Intersectional Peer Effects at Work: The Effect of White Coworkers on Black Women's Careers

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Abstract

This paper investigates how having more White coworkers influences the subsequent retention and promotion of Black women. Studying 9,037 new hires at a professional services firm, we first document large racial turnover and promotion gaps: even after controlling for observable characteristics, Black employees are 6.7 percentage points (32%) more likely to turn over within two years and 18.7 percentage points (26%) less likely to be promoted on time than their White counterparts. The largest turnover gap is between Black and White women, at 8.9 percentage points (51%). We argue that initial assignment to project teams is conditionally random, based on placebo tests and qualitative evidence. Under the assumption of conditional random assignment, we show that a one standard deviation (20.8 percentage points) increase in the share of White coworkers is associated with a 15.8 percentage point increase in turnover and an 11.5 percentage point decrease in promotion for Black women. We refer to these effects as intersectional: Black women are the only race-gender group whose turnover and promotion is negatively impacted by White coworkers. We explore potential causal pathways through which these peer effects may emerge: Black women who were initially assigned to Whiter teams are subsequently more likely to be labeled as low performers and report fewer billable hours, both of which are predictors of higher turnover and lower promotion for all employees. Our findings contribute to the literatures on peer effects, intersectionality, and the practice of managing race and gender inequality in organizations.

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1. Introduction

The underrepresentation of women and men of color in high-wage jobs, especially in leadership positions, remains a significant problem (Bell Smith and Nkomo 2003; Tomaskovic-Devey and Avent-Holt 2019; Hancock et al. 2021). To better understand and reduce these racial inequalities, researchers and practitioners have often focused on pre-hire factors, such as bias in recruitment and selection practices, programs to build a stronger pipeline, or initiatives to diversify the applicant pool (Goldin and Rouse 2000; Behaghel et al. 2015; Bohnet et al. 2016; Agan and Starr 2018; Chang et al. 2020; Abraham and Burbano 2021; Exley and Kessler 2022; Castilla and Rho 2023). Comparatively less scholarly attention has been paid to measuring the impact of within-firm work practices on the retention and promotion of employees of color. Yet the demographic composition of a firm's workforce depends both on who enters the firm as well as who stays and is promoted (Sørensen 2004).

In this paper, we focus on a critical factor shaping one's career trajectory within a firm: coworkers. Many intersecting literatures document the ways in which coworkers influence each other, ranging from convergence in productivity that may improve overall performance, to informal knowledge transfer and networks that lead to future promotable opportunities, to peer support that may influence belonging and satisfaction at work (Ozcelik and Barsade 2011; Hoogendoorn et al. 2013; Lount and Wilk 2014; Herbst and Mas 2015; Cornelissen et al. 2017; Cooke et al. 2019). In elite, knowledge-intensive firms, coworkers impact not only socialization but also success within the firm (Sherer 1995; Anderson-Gough et al. 2000; Davenport et al. 2002; Cross and Parker 2004). Whether and how these peer effects impact employees of color in predominantly White firms remains an open question.

Analyzing the careers of 9,037 inexperienced new hires over a seven-year period (2014-2020) in a large professional services firm, this study asks: Does having more White coworkers early in one's career influence retention and promotion for Black, Asian, and Hispanic women and men? We study the impact of White coworkers in particular because elite high-wage firms are numerically dominated by White employees, such that all non-White employees primarily interact with White colleagues (Blumer 1958; Bobo 1999). We focus on inexperienced new hires for both substantive and methodological reasons. Substantively, one's early work experiences are particularly important in determining career outcomes, as these initial experiences can have imprinting and accumulating effects that persist over time (Briscoe and Kellogg 2011; Marquis and Tilcsik 2013; Tilcsik 2014; Walton and Wilson 2018; Rothstein 2023). Methodologically, focusing on inexperienced new hires

allows us to leverage, for causal inference, the exogenous assignment to one's first project teams, hereafter referred to as "teams": to minimize non-utilized time, an HR manager assigns newly hired employees to teams with no input from the employees or managers themselves. This assignment process eliminates concerns about selection, namely that new hires may be assigned to different teams or projects based on their observable characteristics, such as race or gender, or on the race and gender of their peers. Consequently, we can interpret the effects of peers on new hires as causal. Consequently, we can interpret the effects of peers on new hires as causal. Importantly, this initial assignment process happens after application, screening, and acceptance of the job. This means that factors shaping new hires' selection into the firm—such as racial differences in networks, perceived discrimination, and taste-based discrimination, which could all be correlated with promotion and turnover outcomes—will also not impact our estimates (Becker 1957; Fernandez and Fernandez-Mateo 2006; Pager and Pedulla 2015). As such, conditional on geography and department ("office"), who your coworkers are can be considered random in the first few months at the firm. We verify that claim both qualitatively, through interviews with HR managers, and quantitatively, testing that the racial composition of coworkers on initial teams is orthogonal to one's own race and other individual and project observables.

We first document large heterogeneities in retention and promotion by race and gender: even after controlling for individual (e.g., age, degree, and education) and office characteristics, Black new hires are 6.7 percentage points (32%) more likely to turn over within two years of their hire and 18.7 percentage points (26%) less likely to be promoted on time than their White counterparts. The largest turnover gap is between Black and White women, at 8.9 percentage points (51%). Asian and Hispanic employees also face higher turnover and lower promotion rates than their White counterparts, but the differences are smaller and not statistically significant. To be sure, whether or not turnover or promotion is a net positive or net negative is unclear for any individual employee of color (Sterling 2024). However, these aggregate differences by race so early in career trajectories lend themselves to a deeper exploration of different experiences within the firm.

What causes these differential turnover and promotion rates? We focus our attention on one potential explanation: the racial and gender composition of an employee's coworkers, bringing an intersectional lens to the study of peer effects. Drawing on the assumption of conditionally random assignment of new hires to initial teams, we find a one standard deviation (20.8 percentage point) increase in the share of White coworkers is associated with a 15.8 percentage point increase in turnover and an 11.5 percentage point decrease in promotion for Black women. These peer effects

are similar in magnitude to the overall turnover gap between White and Black women. We refer to these peer effects as "intersectional" because, in contrast with Black women employees, none of the other race and gender groups are significantly affected by exposure to more White coworkers. Further, multiple Wald tests indicate that the effect of White coworkers on Black women's turnover is statistically distinct ($p < 0.05$) from that on other race and gender groups. The impact we identify on Black women is distinct from the effect of being a numerical minority: Hispanic men, Hispanic women, and Black men are numerically similar demographic groups to Black women employees, yet we do not observe an effect of Whiter teams on their turnover and promotion. To further probe the intersectionality of our results, we investigate whether the effect of White coworkers on Black women is differentially driven by either White men or White women coworkers. We find that while both the initial shares of White men and women coworkers influence turnover for Black women, the point estimate for the effect of White men coworkers is almost twice as large as that of White women coworkers, and only the share of White male coworkers influences Black women's promotion.

To explain how initial exposure to more White colleagues influences Black women's retention and promotion, we explore three potential causal pathways—performance evaluations, work assignments, and engagement—using administrative data representing the period after the initial team assignments and prior to turnover and promotion outcomes more than two years later. We find no evidence that Black women are, on average, formally assigned to a different number or different quality of projects. However, we also find that Black women who were initially assigned to teams with a higher share of White coworkers are subsequently more likely to be labeled as low performers and to report fewer billable hours and more training hours in subsequent projects. Receiving a low-performance label and reporting fewer billable hours are both predictors of higher turnover and lower promotion for all employees.

Our findings make several contributions. First, we offer literature on peer effects and racial inequality an intersectional perspective on the causal effect of initial White coworkers on career attainment for Black, Asian, and Hispanic women and men in high-wage jobs, using longitudinal fine-grained administrative data (Hoxby 2000; Falk and Ichino 2006; Jackson and Bruegmann 2009; Mas and Moretti 2009; Hensvik and Skans 2016). Second, we bring a peer effects perspective to the intersectionality literature with novel evidence of intersectional coworker effects on turnover and promotion: only Black women's career outcomes, not other employees', are affected by their majority White colleagues (Crenshaw 1989; Hurtado 1989; Purdie-Vaughns and Eibach 2008). Our

relational approach reframes our understanding of Black women's career outcomes as originating in a set of early interactions with White coworkers and highlights the role organizational practices play in producing distinct disadvantages. Third, our study traces how the impacts of initial interactions are enacted across routine practices, including performance evaluations and work assignments, to produce disparities in turnover and promotion that limit firm diversity and heighten costs associated with developing and managing human capital.

2. Related Literature

Across the social sciences, extant theories about race and gender inequalities in career attainment have focused on what women and men of color lack: for example, human capital or skills (Becker 2009), access to valuable social capital or returns from homophilous social networks (McPherson et al. 2001; Smith 2005; Fernandez and Fernandez-Mateo 2006), and perceived belonging and self efficacy (Bandura 1994; Baumeister and Leary 1995). Yet each of these individual characteristics are produced in relationships with others (Tilly 1998). And, as Tomaskovic-Devey and Avent-Holt (2019) state, "there is no such thing as an individual actor, absent the relationships he or she is embedded within."

