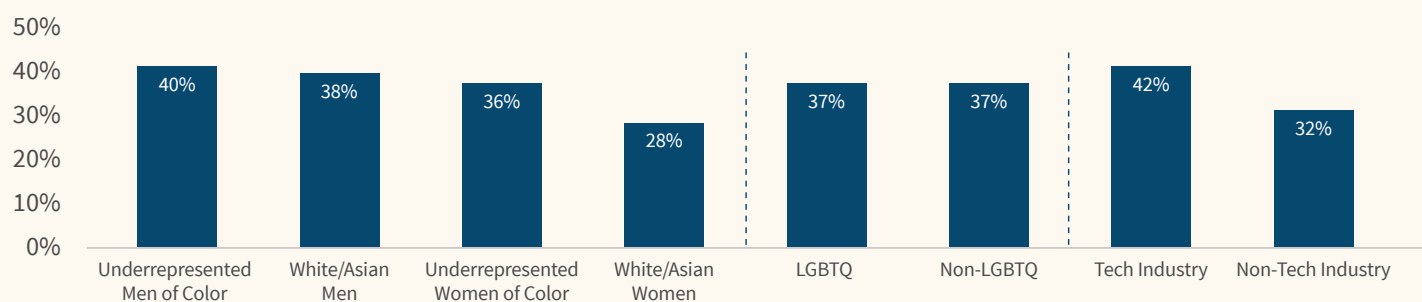
—White, Female, Director of Product

Unfairness by Subgroups

When examined by subgroups, differences were noted in which employees left due to unfairness (Figure 2).

- Underrepresented men of color were most likely to leave due to unfairness (40%) at a rate slightly higher than White/Asian men (39%). Women of color were more likely to cite unfairness as a major reason for leaving than White and Asian women (36% vs. 28%).

- Unfairness was more pronounced in the tech industry: Employees in the tech industry were significantly more likely to leave due to unfairness than technical employees in the non-tech industry (42% v 32%, p<.00)

- Within tech, technical employees were significantly more likely to leave due to unfairness than those in non-technical positions (40% vs. 32%, p<.00).

Unfair treatment plays a critical role in the decision for tech employees to leave their jobs and search for a new employer. While the hot job market is typically blamed for high rates of turnover in tech, this data suggests it is a bit more complicated: experiences with unfairness are actually driving many employees to leave, particularly employees within tech companies.

Figure 2. Who left due to unfairness?

Underrepresented Men of Color	40%
White/Asian Men	38%
Underrepresented Women of Color	36%
White/Asian Women	28%
LGBTQ	37%
Non-LGBTQ	37%
Tech Industry	42%
Non-Tech Industry	32%

"There was a multi-year pattern of young affluent white males who lacked skills and experience being unfairly sponsored, fast-tracked through promotions, and handed top choice of high profile projects. I was forced to compete on an uneven playing field where opportunities for growth and advancement were unlikely. I left the company for a more diverse and inclusive organization."

—Chinese, Female, Engineer

Same Workplaces, Different Experiences

Given that 37% of employees cited unfairness as a major factor in their decision to leave, we wanted to further explore a set of experiences related to unfair treatment in the work environment to understand which were most frequent and which groups of employees were most impacted by these experiences. Four categories of unfair treatment, behaviors, and experiences were explored: (1) Unfair people management practices, (2) Stereotyping, (3) Sexual Harassment, and (4) Bullying/Hostility (Appendix, Table 3).[14]

Overall Experiences

- 78% of employees reported *experiencing* some form of unfair behavior or treatment, while 85% *witnessed or observed* unfair behavior or treatment in their previous workplace.

- Women of all backgrounds experienced and observed significantly more unfair treatment overall than men (p<.00, Appendix, Table 2)

- Individuals in the tech industry experienced and observed more unfairness than those employed in non-tech industries (p<.043; Appendix, Table 2). This suggests that tech companies may have significantly more challenges in both culture and employee treatment.

- Unfair experiences were perpetrated by senior-level employess, significantly more often than junior, mid, or executive level employees. (p<.00)

Unfair People Management Practices

- White and Asian women had the highest rates of dissatisfaction with their company's leadership and management (47%)–significantly higher than underrepresented women of color (32%) and White and Asian men (38%).

- White and Asian men experienced significantly higher rates of unfair management practices than underrepresented men of color, particularly in experiencing poor leadership, being given work assignments below their job level (p<.01), and having others take and receive credit for their work. (p<.05, p<.001)

- 30% of underrepresented women of color reported being passed over for promotion, a percentage significantly higher than White or Asian women (p<.05), White and Asian men (p<.05) and underrepresented men of color (p<.01, Figure 3)

Figure 3. Unfair Management Practices
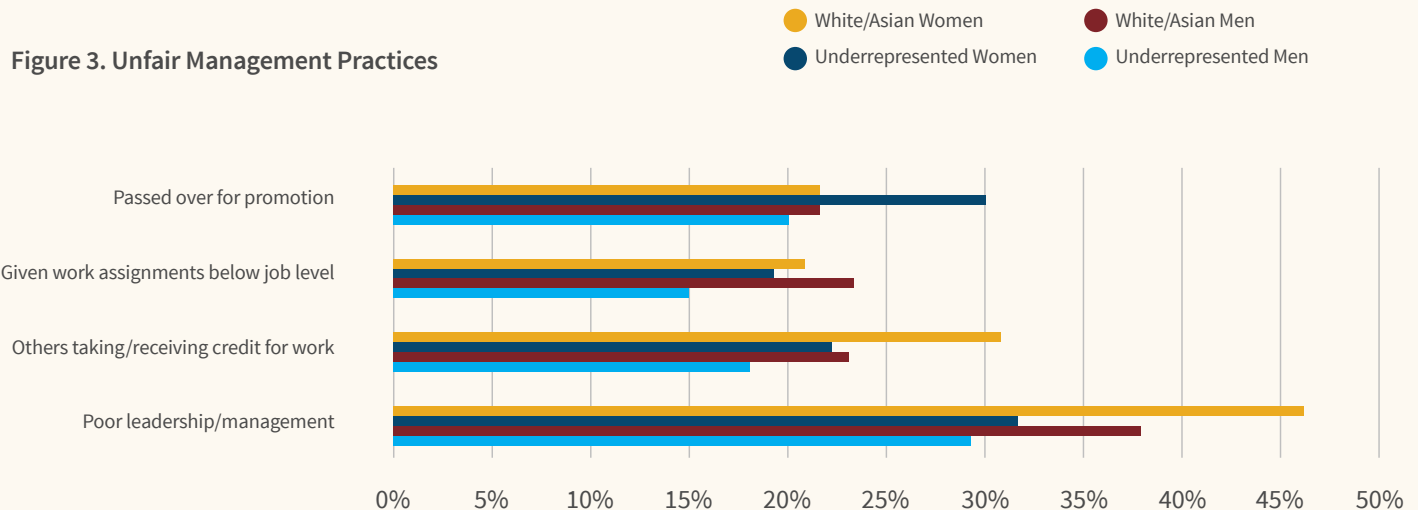
Stereotyping

- Nearly 25% of underrepresented people of color (both men and women) experienced stereotyping in their previous job (Figure 4).

- Underrepresented men and women experienced stereotyping at rates almost twice as high as White/Asian men (14%) and White/Asian women (12%, p<.01).