To focus on how coworkers shape career outcomes for peoples of color, we draw on a vast interdisciplinary literature demonstrating that individual outcomes are influenced by observable and unobservable characteristics of their peers, such as classmates or coworkers (Manski 1993; Hoxby 2000; Mannix and Neale 2005; Sacerdote 2011). For example, individuals' performance and productivity are measurably influenced by their higher-ability and higher-performing peers, which has primarily been studied in schools or low-wage work contexts (Sørensen 2004; Falk and Ichino 2006; Mas and Moretti 2009; Kaur et al. 2010; Cornelissen et al. 2017; Mas and Pallais 2017; Golsteyn et al. 2021; Feld and Zölitz 2022). Relationships with coworkers also enable access to their social networks and are associated with intra-firm and inter-firm career advancement (Granovetter 1973; Podolny and Baron 1997; Burt 2009). Finally, peers can be a critical source of social support, shaping early subjective experiences of social belonging that can launch a recursive cycle, ultimately influencing who stays and who leaves a firm many months or years later (Lepine and Van Dyne 2001; Chiaburu and Harrison 2008; Nanda and Sørensen 2010; Sunder et al. 2017; Walton and Wilson 2018).

Studies that consider the racial identity of the peer are less clear about whether these potential peer benefits apply in demographically diverse work contexts (Sørensen 2004; Leonard and Levine

2006; Cornelissen et al. 2017; Glover et al. 2017). In particular, the extant literature offers mixed evidence on the potential effects of White coworkers—a numerical majority racial identity group—on the retention and promotion patterns for employees of color.

One set of studies points to a positive impact of having more White colleagues on underrepresented employees: if a "rising tide lifts all boats," the existing higher status and privileges afforded to White male employees may mean that exposure to more White colleagues early on in one's career increases access to information, social capital informal networks, resources, and opportunities that might otherwise be unavailable (Lareau and Horvat 1999; Petersen et al. 2000; McDonald 2011; Pedulla and Pager 2019; Castilla 2022). Indeed, access to White male networks can improve career outcomes, such as providing more job leads or job assistance, even for members of the network that are not themselves White and male (McDonald 2011). Some evidence suggests a similar pattern in housing, sporting, religion, and educational contexts, although the evidence is mixed (Day and McDonald 2010; Chetty et al. 2016; Munn 2018). Notably, a large swath of interventions to increase access to predominantly White spaces (e.g., "mentorship programs") implicitly depend on this theory of change (Bonifacino et al. 2021).

In contrast, other evidence points to a more detrimental effect of having more White colleagues on employees of color. For example, a 2006 study of the effect of racial diversity on the turnover of low-wage workers in the service sector finds a correlation between the turnover of Black, Hispanic, and Asian employees and their share of White peers (Leonard and Levine 2006). Such peer effects could operate through a host of different pathways within teams. For instance, underrepresented team members may be assigned fewer promotable tasks, less challenging tasks, or have fewer opportunities to do highly visible or critical components of a team's work (De Pater et al. 2009; Lehmann 2011; Babcock et al. 2017; Hurst et al. 2021). Even if work is similarly assigned and executed, managers or evaluators from the majority group may view the performance of underrepresented team members less favorably (Kanter 1977; Heilman 1980). Over time, this may lead to disengagement or demotivation, impacting either perceptions of performance or performance directly through various channels. For instance, previous studies have shown that working with more biased managers leads to a reduction in subsequent effort by minority employees (Glover et al. 2017). Similarly, the stereotype threat and belonging literature point to a potential reduction in performance when someone fears that their performance will confirm a negative stereotype about their demographic group (Steele 1997; Shih et al. 1999). Indeed, minority employees may rely on the demographic composition of their initial teams as cues of non-belonging. Previous research points to the poten-

tial long-lasting effects of even seemingly small variations in initial cues or experiences (Cohen and Garcia 2008; Cohen et al. 2009; Miyake et al. 2010). This research points to the potential path dependence of early interactions on long-term outcomes because of the compounding effects of a recursive process. Lastly, the literature on tokenization suggests that being the sole member of a given demographic group or "solo status" can reduce performance and effort when individuals feel that they are the sole representative of their group, experience fear of being stereotyped by the dominant group, and/or have lower expectations of their performance in the presence of the dominant group (Sekaquaptewa and Thompson 2002; Sekaquaptewa et al. 2007; Wingfield and Wingfield 2014).

A third possibility is that White coworkers heterogeneously affect different minority racial groups, where there may be no impact for some and large effects for others. Differences in their historical immigration experience to the United States and dramatic demographic shifts in the population have given rise to at least two axes of subordination—cultural foreignness and inferiority—which are often reflected by differences in stereotype content (Kim 1999; Citrin and Sears 2014; Zou and Cheryan 2017). As a result, hierarchical perceptions of culturally foreign minority groups, such as Asian and Hispanic, are variable. For example, stereotypes of Asian people as "model minorities" (Kao 1995; McGrady and Reynolds 2012)—as equally or more competent than Whites—change interracial interaction contexts by casting Asian people as higher ranking than Black and Hispanic people (Bergsieker et al. 2010). Perceptions of Hispanic groups in the U.S. are similarly not monolithic: under different contexts, Hispanic people may be viewed as similar to either White, Asian, or Black people in the racial hierarchy (Fiske et al. 2002; Sears and Savalei 2006).

At the same time, a rigid and relatively impermeable boundary, or color line, separates Black and White people (Bourdieu and Wacquant 1999; Omi and Winant 2018; Derenoncourt et al. 2024). Black women and men perceive significantly more frequent discrimination and are four times more likely to report heightened group consciousness than their Hispanic and Asian counterparts, providing evidence that the color line separating White people from Black people remains more impermeable than the lines separating White people from other minority groups of color (Bourdieu and Wacquant 1999; Brondolo et al. 2006; Landrine et al. 2006; Sears and Savalei 2006; Sears 2015; Omi and Winant 2018; Lean In 2020). In elite organizations that are demographically (especially at the senior ranks), symbolically (e.g., prominent founders and alumni), and culturally White male (e.g., "country club," "fratty," or "bro" cultures), this racial boundary is known as "the Black ceiling" (Acker 1990; Ray 2019a; Woodson 2023). Without the power, status, or group size needed to

change such elite organizational contexts, routine daily coworker interactions take on racial dimensions that can impede, exclude, and isolate Black employees (Moore 2020). Everyday situations often call on Black employees to ensure their White coworkers feel comfortable by managing their Black identity and adhering to racialized norms of emotional expressions (Wingfield 2010), keeping silent when faced with racial bias, demonstrating their competence, and upholding, conforming to, and enforcing interaction norms established by their higher-status White colleagues (Wingfield 2010; Wingfield and Wingfield 2014). In short, such dynamics are likely to afflict Black people's interactions with their White coworkers and to result in profound career disadvantages.

Further evidence documents the double disadvantage of Black women, whose experience and outcomes are shaped by the intersection of multiple subordinated identities and are distinct from other members of their gender or racial groups (Crenshaw 1989; Bell Smith and Nkomo 2003; Combs 2003; Settles 2006; Purdie-Vaughns and Eibach 2008; Hall et al. 2019). For example, relative to Black men, Black women are underrepresented at the top of the corporate hierarchy, holding roughly 3% of Fortune 500 board seats in 2020, and earn lower pay across the majority of occupations (Deloitte, LLP 2019). At work, Black women are more often harassed and minimized more than Black men, experiencing harassment related to both gender and race (Berdahl and Moore 2006; Bailey and Null 2018; Smith et al. 2019). Compared to the idealized White male prototype in elite organizations, Black women are *the* aprototypical race-gender group as they are members of two marginalized groups—being Black and being a woman (Purdie-Vaughns and Eibach 2008). This leads to "intersectional invisibility," where their struggle to be seen and understood is overshadowed by stereotypes, distorting how they are perceived by others. Such stereotypes depict Black women as aggressive, not warm like White women, and incompetent, not smart like White men (Niemann et al. 1994; Ghavami and Peplau 2013; Rosette et al. 2016, 2018). Evidence abounds that Black women professionals' interactions with White coworkers are distinct from those of their Black male (and other female) counterparts (Hughes and Dodge 1997; Wingfield 2007; Cortina and Magley 2009; Hall et al. 2012; Pitcan et al. 2018; Sisco 2020). Unlike Black men, who can leverage their gender identification with White male culture (e.g., sports knowledge (Turco 2010)), Black women can leverage neither their gender nor their race to overcome the limits of negative stereotypes and forge relationships in elite organizational contexts (Yoder and Aniakudo 1997; Yoder and Berendsen 2001). As such, Black women's experiences in such workplaces are characterized by marginalization, seclusion, and non-belonging.

These mixed results in the literature call for taking an intersectional lens to our understanding

of how majority White peers in elite work settings affect their coworkers. Our theoretical lens, methodological approach, and the size and diversity of our sample allow us to explore the impact of White women and men separately on multiple race-gender groups to answer this call.

3. Institutional Setting and Data

3.1. Institutional Setting

Field site. The field site for our research, which we refer to as ProfServ to protect its anonymity, is a large knowledge-intensive global firm in the professional services industry. Professional service firms provide a range of knowledge and expertise—related to management, strategy, finance, information technology, human resources (HR), and other domains—to clients to help them maximize their profitability or effectiveness (O'Mahoney and Markham 2013). In short, these firms are "problem-solvers for hire" (Morkes 2023, pg. 15).

ProfServ is particularly well-suited to the study of peer effects in high-wage jobs at elite organizations for several reasons. First, in many ways the firm reflects the industry to which it belongs. Less than five percent of applicants receive offers from ProfServ, average salaries are in the six figures, most entry-level employees are hired through campus recruitment, and work is organized in teams, which vary in size and duration (Morkes 2023). Offices are geographically dispersed across the U.S. in locations where demand for professional services is high (Dun & Bradstreet First Research Industry Profile 2023), and within each office, employees are assigned to multiple teams at a time. The overall race and gender demographics of the firm look similar to the industry as a whole, with an overrepresentation of White and male employees in leadership positions and comparatively more diversity at the junior level (Dean et al. 2020). With more than 50,000 employees, we have sufficient variation in the demographic composition of coworkers to investigate our research questions. Put differently, we are able to analyze enough junior employees of various races and genders to empirically test our research questions with an intersectional lens.

Second, peers are particularly relevant for an individual's career advancement in this context. For example, although new hires are initially assigned to teams by an HR manager as we describe below, the overall process by which employees are assigned to subsequent teams—the staffing process—becomes increasingly informal, decentralized, and opaque (Woodson 2016). As with many firms in this industry, managers—particularly those heading high-revenue projects—often bypass formal staffing protocols. Instead, they can select junior employees based on personal preference, drawing on their direct interactions and informal networks. At the same time, junior employees are expected

to find ways to demonstrate their value within their assigned teams by conducting research and analyses for clients, drafting and delivering presentations and written reports, developing solutions to various challenges, and making recommendations for clients (O'Mahoney and Markham 2013; Indeed Editorial Team 2023; Morkes 2023; U.S. Bureau of Labor Statistics 2023). This contribution is assessed, in part, through an annual performance evaluation process that includes perspectives from multiple supervisors as well as coworkers. Consequently, coworkers' assessments of a junior employee's work quality and capacity can significantly influence who is assigned to important projects, as well as their performance evaluation, both of which are determinants of success at the firm level (Anderson-Gough et al. 2000; Davenport et al. 2002; Cross and Parker 2004; Tippett 2019; Woodson 2023).

Third, the outcomes we study and can observe are meaningful for both the firm and for employees' career advancement within the firm. From the firm's perspective, human capital, the primary asset in this industry, is costly to develop and replace, rendering employee turnover a significant expense for firms (Sherer 1995; von Nordenflycht 2010; Nishii 2012). Gallup estimates turnover costs between 50% to 200% of an employee's annual pay (McFeely and Wigert 2019), particularly burdensome for organizations with high-wage staff. ProfServ, akin to its counterparts, heavily invests time and money into campus recruiting from what is commonly referred to as "target schools" for their annual junior entry-level hiring (ManagementConsulted 2023; Morkes 2023, pg. 117-8). While we cannot make claims about whether leaving the firm is good for any specific employee, for the firm as a whole, high (and differential) turnover is a critical and costly outcome. From the employees' perspective, on-time promotion within the firm depends on their assessed performance, which is measured in multiple ways including annual performance evaluations and the number of hours an employee billed to client projects, both of which we can observe directly.

Taken together, ProfServ exemplifies the professional services industry in numerous aspects, including structuring work around team projects, the geographic distribution of their offices, the way employees are staffed onto projects, and the "up or out" structure of junior positions. In this context, peers play an important role not only in knowledge sharing or socialization, but also in determining the opportunities they have to demonstrate their skills, abilities, and contribution to the firm. This typicality reduces our concern that idiosyncratic firm dynamics may influence our investigation.

Focus on inexperienced new hires. We focus on inexperienced new hires for both substantive and methodological reasons. Substantively, the first two years at the firm are critical for long-term

success, and more broadly initial experiences can imprint compounding and persistent effects over time (Briscoe and Kellogg 2011; Marquis and Tilcsik 2013; Tilcsik 2014; Walton and Wilson 2018; Rothstein 2023). From a methodological standpoint, the allocation process of inexperienced new hires to teams at ProfServ presents a special opportunity: because inexperienced new hires have neither expertise nor networks to influence their assignment to teams, their initial assignment follows formal staffing procedures implemented by a designated HR manager. Conditional on the office they are hired into, which is defined as the geographic location (city) and department (business) in which they work, the designated HR manager's assignment of new hires to initial projects is as good as random. We present quantitative and qualitative evidence supporting our assumption of random assignment, conditional on office, in Section 4.2. Thus, our research design analyzes inexperienced new hires' initial experiences and subsequent career attainment.

3.2. Data

Data for this study was sourced from seven years of ProfServ's administrative employment data and project staffing records, from 2014 to 2020. From ProfServ's administrative employment data, we observe employees' hiring dates, job changes (including promotions), exits, geographic location, and the department to which they were assigned. Administrative data also contain employees' self-reported racial and ethnic identity, gender (male or female, as assigned at birth), and education history.

From ProfServ's staffing records, we observe the universe of projects to which employees report billing their time at a monthly level, as well as time reported on non-client-facing work and training. Project staffing data also includes a prioritization score for ProfServ which indicates how important the project is to the firm. We refer to people who are working on the same project as coworkers who are part of the same "team." A given employee may work on multiple teams simultaneously.

Sample. ProfServ employs over 50,000 people, distributed across numerous U.S. cities and departments. Figure I depicts the share of Black, Asian, Hispanic, and White U.S. employees by job level. At the most junior level of these jobs, which we term "Professionals," no more than half of all employees are White, with Asian employees being the second largest group. Further racial stratification is evident at more senior job levels, which we refer to as "Middle" and "Top" Management. Indicatively, the share of Black employees in Top Management is a third of the share at more junior levels. Conversely, the share of White employees is greater than 80% at the Top Management level. In sum, the racial composition of employees across ProfServ's job levels—primarily White, with

Asian as the second largest group, and Hispanic and Black comprising smaller shares—is consistent with the broader professional services sector (U.S. Bureau of Labor Statistics 2022; Zippia 2023).

From 2014-2020, the total sample of full-time junior professionals with the same job title in the U.S. is 23,539. For this analysis, we excluded 12,607 employees who had prior experience with ProfServ (e.g., internships, rehires) that likely influenced their initial team assignments. We also excluded 1,879 employees who either primarily worked independently rather than across teams on multiple projects or are the sole new hire in their office. Last, we excluded 3 employees for whom all coworkers on their initial teams did not self-report their race or ethnicity and 13 employees who did not self-report their race or ethnicity, which is not legally required in the U.S.

Our final sample of study thus consists of 9,037 full-time inexperienced new hires, recruited between 2014 and 2020. The study sample, as described in Table I, includes White men (31.8%), White women (24.5%), Asian men (12.1%), Asian women (15.7%), Hispanic men (3.9%), Hispanic women (3.1%), Black men (2.4%) and Black women (2.3%). Table II further summarizes the project and employee characteristics of our full-time newly hired inexperienced sample. New hires are on average 25 years of age, all have an undergraduate degree; 27% have a master's degree, and 12% have degrees from a Top 20 ranked U.S. school. The median number of projects per month that employees bill time to is 2, the median number of total hours reported on a project is 120, and the median number of coworkers (Team Size) per project is 24.

Dependent variables. Our main outcomes of interest are turnover and promotion. Turnover is measured as a binary variable that takes the value 1 in the month that the employee is terminated and 0 otherwise. Similarly, promotion is measured as a binary variable that takes the value 1 in the month that the employee is promoted and 0 otherwise. Our data does not allow us to distinguish between voluntary and involuntary turnover of high-wage employees, both of which impose significant costs for the firm. While these two types of separations may coexist at the firm (MacLeod and Malcomson 1989), even administrative records of voluntary and involuntary turnover would not reflect the true nature of separations (McGinn and Milkman 2013). For instance, some employees may resign in anticipation of being terminated and, conversely, others may prefer a termination instead of resigning for a range of reasons (e.g., benefits). We also define binary indicators for "turnover within two years" and "promotion within two-and-a-half years" for whether an employee exits within two years or is promoted in the six months after they meet the two-year tenure mark, in line with expected promotion cycles. We demonstrate that our results are not sensitive to changing the window within which turnover and promotion are observed in Section

5.3. For these models, we subset the data to employees that we observe for at least two years for turnover (N = 5,839) or two-and-a-half years for promotion (N =5,354). In this organization, promotion is related to turnover in that if someone does not get promoted "on time" (i.e., within two-and-a-half years of their hire), or anticipates not getting promoted, they are likely to leave.