Sexual Harassment

- 1 in 10 women in tech reported experiencing unwanted sexual attention in the job they most recently left (Figure 5).

- Women of all backgrounds were significantly more likely to experience unwanted sexual attention than their male counterparts (10% vs. 8%, p<.005).

- Unwanted sexual attention is reported at rates almost twice as high among employees in the tech industry vs. tech employees in other industries (10% vs. 6%, p<.001).

Figure 4. Stereotyping

Legend:
- White/Asian Women
- Black/LatinX Women
- White/Asian Men
- Black/LatinX Men

Categories:
- Stereotyping
- Stereotypical questions about demographic background
- Assumptions about skills/ailities
- Mistaken Identity

Axis: 0%, 5%, 10%, 15%, 20%, 25%, 30%

Figure 5. Sexual Harassment

Legend:
- Male
- Female
- Tech Industry
- Non-Tech Industry

Categories:
- Male
- Female
- Tech Industry
- Non-Tech Industry

Axis: 0%, 2%, 4%, 6%, 8%, 10%, 12%

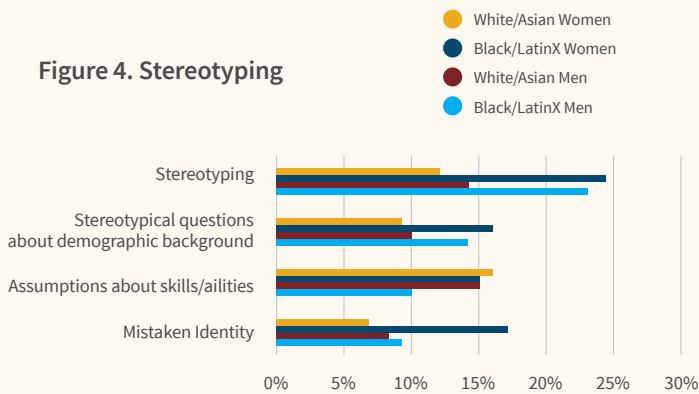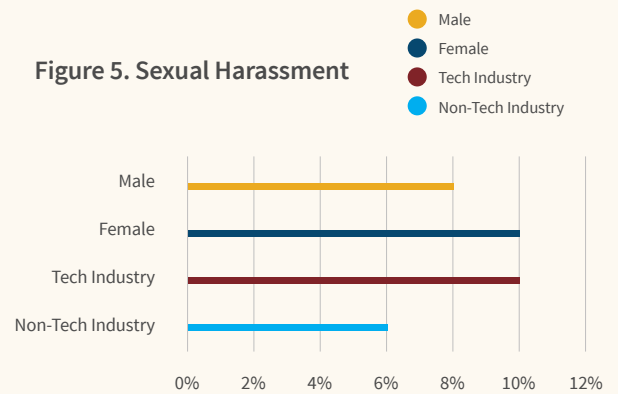> *"My employer assumed I knew Ebonics because I was Black. She also assumed I would be okay with coded language around affirmative action and implying that people of color get in to schools more easily than white people. I shared this feedback with her during my exit interview."*
>
> —Black, Female, Engineer

Bullying/Hostility

- LBGTQ employees were most likely to be bullied (20%) and experience public humiliation or embarrassment (24%), both at significantly higher rates than non-LGBTQ employees (13%, p<.01).
- White and Asian males experienced bullying (16%), public humiliation (16%), and rudeness (25%) more frequently than underrepresented men (9%, 11% and 19%, Figure 6).
- Bullying and hostility were most often perpetrated by senior-level employees (53%)

Summary of unfair experiences

While employees from all backgrounds experienced unfair treatment in their previous workplace, it is clear that employees from underrepresented and diverse backgrounds faced unique challenges. While White and Asian men and women were most likely to experience unfair management practices which had to deal with day-to-day employment experiences like work assignments, underrepresented groups experienced much more negative treatment specific to their racial/gender backgrounds (stereotyping and sexual harassment). Bullying and hostility affected all groups, which suggests these behaviors are more indicative of a toxic workplace culture, but LGBTQ employees were affected most acutely. These data demonstrate that workplace experiences differ dramatically by race, gender, and sexual orientation. Understanding the relationship between these experiences and employee turnover and retention is the next step in understanding the underrepresentation of diverse groups in the tech ecosystem.

Figure 6. Bullying and Hostility
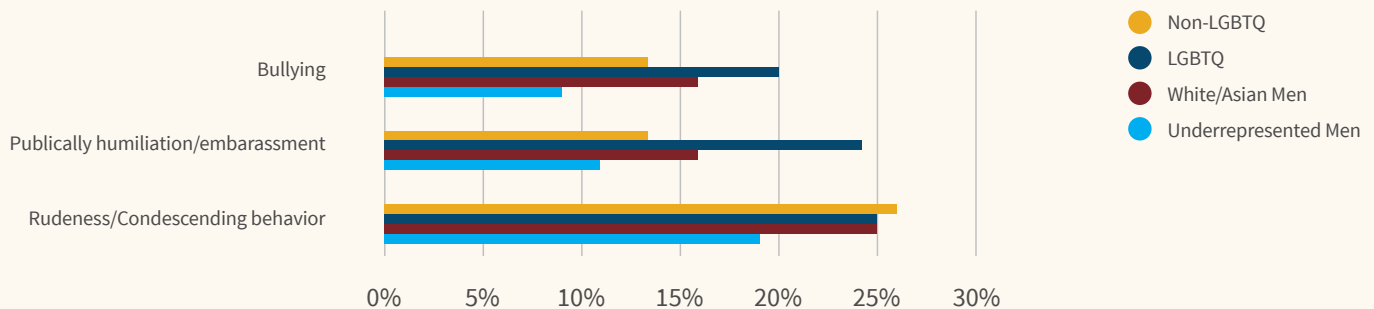
"There were a lot of rude and condescending employees that treated me like I was less competent. The general culture there also wasn't diverse, so I struggled fitting in and making friends… I felt very isolated... Especially working in a company where the majority of employees considered themselves to be politically liberal and inclusive, yet minorities represented a small fraction of the workforce. I felt resentful."

— Latinx, Female, UX Developer

How Unfairness Contributed to Turnover and Retention

Next, we explored the relationship between personally experiencing and/or observing unfair treatment within the work environment and the decision to leave that company.

Unfairness and turnover

Experiencing unfairness significantly increased the likelihood of citing unfairness as the reason for leaving, with stereotyping and bullying/hostility being the experiences that were the strongest predictors of leaving due to unfairness (p<.00). The more stereotyping and bullying employees experienced, the higher the rates of employees' leaving due to unfairness. O*bserving* unfair treatment in the form of stereotyping, bullying, and sexual harassment was also significantly related to leaving due to unfairness, suggesting that the impact of negative treatment and workplace culture extends beyond those with personal experiences of unfair treatment and also affects turnover decisions among one's colleagues (p<.00; Appendix Table 4).

For LGBTQ employees, being bullied was the strongest predictor of leaving due to unfairness (p<.0), and 64% of LGBTQ employees who were bullied said the experience contributed to their decision to leave. For underrepresented men and women of color, being stereotyped was the most significant driver of leaving due to unfairness (p<.0), and 35% who experienced being stereotyped said it contributed to their decision to leave. Fifty-seven percent (57%) of those who experienced unwanted sexual attention said that these experiences contributed to their decision to leave their previous company.

Unfairness and retention

Stereotyping and bullying/hostility were the only two categories of behaviors that were strongly correlated to length of employment, indicating that the more stereotyping and bullying experienced, the shorter the length of time that employees remained at their previous company. Experiencing unfair management and observing unfair treatment both had the opposite effect, with more experiences of unfair management being correlated with staying longer, suggesting that these experiences are associated with being employed with a company for longer periods of time or that these experiences are not major drivers of decisions to leave (Appendix, Table 5).

The relationships between negative and unfair experiences and turnover and retention are clear: the more frequent the experiences that employees have with unfair treatment, the more likely they are to leave. While all employees in this sample were "tech leavers," what differentiates those leaving due to unfairness are the specific reasons for their departure.

"I was treated as an other, excluded, and undervalued in my office. I was sat in the back of the office, I was ignored, and it was made apparent that I was a 'diversity hire.' I was told I was 'too sensitive.' I was told that other black and lesbian folks in the office didn't feel as I did, after mentioning homophobic and racist jokes being spewed in work-only chat channels. I left my employer because I was being treated unfairly as a black woman and human being."

—Black, LGBT, Female, Developer

tech
leavers
study:
the
costs

The Astounding Costs of Unfairness

Unfairness costs companies an estimated $16B per year.

The costs of turnover due to unfairness in workplace culture are staggering. Based on current estimates of average costs for replacing professional employees, each person who leaves a tech job will cost companies an average of $144,000 per employee for full replacement costs (lost productivity, recruiting costs, salary, etc.). Nearly 40% of this sample of tech employees reported leaving their jobs due to unfairness. Based on this data, the annual yearly estimated cost to tech employers for turnover due to unfairness totals over **$16 billion per year**. What would the cost look like for an individual company? If we assume a large tech company pays engineers an average salary of $100,000 and it employs 10,000 engineers, even with a lower turnover rate (5%) and turnover rate due to unfairness of 37%, that company alone would lose **$27 million** per year by allowing their workplace culture to drive talent out the door.

Beyond the financial costs, there are additional reputational costs to companies due to unfairness-related turnover. Within this study, 35% of former employees said their experiences would make them *less likely* to refer others to seek a job at their former employer, and 25% said they would be *less likely* to recommend others to buy or use products from former employer. This adds significantly to the $16 billion annual price tag for replacing employees.

Financial Costs of Turnover Due to Unfairness/Mistreatment

Race/Ethnicity	% of 2016 Computing Workforce	# of 2016 Computing Workforce	# Leaving due to Voluntary Turnover (6.15%)	Turnover rate due to unfairness	# Leaving due to un-fairness	Cost for Making and Engineering Hire ($17,000)	Full Replacement Costs at 1.5x Average Salary ($144,834.24)
White	70%	3,483,900	214,260	35%	74,991		
Asian	18%	895,860	55,095	44%	24,242		
Black	8%	398,160	24,487	34%	8,326		
Other	4%	199,080	12,243	34%	4,163		
Latinx (of any race)	7%						
Total		4,977,000	306,085	37%	111,722	**$1,899,274,000**	**$16,181,170,961**

See Appendix 2 for a full description of methodology

What Can Companies Do?

Tech leavers indicate improving fairness can improve retention for all groups.

Employees in this sample were asked to indicate the likelihood that they would have stayed at their previous company if the company addressed various reasons for leaving. Findings demonstrate that improving the fairness, inclusion, and positive culture of their workplace environment could have also influenced them to stay:

- **62%** of all employees would have stayed if their company had taken steps to create a more positive and respectful work environment.

- More than half of the sample said they would have been likely to stay had their company taken steps to make the company culture more fair and inclusive (**57%**). Underrepresented people of color were significantly more likely to stay if the culture became more fair and inclusive when compared to White/Asian employees (64% compared with 54%), p<.001 .

- **73%** of all employees indicate they would have stayed at their previous company if they were offered greater compensation, a promotion or increased responsibility (67%), or witnessed an improvement in the effectiveness of management and leadership (69%), suggesting the importance of improving management practices.

Each of these findings have a consistent theme of fair treatment—from being given a title and responsibilities consistent with one's abilities, and a promotion when deserved, to being able to work in a respectful and inclusive environment and not treated unfairly based on demographic characteristics. So how can companies ensure fair treatment of all employees, particularly those from underrepresented backgrounds?

Examining the impact of diversity and inclusion initiatives

In the last several years, tech companies have begun to implement initiatives to improve their diversity numbers, while inclusion strategies—to ensure employees feel, included, and satisfied—have been adopted by fewer companies and received less overall attention. Given the earlier findings, which demonstrate that unfair treatment and a culture of disrespect drive employees out the door, we examined whether having diversity and inclusion initiatives in place made any substantive difference in employee experience. We explored five common diversity and inclusion initiatives: (1) Having a Diversity and Inclusion director, (2) Setting explicit diversity goals, (3) Paying bonuses for employee referrals of candidates from underrepresented backgrounds, (4) Conducting unconscious bias training, (5) Establishing Employee Resource Groups (ERGs). [15]

tech leavers study: D&I initiatives

Having a comprehensive diversity and inclusion strategy in place—one which implements all 5 of the above practices—demonstrated promising findings for reducing unfairness (Appendix, Table 6). When all 5 diversity and inclusion initiatives are in place:

- Overall **experiences of unfairness** and mistreatment were significantly lower, demonstrating that diversity and inclusion initiatives can improve the work environment for all employees. (p<.000)

- **Sexual harassment, bullying, and stereotyping were significantly lower**, which were some of the behaviors most closely linked to turnover and retention for underrepresented groups. (p<.000)

- Employees were significantly **less likely to leave** due to unfairness or mistreatment.

- Diversity and inclusion initiatives did not decrease unfair people management practices, in the form of promotions, job assignments, and related day-to-day work, suggesting that alternative interventions to specifically address management training and practices are needed. (p<.06)

Most importantly, having all 5 initiatives implemented (a comprehensive diversity and inclusion strategy) provided a larger reduction in unfair experiences than any single initiative alone. (Appendix, Table 7)

We wanted to further understand whether individual diversity and inclusion initiatives impact specific forms of unfairness, or whether there are greater benefits to having a comprehensive set of interventions. There were mixed findings, indicating some strategies were effective in reducing certain types of behaviors, and others were not (Appendix, Table 8):

- **Unfair People Management Practices:** None of the diversity and inclusion initiatives significantly reduced experiences of unfair people management practices.

- **Bullying/Hostility**: Unconscious bias training was the only initiative that did not significantly reduce bullying and hostility.

- **Stereotyping**: All of the diversity and inclusion initiatives were significantly associated with fewer experiences of stereotyping, although none had as strong of an effect as having all 5 together.

- **Sexual Harassment**: All of the individual diversity and inclusion initiatives significantly decreased experiences of sexual harassment, although having all 5 implemented together had a stronger impact than any one alone.

"Actually increase the number of underrepresented minorities. Altering the company culture so that those people were equally supported in their roles and given equal opportunities to succeed. This includes addressing discrimination and harassment in the workplace and penalizing people who are engaging in discrimination and harassment no matter their level in the company. This also includes fair and equal pay. Pay and promote people according to contribution instead of incentivizing them to comparison shop for other offers to continue earning market rates."