Table III presents the raw mean turnover and promotion by employees' race and gender. Approximately 22.3% of our sample turn over within two years of hire, and 68.4% are promoted on time. Turnover is lowest and promotion is highest for White women employees in our sample, at 17.5% and 76.8%, respectively. We therefore use White women employees as the reference group for the main analyses. The raw turnover and promotion gaps between White and Black employees are 6.1% percentage points and 21.7% percentage points, respectively. Figure II depicts the estimated turnover Kaplan Meier (KM) curves for new hires by race (Panel (a)) and by race and gender (Panel (b)). Panel (a) demonstrates that Black turnover starts to diverge from other groups before one year (at approximately 250 days) and stays consistently higher thereafter. Panel (b) illustrates that while Black men depart the firm earlier than Black women, by the two-year mark, the Black to White women turnover gap is about twice as large as that between White and Black men. Appendix Figure B.2 shows the same KM curves on promotion.

Independent variables. The main independent variable of study is the share of White coworkers each employee works with across all the projects they are assigned to in the first three months of their employment (excluding the employee themselves—the "leave-out" share), when utilization is centrally managed (hereafter called "first project assignments"). Coworkers in a given team are defined as all employees working on the same project as the focal new hire, excluding the managers of the project. For each project team, we compute the share of White coworkers with whom the focal new hire works. The share of White coworkers across all first project assignments is then computed as the weighted average share of White coworkers across projects, weighted by the number of hours that the individual has worked on each project. Based on guidance from ProfServ, we exclude project teams with more than 60 employees because these projects likely reflect distinct administrative functions and should not be conceptualized as employees working on the same team. However, we show that our results are not sensitive to this team size threshold nor to the length of the initial time period window, in Section 5.3.

The average (median) share of missing coworker race (and/or ethnicity) per employee is only 11.21% (4.3%). Our data is constructed such that the shares of Asian, Black, White and Other race in first team assignments sum to 100%, irrespective of the share of missing race of coworkers.

In other words, we assume that the distribution of races among coworkers with missing race in the team is the same as the broader distribution of races in the team. We verified that the sample who does and does not self-report their race do not differ on other observables, both pre-entry characteristics such as gender and education and firm career trajectories (e.g., average turnover and promotion rates).

Figure III depicts the distribution of the average share of White coworkers in first project assignments. This figure illustrates that there is substantial variation in the share of White coworkers across new hires: one standard deviation in the share of White coworker is 20.8 percentage points, and even after residualizing on the office by year of hire fixed effects that we use in our later analysis, this standard deviation remains large, at 14.0 percentage points. Appendix Figure B.1 shows the distribution for exposure to other racial identity groups that are relatively smaller in size.

4. Empirical Strategy and Randomization Check

4.1. Empirical Strategy

We are first interested in documenting racial turnover and promotion gaps. To do so, we estimate the following model:

$$Y_{ij} = \alpha + R_i'\beta_0 + X_i'\gamma + \delta_j + \epsilon_{ij} \tag{1}$$

where Y_{ij} is our main outcome variable, a binary that equals 1 if individual i in office j leaves the firm within two years or 0 otherwise. For promotion, we use a binary equal to 1 if employee i is promoted within two-and-a-half years ("on time"), or 0 otherwise. R_i' is a vector of (own) racial identity dummies (Black, Asian and Hispanic), in which White is the baseline (omitted) group. To enhance the precision of our estimates, we also include a vector of individual-level controls, X_i'. This vector includes four individual demographic control variables (Gender, Age, Education Rank, and Masters) as well as two controls for differences in the nature of initial team project. The "Education Rank" variable consists of four categories that ranks the highest-ranked university from which a professional has a degree (top 20, 21-100, 101-1000, and 1001+), constructed based on rankings from Webometrics. We include two types of "Masters" variables, one indicating whether the employee had a master's degree and another indicating whether the employee had a specialized master's valued by ProfServ. To control for differences in the nature of initial team project assignments, we include controls for the average number of coworkers across all initial assignments (Team Size) and a dummy for whether the new hire was initially assigned to at least one priority project, as

designated by an internal firm ranking system denoting the importance of a given project to the firm's business operations. Finally, δ_j denotes the office by year of hire fixed effect (thereafter office $\times$ year fixed effect), and ϵ_{ij} is the error term. We cluster the (robust) standard errors at the office $\times$ year level. We also estimate Equation 1 interacting the gender of the new hire with their race to test for intersectional differences in turnover and promotion.

We then turn to estimating the effect of a change in the share of White coworkers on the turnover of new hires. Leveraging the assumption of conditionally random assignment of new hires to teams, which we formally test for in the next section, we run the following model for each of our outcome variables (turnover and promotion):

$$Y_{ij} = \alpha + R_i'\beta_0 + W_{-i}\beta_1 + W_{-i}R_i'\beta_2 + X_i'\gamma + \delta_j + \epsilon_{ij} \tag{2}$$

Compared to Equation 1, this model introduces W_{-i}, that is, the (leave-out) share of White coworkers that new hire i works with in their first project assignments, as defined in the Independent variables paragraph in Section 3.2. β_2 is then our vector of coefficients of interest, capturing the impact on turnover of an increase in the share of White coworkers for each of our minority new hires (Black, Asian and Hispanic), relative to its impact on White new hires (captured by β_1). The vector X_i' now also contains the share of Asian, Black, Other race (includes non-Hispanic coworkers that identified as Two or More Races, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, Middle Eastern, North African, Near Eastern, or Indigenous Mexican or Central American), and female coworkers in first project assignments, and separately controls for the share of missing race of coworkers. The results are more broadly not sensitive to the addition of all the mentioned controls to X_i', as illustrated in Section 5.3 and in Appendix Figure B.5. We also estimate Equation 2, controlling for the gender of the new hire and adding a three-way interaction between race, gender, and the share of White coworkers to test for intersectional differences in the impact of White coworkers on turnover and promotion.

Second, we run Cox proportional hazard models, stratified at the office $\times$ year level so that each office has its own flexible, baseline hazard function. We use the same covariates as in the OLS regression, and the likelihood function is then formed by first calculating for each duration time t the conditional probability that, of all new hires employed at a given office for at least t days, a particular new hire i leaves (or is promoted) on day t; and by then taking the product of these conditional probabilities (Cox 1975). Unlike the OLS models, the proportional hazards formulation

allowed us to expand our sample to include individuals who we could not observe for at least two years for turnover (and two-and-a-half years for promotion).

4.2. Randomization Check

Our identification of peer effects relies on evidence supporting the assumption of random assignment, within offices, of new hires to teams. This random assignment addresses two potential sources of endogeneity when considering intersectional peer effects and new hires' career outcomes. First, project characteristics could be correlated with (unobserved) new hire characteristics. Second, peer characteristics could be correlated with new hire characteristics. Random assignment, conditional on office, eliminates both sources of endogeneity.

We first explore this assumption quantitatively. Table IV Panels A and B reports a series of random assignment tests regressing employee characteristics that were determined prior to their entry—their racial and gender identity, education, and age—on the racial composition of their initial teams, controlling for office $\times$ year fixed effects. We do not observe a systematic relationship between observable pre-hire characteristics of employees and the racial composition of their coworkers on teams, with the one exception that the share of Asian coworkers predicts the team assignment of Asian female new hires. Adding individual-level controls does not change our findings, as shown in Appendix Table C.1.

Our quantitative evidence does not preclude selection on unobservables of new hires into teams. To assuage this concern and further understand how newly hired employees are assigned to teams, we conducted 11 informational interviews with ProfServ managers. Our interviews confirmed that the primary objective of HR managers tasked with staffing assignments was to minimize non-utilized time rather than to maximize "fit" between newly hired professionals and their team assignments, which would have heightened concerns about correlations with unobserved characteristics of coworkers and projects. Our interviewees stated that two characteristics of newly hired professionals were taken into account when making staffing decisions: their city and the department into which they were hired. When we probed about other factors that influenced newly hired employees' assignments to teams, one manager simply stated that "a first year is a first year is a first year." Whereas more experienced professionals may have areas of specialization or distinct skills, first-year junior employees lacked any such distinguishing characteristics. Thus, while a newly hired professional's assignment to teams was conditional on their city, department, and hiring cohort, qualitative interviews suggested these assignments were orthogonal to other characteristics of the project.