—Chinese, Female, Engineer

tech leavers: the summary

This nationally representative data provides a unique lens into the technology culture and ecosystem. The findings are clear: unfair treatment is a significant driver of turnover across all employees, and underrepresented employees face different forms and larger cumulative amounts of unfair treatment, indicating that tech workplace culture indeed appears to be exacerbating the challenges to tech workforce diversity and pushing talent out of the door. The findings have revealed four key takeaways:

❶ Unfairness Drives Turnover in Tech

Unfair treatment was employees most frequently cited reason for leaving their previous company, with 37% leaving for this reason. Unfair treatment was cited more than 2x more frequently than being recruited away by a better opportunity. Experiencing and observing unfairness, in the forms of unfair people management practices, stereotyping, sexual harassment, and bullying/hostility, was directly tied to turnover and negatively related to retention. And yet, 57% of tech leavers said that they would have stayed if their prior employer had addressed the workplace environment and created a more fair and inclusive culture. This finding suggests that workplace culture not only drives turnover, but is also closely tied to retention solutions.

❷ Experiences Differ Dramatically Across Groups

While employees from all backgrounds left due to unfairness, their actual experiences within tech workplaces differed substantially. Underrepresented people of color experienced stereotyping roughly 2x more than White employees. LGBTQ employees were more likely to experience bullying than any other group. 1 in 10 women experienced unwanted sexual attention, and were significantly more likely to endure these experiences than men. Underrepresented women of color were most likely to be passed over for promotions. White and Asian men and women were most likely to perceive unfairness in management practices and leadership. While all groups experienced various forms of unfairness, the experiences which were most strongly related to turnover (stereotyping and bullying) were most often experienced by underrepresented groups. Also, the greater the cumulative number of experiences, the more likely employees were to leave due to unfairness, and women experienced significantly more unfairness than men.

❸ Unfairness in Tech Costs Billions Each Year

Based on the percentage of tech employees leaving due to unfairness in this study, unfairness alone will cost tech companies $16B per year in employee replacement costs. This does not include reputational costs associated with employees less likely to refer colleagues for open positions or to recommend the use of their products or services from their former employer . And given that unfair treatment is far more prevalent in tech companies than in non-tech companies, talented employees who have had negative experiences and choose to leave the sector altogether, can add to the loss of talent and innovation.

❹ *Comprehensive* Diversity and Inclusion Initiatives Can Improve Culture and Reduce Turnover

When diversity and inclusion initiatives are in place, unfair experiences are significantly lower, and employees are significantly less likely to leave due to feeling mistreated. Having a comprehensive diversity and inclusion strategy in place has a much greater impact than having single efforts/initiatives. A comprehensive approach with all 5 of these efforts tightly linked and supported with strong commitment decreases experiences of unfair treatment and ultimately decreases turnover due to unfairness. Individual initiatives have some impact on certain areas, and not on others, indicating that single initiatives cannot take the place of a comprehensive diversity and inclusion strategy.

tech leavers study:
the recommendations

Understanding the complexity of what drives turnover for different groups in tech is only half of the battle; the hard work involves addressing the challenges head-on and implementing comprehensive and rigorous solutions. It will take strong commitments from leadership, buy-in at all levels, and consistent monitoring of the effectiveness of solutions to shift cultures, enhance diversity and inclusion, and create fair environments for all employees to thrive. Addressing underrepresentation in tech must start first with these hard cultural changes within companies. Here are our recommendations for where to start:

1. Implement Comprehensive D&I Strategies

- Develop and implement a comprehensive diversity and inclusion strategy that starts with unequivocal leadership from the top and is customized and aligned to your company's values, culture, and business model. Leadership from the CEO and executive team on diversity and inclusion is critical to the success of any initiatives.

- Ensure the strategy is comprehensive and implements multiple, interrelated initiatives rather than taking a one-off approach. Don't take the easy road: the potentially controversial, and less widely implemented strategies (e.g., establishing specific diversity goals and offering employee referral bonuses for underrepresented talent) require a much more sophisticated explanation and implementation plan, and therefore tend to signal a genuine commitment from the top.

- Treat diversity and inclusion as a business strategy: Try innovative approaches, measure the effectiveness of the strategies you implement, and course-correct when needed.

2. Create Inclusive Cultures

- Strive to create a welcoming culture where differences are valued, empathy is practiced, and respect is fundamental. Identify core values, describe the boundary between appropriate and inappropriate behaviors in the workplace (and all work-related settings), and articulate the expectation of each employee in respecting the boundaries set by their colleagues and company.

- To find out which employees feel excluded and mistreated, and why, conduct customized, methodologically rigorous surveys at regular intervals, examine the data by each demographic group, with a focus on intersectionality, and provide transparency about culture issues and related challenges facing employees.

- Collecting data is only the first step; companies must be willing to address the problems that are revealed by surveys and be prepared to discipline people who violate company values and drive talent away—regardless of their ability or seniority.

- Develop and maintain open and confidential communication and complaint channels for employees should also be a critical part of the strategy. Formal and informal complaint channels can allow issues of bias, unfair treatment and exclusion to be expressed and handled quickly before they escalate and to remedy problematic behavior.

3. Develop Effective and Fair Management Processes

- Audit current compensation and performance management practices for potential biases. Since underrepresented women of color in this study were most likely to report being passed over for promotion—and then leaving—it is critical to audit current promotion practices at regular intervals, and act on the findings.

- Establish a rigorous and customized performance management system and compensation structure and practices, to fairly determine compensation, work assignments, performance reviews, and promotions, while removing biases and barriers affecting different groups of employees.

- Develop and implement customized management training which addresses biases and bias-reduction strategies. Consider the use of people operations technology tools to remove bias in all stages of the employment lifecycle, particularly for mid- and senior-level management.

Check out <u>Project Include</u> for a set of recommendations for defining and implementing inclusive cultures, and People Ops Technology companies which aim to mitigate bias from interviews and performance evaluations and develop inclusive talent management using tech tools.

APPENDIX 1. Sample Demographics

Table 1. Sample Demographics *Total Sample: n=2,006 respondents*	PERCENTAGE (%)
Race/Ethnicity	
White	73%
African American/Black	7%
Hispanic/Latinx	11%
South/East Asian	5%
Filipino/Pacific Islander	1%
Native American/Alaskan Native	1%
Other/Decline to Answer	2%
Gender Identity	
Male	63%
Female	36%
Trans/Genderqueer/Questioning/Other	1%
LGBTQ	
LGBTQ-identified	7%
Non-LGBTQ identified	91%
Other/Decline to Answer	2%
Age	
18-25	10%
26-35	27%
36-45	19%
46-55	14%
56-65	19%
65+	11%
Income	
<$34,999	20%
$35,000-74,999	28%
$75,000-124,999	31%
$125,000-199,999	12%
$200,000<	3%
Decline to answer	5%
Region	
West	26%
Midwest	20%
East	23%
South	31%
Immigrant Status	
Born outside U.S.	13%
Born in the U.S.	87%
Education	
Less than HS Graduate	2%
HS Graduate	9%
AA Degree/Job Training Degree	12%
Some College (no degree)	15%
4-Year College Degree	32%
Some Graduate School (no degree)	6%
Graduate Degree (MBA, MS, M.D., Ph.D.)	23%
Current Job Level	
C-Suite Executive/President/Partner	15%
Senior Vice President/Vice President	7%
Director/Manager	28%
Senior/Mid-Level Contributor	25%
Entry-Level Contributor	19%
Other	6%
Note: Percentages may exceed 100% due to rounding	

Table 2. Previous Employer Characteristics *Total Sample: n=2,006 respondents*	PERCENTAGE (%)
Industry of Former Employer	
Technology	53%
Non-Technology	47%
Job Function at Previous Employer	
Engineering	27%
Information Technology/Data Security	28%
Design/Product Management/QA	11%
Other Technology Function	13%
Business Dev/Strategy/Operations	5%
Admin/HR/Legal	6%
Sales/Marketing/Communications	4%
Other Function	6%
Size of Previous Employer	
<51 Employees	16%
51-100 employees	12%
101-500 employees	20%
501-1,000 employees	14%
1,001-5,000 employees	15%
5,000 Employees<	24%
Note: Percentages may exceed 100% due to rounding	

APPENDIX 2. Definitions, Methodology, Limitations

Unfairness: Unfairness was intentionally undefined for participants, since we were most interested in their experience and perception of an event, rather than determining whether the experience or perception met an objective standard of unfair treatment. Participants were asked to indicate, on a scale of 1-10, to what extent was unfairness or mistreatment a factor in their decision to leave their previous company (1=not at all a reason,10=the only reason). A set of unfair behaviors/experiences were developed by the authors of the study based on prior research and applied experiences within technology companies, and included the following categories: People Management Practices, Sexual Harassment, Stereotyping, and Bullying/Hostility. Participants were then asked to describe their experience or observations with each type of behavior. Additional information on these categories can be found in the methodology section.

Technology Sector/Industry: Acknowledging that technology crosses all sectors and the technology industry is becoming increasingly difficult to define, we chose to first consult the both consult the industry classifications and the description of the High-Tech Industry from the Bureau of Labor Statistics, and then construct a broad list of industry types and categories, which included both technology and non-technology related sectors/industries. We asked participants to choose which industry category best described the primary industry of their previous company. The following categories were defined as the "Tech Industry:" High-tech, Information Technology, Engineering, Bio-Technology, or E-Commerce. Non-Technology Industry categories included: Manufacturing, Construction, Agriculture, Retail, Finance, Transportation, Healthcare, Government, Education, Marketing, Aerospace, Defense. This study examined differences between tech (as an industry cluster) and non-tech environments. The terms tech industry and tech sector are used interchangeably in report.

Culture: Culture is utilized throughout the study as a broad term attempting to describe a set of behaviors, attitudes, and practices within workplaces.

Underrepresented: Underrepresented is used to describe racial/ethnic and gender populations that are underrepresented in the technology sector relative to their overall population in the U.S. workforce. The term underrepresented people of color distinguishes between individuals who may self-identify as people of color and the groups of people of color that are statistically underrepresented within the tech sector, relative to their overall population. Within this study, underrepresented racial/ethnic groups include African American/Black, Latinx, and Native American/Alaskan Native, and underrepresented gender groups include women and non-binary individuals. While we recognize that East Asian, South Asian, and Pacific Islander employees may have similar and unique experiences to White employees, we chose to focus on differences between over- and under-represented groups in tech in this study. See the limitations section for a broader discussion.

Study Methodology

This study was conducted by Harris Poll on behalf of the Kapor Center for Social Impact (KCSI) in the United States between December 19, 2016 and January 19, 2017. Harris Poll and the Kapor Center for Social Impact jointly constructed a 15-30 minute online survey questionnaire with 40 quantitative and 4 qualitative/open-ended questions covering six topic areas: (1) Sample Demographics, (2) Reasons for Leaving Previous Employer, (3) Perceptions of Practices at Previous Employer, (4) Perceptions of Diversity and Inclusion at Previous Employer, (5) Negative Experiences within Previous Workplace, and (6) Potential Retention Factors.

The final sample included 2,006 United States residents, ages 18+, who have left a job in a technology-related industry or left a technology function within the last three years. Respondents met sample criteria if they were in the last 3 years: (1) Employed in a technology-related industry, defined as: Information Technology/High-Tech, Engineering, Bio-Technology, Aerospace/ Defense or E-Commerce, OR (2) Employed in a technology-related function at prior employer, defined as: Engineering, Technology, Information Technology, Data Security, Design/Product Management/Quality Assurance, or Other Technology Function. Respondents were asked to answer the questions related to the job they most recently left. The data have been weighted to reflect the composition of adults across the United States, including weighting for age, gender, geographic region, race/ethnicity, income, household size, marital status, employment and education, when necessary to align them with their actual proportions in the population. Because the sample is based on those who agreed to participate in the Harris Poll panel, no estimates of theoretical sampling error can be calculated. The incidence rate for qualified respondents among the U.S. adult population is 4%, indicating that approximately 4% of the U.S. adult population met the sampling criteria. Propensity score weighting was used to adjust for respondents' propensity to be online.

To gather additional qualitative information about the experiences of diverse professionals within the tech sector, an additional sample of 254 respondents were recruited from networks of affinity groups and diverse community groups and completed the survey between January 3, 2016 and January 31, 2017. These respondents received an incentive of a $15 Amazon. com gift card or a $15 donation to the charity of their choice for participation. This sample was not weighted, and was a convenience sample intended to gain access to more diverse tech professionals, beyond the percentage who participated in the national sample. Since the sample was unweighted and non-representative of the broader U.S. population, the qualitative data were the only data utilized from this sample.

Data were analyzed by researchers at the Kapor Center for Social Impact. Descriptive analyses were conducted to examine frequencies and means of experiences across the sample and by subgroups. Subgroup analyses were conducted to examine experiences by gender, race/ethnicity, LGBTQ-identification, and industry type. Significance testing was used to determine whether group differences were statistically significant (at the $p<.05$ level), and findings meeting this criteria are reported as "significant differences." Several variables were also combined into scales to examine cumulative experiences (summing unfair experiences and summing observed unfairness), and the presence of diversity policies/practices (summing all 5 individual practices). Correlation and regression analyses were used to examine relationships between variables and determine direction of relationships. All analyses were conducted using weighted data. All analyses, interpretations, and conclusions are those of the Kapor Center and not reviewed or endorsed by Harris Poll.

Methodology: Calculating Financial Costs of Turnover

To calculate the financial costs of turnover, we calculated the total number of individuals who voluntarily leave the computing workforce each year (using a 6.15% yearly turnover rate) and then multiplied this number by the rate of leaving due to unfairness which was uncovered in this study (37% of those who voluntarily left, left due to unfairness). The number of individuals leaving due to unfairness each year is then multiplied by the cost of making an engineering hire ($17,000) and the full replacement costs for full-time employees (1.5x annual salary, at $144,834.24). The full methods are described below.

1. Calculated the total number of individuals employed in computer occupations in 2016. According to the BLS Computer and Mathematical Occupations in 2016, and subtracting the mathematical occupations and adding computer and information systems managers, there were 4,977,000 total employed in computer occupations in 2016. Source: BLS (2016) Labor Force Statistics from Current Population Survey.