Since the quality of the first projects may shape individual turnover and promotion independently from the racial composition of the team, we would ideally also have randomized assignment of projects to teams. While that is not the case, we can still explore whether the racial composition of teams is predictive of some observable characteristics of the projects on which a team works. Specifically, we use an indicator of project "quality" to confirm that the racial composition of teams is orthogonal to how important a project is to the firm. We used data about each project's level of priority to the firm (from 1 to 5, where 1 is highest priority) to construct the average project rank variable for each employee. Panel C of Table IV reports that the average priority rank of an employees' project portfolio is not systematically related to the racial composition of their team. Although this does not eliminate concerns about a correlation between unobservable characteristics of projects and the racial composition of one's coworkers, our results demonstrate that there is not a relationship between either (a) observable pre-hire characteristics of employees and team racial composition, or (b) observable project characteristics and team racial composition in our sample.

5. Results

5.1. Racial gaps in early career attainment

The racial turnover gap. We begin by examining the main effect of race and the interaction of race and gender on turnover. Table V Column 1 reports results from linear probability models regressing turnover on employees' race, including controls for individual and project characteristics, and office × year fixed effects; Column 2 adds the new hire's gender as a control. Column 2 documents that Black employees are 6.7 percentage points ($p < 0.05$) more likely to exit within two years than their White counterparts, whose average turnover rate is 20.9 percentage points. Column 3 disentangles the effects of race and gender. Neither Black, Asian, nor Hispanic men have turnover rates that are significantly different from their respective same-race female counterparts. Black women are 8.9 percentage points ($p < 0.05$) more likely to turn over than their White women counterparts, whose turnover rate is the lowest, at 17.5 percentage points. Columns 4, 5, and 6 of Table V report results from Cox proportional hazard models estimating employees' time to exit as a function of their race and gender. All results are consistent with OLS regression results.

The racial promotion gap. We now turn to the main effect of race and the interaction of race and gender on promotion. Table VI Column 1 reports results from linear probability models regressing promotion on employees' race, including controls for individual and project characteristics, and office × year fixed effects; Column 2 adds the new hire's gender as a control. Column 2 of Table

VI reports that Black employees receive on-time promotions at the lowest rate in ProfServ, with an on-time promotion rate 18.7 percentage points ($p < 0.01$) lower than their White counterparts. Asian employees are also less likely to be promoted on time than White employees, but only by 5.0 percentage points ($p < 0.01$). Column 3 interacts the gender and race of the new hire and reveals that neither Black nor Asian men receive promotions at rates that are statistically significantly different from their same-race women counterparts. Black women are 20.3 percentage points ($p < 0.01$) less likely to be promoted on time than their White female counterparts, who have the highest promotion rate, at 76.8%. Results from Cox proportional hazard models in Table VI are consistent with our OLS regression results.

To summarize, we find evidence consistent with the broad concepts of a racial hierarchy and intersectionality (Hurtado 1989; Purdie-Vaughns and Eibach 2008; Ray 2019a): White employees, and in particular White women, have the highest retention and promotion rates. Black employees have the lowest retention and promotion rates relative to their White, Asian, and Hispanic colleagues, with the largest relative turnover and promotion gap between White women and Black women. In contrast, Hispanic employees—a group similar in size to Black new hires—are statistically indistinguishable from their White colleagues in terms of their early career attainment.

5.2. Intersectional Peer Effects at Work

Effects of the share of White coworkers on turnover and promotion. Tables VII and VIII report how the share of White coworkers interacts with an employee's race and gender in predicting career attainment. The effect of the share of White coworkers on Black employees is both statistically significant and economically meaningful. Table VII, Column 2, shows that for Black new hires, a one percentage point increase in the share of White coworkers is associated with a 0.46 percentage point increase in the likelihood of leaving the firm within two years ($p < 0.01$). This is obtained by adding β_1, the coefficient on the share of White coworkers, to the coefficient on the share of White coworkers interacted with the Black dummy (equal to 1 when the new hire is Black). Put differently, a one standard deviation (20.8 percentage point) increase in White coworkers is associated with a 9.5 percentage point increase in turnover for Black employees. This effect is driven by the impact on Black women: a one percentage point increase in the share of White coworkers is associated with a 0.76 percentage point increase in their turnover rate within two years ($p < 0.01$). In other words, a one standard deviation (20.8 percentage point) increase in White coworkers is associated with a 15.8 percentage point increase in turnover for Black female employees.

This is approximately the same size as the overall turnover gap between White and Black women. To correct for multiple hypothesis testing, the bottom panel of Table VII shows the Bonferroni corrected p-value on the Black × % White Coworkers coefficient, adjusting for the fact that we are performing four different tests in Column 2 (namely testing the significant of the coefficient on % White Coworkers and its two-way interaction with three races) and eight different tests in Column 3 (namely testing the significant of the coefficient on % White Coworkers, its two-way interaction with Male, its two-way interaction with three races and its three-way interaction with Male and all three races). The Bonferroni corrected p-values are both below 0.05, confirming the significance of our results even after a multiple-comparison correction. Finally, the corresponding Cox hazard models in Column 5 and 6 display similar effects.

We label this effect intersectional: we do not observe statistically significant impacts of having more White Coworkers for any of the other race and gender groups, even when considering similarly sized minority groups like Hispanic employees. Using multiple Wald tests, we test whether the effect of White coworkers on turnover for Black women differs from the effect for each of the other seven race and gender groups: White women, White men, Black men, Asian women, Asian men, Hispanic women and Hispanic men. We find p-values below 0.05 for all these tests, confirming that the effect on Black women is distinct from the effect on all other groups.

Table VIII follows the same structure as above but considers "on time" promotion as the main outcome. We do not detect a significant difference in the effect of more White coworkers on the on-time promotion of other racial groups, whether Hispanic, Asian or Black. However, Column 3 shows that Black women's on-time promotion likelihood is 0.55 percentage points lower for every percentage point increase in White coworkers ($p < 0.01$). This is obtained by adding β_1, the coefficient on the share of White coworkers (0.123), to the coefficient on the share of White coworkers interacted with the Black dummy (-0.675), which is equal to 1 when the new hire is a Black woman because of the included three-way interaction representing Black men). This is equivalent to an 11.5 percentage point reduction in on-time promotion for a one standard deviation increase in White coworkers. The corresponding Cox hazard models in Columns 5 and 6 display similar effects. Similar to our turnover findings, these effects are intersectional in that we do not observe a statistically significant impact of having more White coworkers on the likelihood of on-time promotion for other race and gender groups. We perform multiple Wald tests of the difference between the effect of White coworkers on Black women and the effect on each of the other seven racial and gender groups and find that all comparisons have p-values below 0.05 except for the difference between the effect

of White coworkers on Black women and on Hispanic women, which is directionally similar but not statistically significant by conventional levels.

Effects of White women and men on Black turnover and promotion. To deepen our intersectional understanding of the main findings, we further investigate two questions about the impact of White coworkers on Black hires: (a) whether this effect is differentially driven by either White men or White women coworkers; and (b) whether Black men or Black women are differentially affected by either White men or White women. Figure IV plots key coefficients from individual models that separate out the share of White women and the share of White men. The figure reveals that White coworkers influence Black women's turnover in different ways: While both White men and women influence the turnover of Black women, the point estimate for the effect of White men coworkers is almost twice as large as that of White women coworkers and only White men coworkers have a significant effect on Black women's promotion. We do not detect any heterogeneity for Black men, whose turnover and promotion is neither impacted by White women nor White men coworkers.

Effects of Asian, Hispanic, and Black coworkers on turnover and promotion. The tables presented above already point to one type of intersectional peer effect: in contrast with Black female employees, none of the other race and gender groups are significantly affected by exposure to more White coworkers. Further, multiple Wald tests indicate that the effect of White coworkers on Black women's turnover is statistically distinct ($p < 0.05$) from that on other race and gender groups. We now investigate the effect of Asian, Black, and Hispanic coworkers on the turnover of new hires, by race and gender. Figure V illustrates these additional effects by plotting interaction coefficients from separate models that consider coworkers' racial composition on employees' turnover. The first eight coefficients (to the left of the graph) correspond to the regression in Table VII Column 3, where each plotted coefficient is the sum of the coefficient on % White Coworkers, its interactions with the employee's own race (if not White) and gender (if not female), and the three-way interaction when applicable. The next eight correspond to a specification where we replace White coworkers with Black coworkers, otherwise keeping the same specification as in Table VII Column 3.

Two patterns emerge from this analysis. First, an increase in the share of Black coworkers does not significantly impact the turnover of White employees (nor of Hispanic or Asian). However, we note that the distributions of White and Black coworkers do not have the same support (i.e., White employees are not exposed to a very large share of Black coworkers). Second, we find that having more Black coworkers significantly decreases the turnover of Black female employees, and no other gender and race group. This is consistent with past research finding that having more similar peers

(in this case, Black coworkers) can have a positive effect on retention for racial minorities (Zatzick et al. 2003; Sørensen 2004; Leonard and Levine 2006). While we are powered ($p < 0.05$) to detect, with a Wald test, that the positive effect of Black coworkers on Black women's retention is distinct from that of the (null) effect of Black coworkers on White men and women, we are not powered to detect, at conventional levels, whether the positive effect of Black coworkers on Black women's retention is distinct from that on other minority groups, like Black men.