2. Calculated the total number of each racial/ethnic group (White, Black, Asian, Latinx, and Other) who were employed in computer occupations in 2016. The total percentage of each race/ethnic group was retrieved from the Census Bureau and the number was then calculated by multiplying the percentage of each group by the overall total.
Source: U.S. Census Bureau (2016) Occupations in Information Technology.

3. Calculated the total number of individuals voluntarily leaving computing jobs each year. According to the Bureau of Labor Statistics, the average rate of yearly turnover ("quit rates") across professional and business services is 3.2%. "Quit rates" include voluntary separations by employees, except for retirements across professional and business services. Additional estimates of turnover specifically in tech are much higher, from 9.1% up to 15%. Using a conservative estimate, we averaged the two lowest estimates (3.2%) and (9.1%) to get an average yearly voluntary turnover rate of 6.15%. The multiplied yearly turnover rate (6.15%) was multiplied by the number of individuals in the computing workforce. Sources: Bureau of Labor Statistics (2017) Job Openings and Labor Turnover Survey, Compensation Force and SHRM.

4. Calculated the rates of voluntary turnover due to unfairness. The rates of voluntary turnover due to unfairness were calculated within the sample using a question asking participants, "On a scale from 1 to 10, where 1 means "not a reason" and 10 means "the only reason", to what extent was unfairness or mistreatment a factor in your decision to leave your previous company?" Participants who responded with ranking of 8-10 were coded as "leaving due to unfairness." Unfairness rates by race/ethnicity were then calculate using crosstabs. The number leaving due to unfairness was calculated by multiplying unfairness turnover rates by the number leaving voluntarily each year, for an estimate of how many voluntarily left *due to unfairness*.

5. Calculated the average yearly salary of employees within the sample. The average yearly salary was calculated by selecting all employees who voluntarily left due to unfairness (37%, n=742) and examining their yearly salaries. Salary data were collected using salary bands, so to get an accurate average, the mean of each salary band was calculated (e.g.,$75,000 + $99,999/2= $87,499.50). The average salary within each band was then multiplied by the number of people in that category (e.g, $87,499.50 * 128), and then adding up all salary totals, and dividing the figure evenly by the total number of employees (n=742), for a total of $96,556.16. This average is consistent with the average yearly salary for software engineers, although we acknowledge that this as a low-end estimation of engineering salaries at many top companies, especially in markets like Silicon Valley.

6. Calculated the costs of turnover. Two different estimates of turnover costs were utilized: (1) the widely-recognized Bureau of Labor Statistics estimated cost per employee of 1.5x the yearly salary of employees, and (2) Interviewing.io's estimated cost for making an engineering hire, which includes examining conversion rates and hourly wages for recruiters and interviewers at each stage of hiring (Source: interviewing.io). The costs of 1.5x yearly salary were calculated at $144,834.24 ($96,556.16 x 1.5). The cost of making new engineering hires was calculated at $17,000. The number of individuals leaving due to unfairness were multiplied by both cost estimates.

The total number of employees in the computing workforce does not include Chief Executives, who are counted within a different category in the Bureau of Labor Statistics occupational classification. The turnover rate estimated for those in professional/business occupations (3.1%) is a conservative estimate across all professional occupations, does not specify turnover in tech, and does not include those who work in computing occupations within government, which is a separate category. The 6.15% average yearly turnover rate utilized (calculated by taking the average of the 3% and 9% estimates) is a conservative estimate because there is limited data on turnover rates across computing occupations, and some studies have estimated the turnover rates in tech to be much higher than 3%, between 9% and 30%. Many of the larger Silicon Valley companies pay engineers significantly more than $96,556.16 per year, and the annual salary does not include total compensation which includes costs for benefits on top of base pay. The annual salary does also not take into account elevated replacement costs for managers. The costs for replacing employees also does not take into account reputational costs if employees are public about their unfair treatment.

Limitations

While this study demonstrates important findings about workplace experiences and factors driving turnover across groups, there are several limitations in the following:
(1) Sampling, (2) Subgroup Analyses, (3) Examples of Unfairness, (4) Diversity and inclusion initiatives, and (5) Complexity of Factors affecting Turnover.

Sampling. All sample surveys and polls, whether or not they use probability sampling, are subject to multiple sources of error which are most often not possible to quantify or estimate, including sampling error, coverage error, error associated with nonresponse, error associated with question wording and response options, and post-survey weighting and adjustments. Therefore, Harris Poll avoids the words "margin of error" as they are misleading. All that can be calculated are different possible sampling errors with different probabilities for pure, unweighted, random samples with 100% response rates. These are only theoretical because no published polls come close to this ideal. While the sampling and weighting procedures ensured the representation of the sample to the U.S. population and the incidence of tech leavers within the population, there are always cautions drawn on extrapolating experiences of a sample of individuals to a population of individuals. We recognize that the experiences describe within the report do not reflect all companies or all employees. Obtaining retrospective data also has drawbacks, and while we only sampled individuals who had left tech jobs in the last 3 years, it is possible that individuals had varying levels of recollection of experiences that could account for some variation in responses.

Subgroup Analyses. Examining subgroup differences was a critical component of this study and we examined variables in most cases by race/ethnicity, gender, LGBTQ-identification, race x gender, and industry. Due to sample size limitations, we were not able to report on additional diverse groups including (dis)ability, non-binary gender, and intersectional groups by race and LGBTQ-identification. We did not examine differences by company size, revenue, publically vs. privately held, and region, opting instead to aim for a representative summary of individual employee experiences across tech. We also did not look specifically at differences by tech and non-tech job functions, or differences by title or seniority. Additional research is needed to examine experiences of East, South Asian, and Pacific Islander employees, and additional race, gender, sexual orientation, religion, ability, and veteran, immigrant categories.

Examples of Unfairness. Respondents chose from a list of 17 types of unfairness across 4 categories of behaviors. This is not an exhaustive list of unfair experiences, and additional research is needed to understand whether there are specific experiences contributing to turnover due to unfairness that were not listed, specifically in unfair people management and sexual harassment. Additionally, there was only one question about sexual harassment, and additional questions are further needed to explore nuanced differences between the range of behaviors, from offensive sexual comments, or stereotypes about sexual behavior versus unwanted advances, touching, pressure for dates, and retaliation.

Diversity and Inclusion Initiatives. The five initiatives included in this study are the most commonly implemented initiatives, although not an exhaustive list of strategies and initiatives. While we found that having all 5 produced several positive findings, there is more to learn about the efficacy of these strategies, what contexts they work best in, who they work best for, and their longitudinal efficacy. We looked at relationships between having these initiatives in place and various outcomes; additional intervention research is needed to examine the efficacy in an experimental way.

Complexity of Factors Affecting Turnover. Turnover decisions are most often highly complex, rather than being the result of one discrete action. This study collected a range of data on reasons for leaving, experiences, what would have made them stay, etc. to understand decision-making and turnover. We focused on the findings of unfair treatment as a specific driver of turnover and how it relates to workplace experiences in this report. Additional research can build upon these findings by examining the individuals for whom unfairness was not a factor in the decision to leave, those who had no negative experiences, and those who were seeking specific compensation, promotion, geographic factors in a new company (which had nothing to do with unfairness).

APPENDIX 3: Technical Appendix

Table 1. Why did they leave? Push vs. Pull Factors

	Total Sample	UR Men	White/ Asian Men	Women of Color	White/Asian Women	Men	Women	LGBTQ	Tech Industry	Non Tech Industry	Tech Role	Non Tech Role
Unfairness/Mistreatment	37%	40%	38%	36%	28%	40%	31%	37%	42%	32%	40%	32%
Seeking Better Opportunity	35%	37%	35%	39%	30%	36%	33%	29%	39%	31%	39%	29%
Not Satisfied with Work Environment	25%	27%	23%	23%	29%	25%	27%	30%	26%	24%	25%	26%
Recruited Away	22%	23%	22%	21%	16%	23%	18%	21%	26%	17%	25%	17%
Not Satisfied with Job Duties	19%	23%	18%	22%	20%	18%	21%	21%	22%	16%	21%	16%

Table 2. Differences in Experiencing and Observing Unfairness by Subgroups

	Experienced + Observed Unfairness – Independent Samples t-test for Equality of Means					
Subgroup	Mean	t	df	P	Mean Difference	Std. Error Difference
POC	6.61	-.881	2004	.829	.29	.29
White/Asian	6.86					
Women	7.55	-.369	2004	.00**	-1.05	.29
Men	6.47					
WOC	7.91	.737	506	.061	.46	.62
White/Asian Women	7.46					
Tech	6.86	.603	2004	.043**	.16	.27
Non Tech	6.70					

Note: Mean frequency of types of unfairness observed/experienced (ranging from 0-17 types of unfairness observed/experienced); **indicates statistical significance at the p<.05 level.

Table 3. Frequency of Experiences of Unfairness by Subgroups

In my previous job, I personally experienced…	All	UR Men	White/ Asian Men	Women of Color	White/ Asian Women	Male	Female	LGBTQ	Non LGBTQ	Tech Industry	Non Tech Industry
UNFAIR MANAGEMENT PRACTICES											
Poor management/leadership	37%	29%	38%	32%	47%	36%	40%	30%	38%	35%	39%
Passed over for promotion	22%	20%	22%	30%	22%	22%	25%	19%	23%	24%	20%
Others taking/receiving credit for your work	23%	18%	23%	22%	31%	22%	27%	19%	23%	24%	23%
Given assignments below level	20%	15%	23%	19%	21%	20%	21%	15%	21%	22%	19%
Coworkers at similar level less educated	22%	14%	23%	31%	24%	20%	25%	20%	22%	20%	24%
STEREOTYPING											
Stereotyped	16%	23%	14%	24%	12%	16%	17%	18%	16%	18%	15%
Stereotypical questions about demographics	11%	14%	10%	16%	9%	11%	12%	15%	11%	13%	9%
Assumptions about skills/ability	14%	10%	15%	15%	16%	13%	16%	19%	13%	14%	13%
Identity mistaken for someone of same race	9%	9%	8%	17%	7%	8%	11%	13%	9%	11%	7%
Exclusionary Cliques	15%	14%	15%	17%	17%	14%	16%	17%	15%	16%	13%
SEXUAL HARASSMENT											
Unwanted sexual attention	8%	12%	7%	11%	10%	8%	10%	11%	8%	10%	6%
BULLYING/HOSTILITY											
Bullied or Harassed	14%	9%	16%	13%	15%	13%	14%	20%	13%	14%	13%
Publically humiliated or embarrassed	14%	11%	16%	13%	15%	14%	13%	24%	13%	14%	13%
Rudeness, condescending behavior	25%	19%	25%	33%	33%	23%	31%	25%	26%	23%	28%
Offensive materials	9%	7%	11%	13%	7%	9%	9%	11%	9%	10%	8%

Table 4. Unfairness and Turnover

Dependent Variable: Turnover due to Unfairness—Linear Regression Results			
	Beta (standardized)	t	p
Experiencing Unfair Management	.079	3.56	.000**
Experiencing Stereotyping	.226	10.41	.000**
Experiencing Bullying	.186	8.47	.000**
Experiencing Sexual Harassment	.083	3.73	.000**
Observing Unfair Management	.082	3.38	.001**
Observing Stereotyping	.207	8.69	.000**
Observing Bullying	.188	7.83	.000**
Observing Sexual Harassment	.083	3.73	.000**

**Indicates statistically significant relationship at p<.05 level, between experiencing or observing types of unfairness and the likelihood of leaving due to unfairness.

Table 5. Unfairness and Retention/Length of Time Employed at Previous Employer

Dependent Variable: Length of Time at Previous Employer – Linear Regression Results			
	Beta (standardized)	t	p
Experiencing Sexual Harassment	0.03	1.33	0.18
Experiencing Unfair Management	0.05	1.38	0.17
Experiencing Stereotyping	-0.03	-1.00	0.32
Experiencing Bullying	-0.12	-4.20	0.00**
Observing Unfair Management	0.30	9.06	0.00**
Observing Stereotyping	-0.06	-1.87	0.06**
Observing Bullying	0.07	2.41	0.02**
Observing Sexual Harassment	-.018	-.755	0.45

**indicates statistically significant relationship at p<.05 level between experiencing or observing types of unfairness and the length of employment at prior company.

Table 6. Impact of Comprehensive D&I Initiatives

Independent Variable: 5 D&I Initiatives	Beta (standardized)	t	p
Experiencing Unfairness (ALL)	-.115	-4.58	.000**
Observed Unfairness (ALL)	-.017	-.76	.444
Turnover Due to Unfairness	-.219	-10.06	.000**
Experiencing Unfair Management	.042	1.87	.062
Experiencing Stereotyping	-.200	-9.13	.000**
Experiencing Experiencing Experiencing	-.157	-7.14	.000**
Experiencing Bullying/Hostility	-.077	--3.45	.001**

**indicates statistically significant relationship between having 5 D&I initiatives in place and experiencing/observing unfairness, and leaving due to unfairness.

Table 7. Impact of Comprehensive Diversity and Inclusion Initiatives on Unfairness and Mistreatment

Subgroup	Mean	Overall experiences of unfairness - Independent Samples t- test for Equality of means				
		t	df	p	Mean Difference	Std. Error Difference
All Five Initiative	.70	-6.03	1231	.000**	-.122	.020
Not all Five	.82					

Subgroup	Mean	Experienced Unfair Management Practices – Independent samples t-test for Equality of Means				
		t	df	P	Mean Difference	Std. Error Difference
All Five Initiative	.61	-1.32	1417	.186	-.03	.023
Not all Five	.64					

Subgroup	Mean	Experienced Stereotyping – Independent Samples t-test for Equality of Means				
		t	df	P	Mean Difference	Std. Error Difference
All Five Initiative	.29	-8.27	1557	.000**	-.18	.022
Not all Five	.47					

Subgroup	Mean	Experienced Sexual Harassment – Independent Samples t-test for Equality of Means				
		t	df	P	Mean Difference	Std. Error Difference
All Five Initiative	.04	-4.99	1896	.000**	-.06	.011
Not all Five	.10					

Subgroup	Mean	Experienced Bullying – Independent Samples t-test for Equality of Means				
		t	df	P	Mean Difference	Std. Error Difference
All Five Initiative	.36	-2.46	1468	.014**	-.06	.023
Not all Five	.42					

Subgroup	Mean	Unfairness Played Major Role in Decision to Leave – – Independent samples t-test for Equality of Means				
		t	df	P	Mean Difference	Std. Error Difference
All Five Initiative	.27	-6.96	1570	.000**	-.15	.022
Not all Five	.42					