We repeat this exercise in the third panel, replacing in our main analysis the share of White coworkers with that of Asian coworkers. Having more Asian coworkers also significantly increases the retention of Black women, and does not negatively impact the turnover of any racial and gender group. We caution, however, that some of these effects may be mechanical: the shares of Black, White, Asian, Hispanic (and Other) coworkers sum to 100% such that the negative effect of White coworkers on Black female retention will be partly mechanically reflected in positive effects of other groups (e.g., the most likely replacement of a White coworker is an Asian coworker). In the last panel, we look at the effect of the share of Hispanic coworkers on new hires: while Hispanic coworkers have a directionally positive effect on Black new hires' retention (and Hispanic employees' retention), we cannot conclusively distinguish these effects from the effect on other racial groups.

Manager and non-linear effects. Given past research findings that managers influence junior employees' careers through project assignments, training, and performance evaluations (Castilla 2011; Giuliano et al. 2011; McGinn and Milkman 2013; Srivastava and Sherman 2015; Abraham 2017), we also explore whether the race of one's manager in their initial assignments has any effect on their later turnover and promotion. Appendix Table C.2 reports results from an OLS regression and Cox hazard models of turnover on initial share of managers' race as well as interacted with a newly hired employees' racial identity. No substantive or significant effects are detected in turnover (or promotion, not reported), failing to provide evidence that managers' racial identities influence newly hired employees' early attainment within the firm. This may be context-specific: further inquiry with ProfServ revealed that managers in their team-based organizational structure tend to have less of a singular influence over junior employees than in other hierarchical structures.

Our main findings are modeled as a linear relationship between exposure to White coworkers and Black turnover. However, it is possible that the effects are nonlinear in important ways. In models not shown, we interact Black employees with a squared term for the share of White coworkers. We do not find statistically significant effects of our key interaction with the squared term, failing to provide evidence of a curvilinear relationship between Black employees and their share of White

coworkers. Also, theories of tokenism suggest that Black employees who are the only Black people on their teams are likely to experience greater isolation, resulting in stronger negative peer effects than Black employees working with at least one other Black coworker (Kanter 1977). To explore whether our main finding is driven by tokenism, we restrict the sample to new hires with at least one Black coworker and re-run our main model specifications. Our main results hold (Appendix Table C.3), suggesting that tokenism is not driving the results.

5.3. Robustness checks

We estimated additional models to probe the robustness of our findings to alternative specifications. First, we consider team size. Based on guidance from ProfServ, we exclude in our main analysis projects with more than 60 employees because these projects likely reflect distinct administrative functions and should not be conceptualized as employees working on the same team. However, we also verify that our results are robust to varying this censoring of team size. In Appendix Figure B.3, we study models that vary the cutoff of projects excluded from the calculation of the share of White (and other race) coworkers, from 40 to 80 coworkers. The figure plots the resulting coefficient on Black × % White Coworkers (left panel), with otherwise the same specification as in Table VII Column 2, and Black × % White Coworkers, with otherwise the same specification as in Table VII Column 3 (such that it can be interpreted as the coefficient on Black (Female) × % White Coworkers). The coefficients are virtually the same regardless of the cutoff we pick. Second, in Appendix Figure B.4, we explore how varying the time window of initial team assignments shapes our findings. Our key coefficients of interest have the same magnitude and statistical significance whether we consider as "initial" assignments the projects that are in the first two, three, four, or six months at the firm. Third, in Appendix Figure B.5, we vary the controls of our main specification, considering models with no controls, no individual-level controls, and adding share of White (and other race) manager controls to our baseline specification. The key coefficients are again unaffected. Fourth, while our main estimate on turnover considers a 24 month (2 year) window, our results remain qualitatively similar if we estimate turnover in windows between 12 and 30 months as illustrated in Appendix Figure B.6. Our results also remain effectively unchanged when considering promotion within 2 years, 2.5 years, and 3 years of the start date, as illustrated in Appendix Figure B.7. Fifth, in Appendix Figure B.8 we restrict our sample to new hires for whom the share of missing coworker race is less than 2%, 5%, and 10% and show that our main results are unchanged. Sixth, we also explored whether a higher proportion of White coworkers is confounded

by individual characteristics of coworkers that may be driving our results. For example, given that diversity has improved in the company over time, it is possible that Whiter teams are also older, on average. We therefore ran additional models controlling for the median and maximum age of other coworkers on new hires' teams, and they do not change our results. Finally, to explore whether our effect is driven by the lack of overall diversity in a team, we use a Herfindahl-Hirschman (HHI) index of team diversity to control for this and find that our main results hold.

6. Exploring Potential Causal Pathways

While we find consistent evidence of the impact of having more White coworkers on Black women's later retention and promotion outcomes, we are unable to observe the day-to-day interactions in the firm that may drive the effects we detect in the administrative data. We are therefore not able to provide a detailed account of the initial individual, interpersonal, and group dynamics that may underpin the causal effects we have documented. Nonetheless, to deepen our understanding of our key findings, we take several steps.

We start by reviewing extant literature to identify plausible causal pathways that undergird our findings. We use past research to understand how the effect of a greater share of initial White coworkers could manifest differently for Black women over time such that it would produce higher turnover and lower promotion for them. Alongside our literature review, we also turn to qualitative data to understand salient aspects of employees' experiences at ProfServ and to gain insight into which causal pathways could plausibly operate in our specific organizational context. To do this, we conducted semi-structured interviews with 17 employees exploring how organizational structures, formal and informal practices, and coworker interactions impact employees' reported behavior and beliefs about success at ProfServ. Our partners at ProfServ helped us recruit interview participants from a sample of 600 employees stratified by broad business area, race, ethnicity, and gender. In our invitations to participate in an interview, we oversampled Black employees because we aimed to learn more about their experience with coworkers, in particular. Our final sample included: four participants (23.5%) identified as White non-Hispanic (two women, one man, one nonbinary); seven participants (41.2%) identified as Black (four women, three men); three participants (17.6%) identified as Asian (one woman, two men); three participants identified as White Hispanic (all women). Our interviews were all conducted on Zoom between June and July 2021 and were 46 minutes long, on average. For further details about our qualitative methodology, findings, and limitations, see Appendix A.

We then return to the administrative data for additional quantitative analyses on the specific intermediate organizational dynamics to which the literature and qualitative data point us. Using the same identifying assumptions of conditional random assignment as above, we analyze three potential, but not mutually exclusive, subsequent causal pathways—performance evaluations, work assignments, and engagement—that may trace the relationship between initial interactions with White coworkers and Black women's later-term outcomes. These pathways emerge subsequent to the initial coworker interactions (first three months) and prior to later turnover and promotion outcomes (two to two-and-a-half years later).

6.1. Performance evaluations

One pathway through which Black women's initial share of White coworkers may affect their subsequent turnover and promotion is through influencing the subjective performance evaluations that Black women receive. Subjective performance evaluation processes remain prevalent in U.S. organizations as tools for assessing employee contributions, despite limitations to their accuracy and reliability (Cappelli and Keller 2014; SHRM and Globoforce Workhuman 2018). Their salience in the employee experience at ProfServ was echoed in our interviews: although we did not explicitly ask about performance evaluations, 76.5% of participants in our sample mentioned them as a factor that limited one's ability to succeed at ProfServ. Participants described performance evaluations as unclear, confusing, and highly variable, noting that ProfServ's process was subjective and comparative. For example, a White nonbinary respondent (ID 10) elaborated: "ProfServ releases [performance evaluation scores] and it [tells you] where you fall, how well you did for people skills and client skills, and so you see where you rank in accordance with all the other [peers] or everybody else at your level on this score… [it] is dependent on how well you did there and also 100 other things that we don't get a whole lot of insight into." A Black female participant (ID 11) suggested that how performance was evaluated relative to peers was opaque: "[The performance review process is] still a little bit unclear for everyone, it goes back to how all those [performance labels] are getting assigned. When you are being told, 'hey, your performance is with your peers, but you're [Average], you're not [Outstanding].' Does that mean all your peers are [Average], not [Outstanding]? … I'd rather not have a [performance] label to be honest. I'd rather not be labeled with anything."

In U.S. organizations, extant research highlights two important aspects of performance evaluation that can adversely shape Black women's evaluations: subjectivity and comparison, which

enables discretion and highlights the importance of whom employees are measured against (Acker 1990; McGinn and Milkman 2013; Ray 2019b). As the share of an employee's White coworkers increases, White coworkers are more likely to become the background against which an employee is seen and defined in contrast to. Any perceived differences between a given employee and their White coworkers are more likely to be scrutinized, stereotyped, and exaggerated, independent of how the employee actually behaves (Kanter 1977; Heilman 1980). Indeed, in contexts that conflate merit with idealized images of White masculinity, performance evaluations tend to result in a bias favoring White men (Castilla 2008, 2015). This can have long-term consequences because any initial impressions of a newly hired employee, especially stereotype-consistent perceptions, are sticky and can persist to subsequent performance evaluations, even after evaluators observe performance improvements (Wayne and Liden 1995; Heilman et al. 2019; Black and Vance 2021). For Black women, who are *the* aprototypical race-gender group in these contexts, such perceptual distortions—like negative stereotypes about the tendency to be aggressive, domineering, and incompetent—are likely to be particularly costly in subjective and comparative performance evaluations (Purdie-Vaughns et al. 2008; Pratt 2012; Ghavami and Peplau 2013; Rosette et al. 2016, 2018). For example, Black women described as running underperforming companies received the lowest ratings of leader effectiveness compared to other members of their race and gender groups (e.g., Black men and White women), in part because negative stereotypes about them are incongruent with expectations about leadership (Rosette and Livingston 2012). Thus, independent of actual performance, perceptions of Black women's performance, leadership potential, and promotability may not only be limited by such stereotypes but also by their incongruence with the characteristics of the "ideal" professional services employee (Eagly and Karau 2002; Rosette et al. 2016; Benson et al. 2024).

Given that extant literature and our qualitative interviews both point to performance evaluations as a potential causal pathway through which our main outcomes could emerge, we quantitatively investigate whether Black women who initially work with a greater share of White coworkers receive lower performance evaluations in administrative data. Formal performance reviews typically take place after one year of full-time employment, and can subsequently influence an employee's likelihood of turnover and promotion. We focus on one key component of ProfServ's formal performance evaluation process in Table IX: whether the employee is labeled a low performer. We estimate this in three ways: (1) Columns 1 and 2 estimate the likelihood that an employee will be labeled a low performer in their first review cycle; (2) Columns 3 and 4 estimate the percentage of projects in the first review cycle for which an employee was labeled a low performer; and (3) Columns 5 and

6 extend the observation period to estimate whether an employee was labeled a low performer in any review cycle.

Table IX shows that all three measures of low-performance labels point to similar findings. Columns 1, 3, and 5 document that Black male and female employees are, on average, between 4.7 and 12.6 percentage points more likely to be flagged as low performers than their White counterparts ($p < .01$). In Columns 2, 4, and 6, we find a large, negative effect of Whiter teams on Black women's probability of receiving low-performance labels: a one standard deviation (20.8 percentage points) increase in the share of initial White coworkers is associated with between a 3.5 and 7.8 percentage point increase in the probability that they are labeled as low performers. Given the low baseline rate of low performance flags (only 3.6 percent of White women are flagged as such), but their critical importance in predicting turnover and promotion for all employees (as shown in Appendix Table C.4) the magnitude of these effects is very large. In sum, when Black women initially work with a greater share of White coworkers across their teams, they are more likely to be identified as low performers by their evaluators.

6.2. Work assignments

A second potential causal pathway identified in the literature and the interviews is discrepancies in work assignments. All our participants noted that the quality of employees' work assignments—namely, working on billable tasks for visible, high-priority projects where newly hired employees could develop valued skills and demonstrate their contributions to the project and team—was critical to achieving success at ProfServ. Some interview respondents implied that access to such work assignments was susceptible to the influence of coworkers. For example, one Black female participant (ID 15) said: "If you know the right people, you will get the right opportunities, which will put you in the prime position for promotion or quicker promotion, you will get better bonuses, because they all sit and have a little discussion about you, so if you know more people and more people like you, will get better bonuses and better pay." One Hispanic female participant shared her experience and observation about the initial impact of having White coworkers on the project portfolios of employees of color. She (ID 6) stated, "people of color sit on the bench longer than their White counterparts, which means they aren't getting the [good] projects, which means there's already this separating very early on…." Similarly, a Black female participant (ID 11) described how such challenges with their project portfolios influenced later turnover decisions for women of color. She said, "They [women of color] have said that doing the work they want to do doesn't

seem to be coming as easily … and they leave… They were finding it harder to get asked to work on [projects] and proposals that might have been a large enough deal."

These aspects of our participants' experiences at ProfServ are consistent with two bodies of research that demonstrate how differences in work opportunities impact subsequent career outcomes for Black employees and for women: research on "opportunity" and "human capital" discrimination (Woodson 2016; Tippett 2019) and research on gender differences in nonpromotable tasks (Babcock et al. 2017, 2022). Work assignments vary in the extent to which they present employees with opportunities that are crucial for their development and advancement. High-quality assignments involve work on high-priority projects, allow for expertise development in specific areas (e.g., industry, function, type of service), facilitate relationships with senior leaders, and are visible across the organization. Conversely, low-quality assignments include lower-priority projects, clients in minor industries, and clerical or administrative tasks. Early differences in assignment quality can stunt development and limit career advancement, as initial experiences influence future access to high-quality assignments (Sturm 2001; Woodson 2016; Tippett 2019). As employees develop expertise and relationships, securing high-quality assignments increasingly depends on their relationships with senior colleagues and perceptions of their competence. Black women, as members of two marginalized groups (Black and female), face additional barriers in building strong relationships and overcoming negative stereotypes in culturally White male-dominated elite organizations (Purdie-Vaughns et al. 2008; Rosette et al. 2018; Woodson 2023). For example, after initially working with a higher share of White coworkers, Black women may struggle to receive subsequent assignments to high-quality work or may be relegated to low-quality assignments, hindering their long-term success at the firm.

To explore whether a greater initial share of White coworkers shapes subsequent work assignments, we constructed several intermediate dependent variables. First, we use staffing data detailing how employees document their time to investigate potential effects on Black women's task assignments. Specifically, we construct four intermediate outcomes that measure the tasks that employees report spending their time on: average monthly (1) billable hours (White mean = 138.04), (2) non-client facing hours (White mean = 15.18), and (4) training hours (White mean = 5.79). For Black women, compared to White women, we find that the initial share of White coworkers is associated with 8.7 more training hours per month and 18.8 fewer billable hours per month (both $p < 0.05$). The latter is particularly important because, as we show in Appendix Table C.4, fewer billable hours are associated with lower promotion and higher turnover for all employees. Further,

in models not shown, we find that reporting fewer billable hours predicts the likelihood of being labeled a low performer for all employees. Yet, the association between fewer billable hours and being labeled a low performer in the first review cycle is significantly larger for Black women than their White counterparts ($p < 0.05$).

Second, we construct two additional intermediate outcomes that measure employees' subsequent project portfolios: (1) monthly average number of (project) teams (White mean = 4.2), and (2) monthly average project portfolio priority ranking (White mean = 3.2). Columns 7 through 10 of Table X report our main model specifications with these two intermediate dependent variables. We do not detect any significant coefficient on our key interaction term (Black × Share of White Coworkers). We also do not detect a statistically significant main effect for Black (female or male) employees on either intermediate outcome. We note, however, that archival data allows us to test for differences in formal task assignment over time but not informal within-project roles, which may also influence individual workloads and corresponding changes to team size.

6.3. Engagement

A third potential causal pathway that emerged from both our literature review and as salient aspects of Black women's experiences at ProfServ was how their coworkers influenced their engagement. Nearly all participants (94.1%) pointed to various ways that their coworkers influenced them, and moreover, all four Black women participants described racialized and gendered aspects of their interactions with coworkers that impeded their day-to-day engagement on a team. A Black female (ID 15) participant implied this when she said, "What I have to say carries less meaning than my White counterparts. So a lot of the time, I don't speak up unnecessarily, I don't give my opinion, because even though she [a White colleague] is saying something that doesn't make sense...it doesn't matter what you're saying, I don't bother…" Another Black female (ID 11) noted that she did not experience the same opportunities to participate in male-dominated teams as she did in other team contexts: "Other projects...where it was more male-dominated, and I will say that I felt like I was fighting for airtime at times...I'm trying to get my words in here."

These salient aspects of participants' experiences are aligned with prior research on factors limiting Black women's engagement at work—such as identity management, pressure to gain legitimacy, belonging uncertainty, and discomfort in speaking up. For example, because Black women face negative stereotypes that conflict with ideal worker expectations, extant literature notes that they may feel greater pressure to gain legitimacy relative to their White counterparts (Thomas and Hollen-

shead 2001; Bell Smith and Nkomo 2003; Williams and Dempsey 2014). Pressure to avoid being seen (by their White coworkers) as domineering by speaking in an articulate and tame manner can be taxing and stressful, and leave Black women feeling inauthentic (Dickens and Chavez 2018). Further, Black women working with a greater share of White coworkers may feel more compelled to engage in impression management strategies and less likely to disclose and share, leaving them unsatisfied and disengaged (Hewlin 2003; Catalyst 2004; Phillips et al. 2009). Such early psychological experiences of non-belonging, pressure, and threat can establish the starting point and initial trajectory of a recursive cycle between Black women and their White coworkers (Cohen and Sherman 2014; Yeager et al. 2016; Walton and Wilson 2018). Once launched, these recursive processes have been shown to disproportionately influence engagement behaviors—for instance, developing positive and long-lasting relationships with peers and mentors—even up to nine years later (Walton and Cohen 2007; Cohen et al. 2009; Walton and Cohen 2011; Brady et al. 2020).