**indicates statistically significant differences at the p<.05 level.

Table 8. Impact of Specific D&I Initiatives

Linear Regression Analysis: Independent Variable: D&I initiative	Experiencing Unfairness (ALL)		Stereotyping		Unfair People Management		Sexual Harassment		Bullying/ Hostility	
	t	Sig	t.	Sig	t	Sig	t	Sig	t	Sig
Director of D&I	-2.53	.01*	-6.29	.000**	1.32	.190	-5.22	.000**	-5.22	.000**
Explicit Diversity Goals	-2.97	.003**	-7.40	.000**	1.28	.201	-6.07	.000**	-3.93	.000**
Employee Resource Groups	-2.06	.04**	-5.81	.000**	-1.2	.213	-2.88	.004**	-2.43	.041**
Bonuses for Referring Underrepresented Employees	-4.45	.000**	-8.16	.000**	2.14	.032*	-4.82	.000**	-3.05	.002**
Unconscious Bias Training	-3.32	.000**	-4.92	.000**	3.56	.000*	-5.8	.000**	-1.46	.16

**indicates statistically significant relationshi at the p<.05 level.

APPENDIX 5: References

[i]McKinsey (2015). Why diversity matters: http://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters; Dalberg (2016). Decoding diversity: The financial and economic returns to diversity in tech http://www.dalberg.com/wp-content/uploads/2016/06/Diversity_report_6.20.16x.pdf; Center on Education and the Workforce (2010) https://cew.georgetown.edu/wp-content/uploads/2014/12/fullreport.pdf; Department of Commerce (2011) http://www.esa.doc.gov/sites/default/files/stemfinalyjuly14_1.pdf; Keeley, B. (2015), Income Inequality: The Gap between Rich and Poor, OECD Publishing, Paris.DOI: http://dx.doi.org/10.1787/9789264246010-en

[ii]Trujillo (2016). 30 Tech Companies Sign Diversity Pledge. http://thehill.com/policy/technology/284517-white-house-pressures-30-tech-companies-to-sign-diversity-pledge; Pepitone (2011). Silicon Valley Fights to Keep Diversity Data Secret. http://money.cnn.com/2011/11/09/technology/diversity_silicon_valley/; Kapor Capital (2015). Founder's Commitment http://www.kaporcapital.com/founders-commitment/; OpenMIC (2017). Breaking the Mold: Investing in Racial Diversity in Tech http://breakingthemold.openmic.org/.

[iii]Kelly (2015). Google commits $150M to diversity http://money.cnn.com/2015/05/06/technology/google-diversity-plan/; Wong (2016). Facebook's diversity numbers barely budge http://www.mercurynews.com/2015/06/25/facebook-diversity-numbers-barely-budge-advocacy-groups-call-for-more-change/. OpenMIC (2017). Breaking the Mold: Investing in Racial Diversity in Tech http://breakingthemold.openmic.org/

[iv]Equal Employment Opportunity Commission (2015). Diversity in High Tech. https://www.eeoc.gov/eeoc/statistics/reports/hightech/. Molla & Lightner (2016) Diversity in tech companies. http://graphics.wsj.com/diversity-in-tech-companies/

[v]U.S. Census Bureau (2015). U.S. Population by Race and Gender. http://www.census.gov/quickfacts/table/PST045215/00; U.S. Bureau of Labor Statistics (2014). Labor Force Characteristics, by Race and Ethnicity. https://www.bls.gov/opub/reports/race-and-ethnicity/archive/labor-force-characteristics-by-race-and-ethnicity-2014.pdf.

[vi]Kapor Center for Social Impact (2016). Analysis of top 23 highest-grossing public technology companies with available diversity reports. Tech companies included Include US-based companies only, ranked based on annual revenue, and include both hardware, software, and internet companies.

[vii]AAUW (2010) http://www.aauw.org/research/why-so-few/; Bertrand & Mullainathan (2004) http://www2.econ.iastate.edu/classes/econ321/orazem/bertrand_emily.pdf; Cheryan et al. (200) http://sciencewithart.ijs.si/pdf/How%20stereotypical%20cues%20impact%20gender%20participation%20in%20computer%20science.pdf; Gallup/Google http://csedu.gallup.com/home.aspx; Martin, McAlear & Scott (2015) http://www.lpfi.org/wpcontent/uploads/2015/05/PathNotFound_FindingsAtAGlance.pdf; Stout et al. (2011) http://gap.hks.harvard.edu/steming-tide-using-ingroup-experts-inoculate-women%E2%80%99s-self-concept-science-technology-engineering-and; Schmidt (2015) http://poetsandquantsforundergrads.com/2015/01/07/the-top-feeder-schools-to-google-goldman-sachs-and-more/.

[viii]Shahani (2016). http://www.npr.org/sections/alltechconsidered/2016/02/03/465270938/intel-discloses-diversity-data-challenges-tech-industry-to-follow-suit; Quinn (2016). Intel struggles to retain young black employees. http://www.mercurynews.com/2016/02/02/quinn-intel-struggles-to-retain-young-black-employees/

[ix]The EEO-1 Report is a compliance survey mandated by federal statute and regulations. The survey requires company employment data to be categorized by race/ethnicity, gender and job category.

[x]Elephant in the Valley study and Indeed study on discrimination; Level Playing Field Institute (2011), The Tilted Playing Field: Hidden Bias in IT Workplaces http://www.lpfi.org/wp-content/uploads/2015/05/tilted_playing_field_lpfi_9_29_11.pdf; Level Playing Field Institute (2007) Corporate Leavers Study http://www.lpfi.org/wp-content/uploads/2015/05/cl-executive-summary.pdf.

[xi]Gallup (2008). http://www.gallup.com/businessjournal/106912/turning-around-your-turnover-problem.aspx.

[xii]Level Playing Field Institute (2011) The Tilted Playing Field: Hidden Bias in IT Workplaces http://www.lpfi.org/wp-content/uploads/2015/05/tilted_playing_field_lpfi_9_29_11.pdf.

[xiii]Unfairness as a contributing factor to turnover was examined as one question, which read, "On a scale of 1 to 10, with 1 being not at all a factor and 10 being the only factor, to what extent did unfairness or mistreatment factor into your decision to leave?" Leaving due to Unfairness was calculated by summing responses from 8-10. An additional set of individual questions were asked about their reasons for leaving their previous company. Individuals were allowed to choose "all that apply" and many selected more than one contributing factor, thus the percentages are not intended to be summed across factors.

[xiv]To examine experiences with "unfairness," questions about 17 types of experiences were asked across 4 categories of behavior. Respondents were asked to indicate whether they had witnessed or personally experienced each of the 17 items. The questions have been used in previous research by LPFI and were developed from experiences of professionals within corporate America. See: Corporate Leavers Study.

[xv]Diversity and Inclusion Initiatives Scale included 5 commonly-adopted strategies: (1) Having a D&I Director or Manager, (2) Having Explicit Diversity Goals, (3) Having Employee Resource Groups [ERG], (4) Offering Bonuses for Recruiting/Referring Diverse Candidates, (5) Implementing Unconscious Bias Training. We have no information about the type or quality of the D&I initiatives, only whether or not the company had these initiatives in place. These strategies are only a sampling of the numerous D&I initiatives being implemented and not an exhaustive list.