Although we turn to the administrative data to explore how Black women's initial share of White coworkers shapes their engagement at ProfServ, many of the dynamics related to engagement are not captured in administrative data. As such, we test this potential causal pathway with proxy data from ProfServ's annual engagement survey. In Appendix Table C.5, we report models testing for evidence of any association between our key interaction term and various engagement survey questions measuring employees' perceptions of voice, fairness, and respect. We do not find evidence of any significant statistical relationship between the initial share of White coworkers and Black women in these engagement survey response data. It may also be possible that differences in response rates to engagement surveys, as opposed to the scores themselves, are a more accurate predictor of employees' experiences at work (Zaslavsky et al. 2002; Klein et al. 2011). As such, Models 7 and 8 of Appendix Table C.5 report results from OLS regressions of a binary indicator of engagement survey completion on our main model specifications. While Black women are indeed the least likely to complete the company's annual engagement survey, being on Whiter teams is not associated with lower response rates for Black women.

In sum, our investigation into three potential causal pathways—performance evaluations, work assignments, and engagement—furthers our understanding of how the effect of a greater share of initial White coworkers could manifest for Black women over time such that it would produce higher turnover and lower promotion. We find evidence that Black women who initially work with a greater share of White coworkers are (a) more likely to be labeled as low performers and (b) subsequently spend more time on training and fewer hours billing to client projects, than Black women who work

with a lesser share of White coworkers at the start of their careers. Receiving a low-performance label and reporting fewer billable hours both predict higher turnover and lower promotion for all employees. We detect no differences in their (c) formal assignment to higher priority projects and (d) engagement survey scores. However, we note that our data and methodology would not be appropriate to uncover differences in more informal task assignments or day-to-day disengagement on a project, two plausible pathways that we leave for future research.

7. Discussion

This paper empirically documents the magnitude and enduring effects of initially working with a greater share of White coworkers for Black women in junior high-wage jobs in a large professional services firm. We find that a one standard deviation increase (20.8 percentage points) in the share of White coworkers early in an employee's career increases Black women's likelihood of turnover by 15.8 percentage points and reduces their likelihood of promotion by 11.5 percentage points. These effects are consistent with intersectionality research on Black women's experiences in elite organizations: neither White women nor other employees of color, even similarly sized numerical minorities such as Black men or Hispanic women and men, experience similarly negative turnover and promotion patterns on initial Whiter teams. Our findings remain robust to multiple adjustments to our models, including to team size censors, the definition of "initial" coworkers (ranging from two to six months), controls in our main model including controlling for overall team diversity, turnover and promotion timelines, sample restrictions related to missing race data, and the age composition of initial coworkers. We draw on extant literature and qualitative interviews to gain insight into three salient and plausible causal pathways that may underlie these findings. Using administrative data on intermediate outcomes to explore these pathways, we find that Black women who were initially assigned to work with a greater share of White coworkers are more likely to be labeled as low performers and report fewer billable hours and more training hours in subsequent periods.

Our research makes contributions to three literatures. First, we contribute directly to the literature on how peer effects impact racial inequality at work. Past studies about the effect of White peers on their colleagues from underrepresented groups have offered mixed evidence about the nature of such peer effects, mainly focusing on managers' effects, immediate or short-term performance and productivity, and primarily studying low-wage work (Sørensen 2004; Leonard and Levine 2006; Cornelissen et al. 2017; Glover et al. 2017). By drawing on longitudinal administrative data in a high-wage firm where assignments to initial teams appear random, conditional on office, we

move beyond short-term outcomes to identify the longer-term causal effects of peers on two critical labor market outcomes, turnover and promotion. Our granular performance, work assignment, and engagement data also expand our understanding of the possible pathways through which White coworkers can affect careers in a relatively understudied high-wage context. Since differences at the top decile of the income distribution disproportionately shape economic inequality (Saez 2008), understanding racial differences in career trajectories for elite jobs can help identify a key mechanism underlying broader labor market inequality.

Second, we offer the intersectionality literature quantitative empirical specifications on the experience of Black women in an elite professional services organization. The peer effects identified in our study are statistically and practically meaningful: the effect of a one standard deviation increase in the share of White coworkers is similar in terms of magnitude as the entire Black-White gap in turnover. Whereas previous research has recognized Black women's distinct disadvantage in socially constructed systems—such as primarily White American business cultures (Bell Smith and Nkomo 2003; Wingfield 2023), White spaces (Moore 2008; Evans 2013; Moore 2020), White racial frames (Feagin 2020), White institutions (Melaku 2019, 2022), White cultures (Woodson 2023), and racialized and gendered structures and systems (St Jean and Feagin 1998), we offer a more granular understanding of when and how these disparities may emerge—in initial interactions on teams with a greater share of White coworkers. Our relational approach reframes our understanding of Black women's career outcomes as originating in a set of early interactions with White coworkers and highlights the role organizational practices play in producing distinct disadvantages.

Our intersectional approach also yielded insights about the roles that White men and White women take up in elite organizations. First, further intersectional explorations suggested that White men directionally have a greater impact than White women on Black women's turnover and promotion. This finding may be linked to White men's position atop the race-gender hierarchy in the firm and in society or a wider organizational culture that idealizes elements of White masculinity (Acker 1990; Ray 2019a). Future research is needed to explore how attempts to shift any of these levers—for instance, changing elements of organizational culture—can affect White men's interaction behaviors and whether that also leads to improvements for Black women's career experiences in elite organizations. Second, our findings document that White women, entering junior jobs from degree programs with no prior experience at the firm, receive the highest promotion and lowest turnover rates compared to all other race-gender groups. However, White women's advantage appears to erode over time, as White women are underrepresented in more senior leadership positions.

Speculatively, this could suggest countervailing factors influencing White women's experiences in elite organizations—including parental status and caregiving responsibilities (Correll et al. 2007; Bertrand et al. 2010), gendered cultural beliefs about power and leadership (Eagly and Carli 2007), alongside pressures to increase gender diversity (Fernandez-Mateo and Fernandez 2016). Future research could consider how such factors interact over time and the job hierarchy.

Finally, our study yields insights about the practice of managing race and gender diversity in elite firms (Ely and Meyerson 2000; Dobbin and Kalev 2022; Wingfield 2023). Our findings point to a "second generation" form of inequality that is hard to link to intentional actions by specific individuals (Sturm 2001): we trace how the impacts of initial interactions are enacted across routine practices including performance evaluations and work assignments to produce disparities in turnover and promotion. It would be reckless to conclude from this evidence that the practical solution to these challenges is racial segregation on teams. Rather, our research calls on organizations to uncover the root causes of problems stemming from coworker interactions, to investigate how these interactions may structure performance evaluations and work assignments over time, and to institute processes to prevent and remedy these problems. Redesigning organizations demands institutionalizing information gathering and analysis, identifying pain points and bottlenecks in processes, and providing compelling incentives for organizational leaders and employees to engage in and commit to problem-solving (Duflo 2017; Mobasseri et al. 2023). Future research can test the effectiveness of numerous revisions to seemingly neutral organizational policies and practices on Black women's career advancement. For example, our finding that Black women's initial interactions with a greater share of White coworkers are associated with receiving a low-performance label suggests that testing modifications to explicit and implicit comparisons in performance evaluation processes may be needed (Bohnet et al. 2016; Chang et al. 2020). Further, our finding that Black women initially working with a greater share of White coworkers subsequently spend less time on billable work calls for future research into the effects of alternative work assignment processes—such as random, rotational, or skills-based assignment mechanisms (Babcock et al. 2017, 2022)—on Black women's career advancement.

Notwithstanding its contributions, this research has several notable limitations. First, although we leverage conditional random assignment of newly hired employees to teams, supporting a causal interpretation of peer effects, the possibility remains that unobservable factors shape why some teams have higher shares of White coworkers, which may independently influence newly hired employees' outcomes. Future experimental research designs employing randomized assignment of

people to teams and teams to projects could resolve this issue. Second, we study a single company in the professional services industry, which limits the generalizability of our findings. We cannot know the degree to which our findings depend on the particular composition and coworker dynamics of the firm we study. We do not believe that our results are an artifact of idiosyncratic coworker or firm dynamics—indeed, ProfServ project dynamics are typical of firms in this industry—but we cannot claim that our results apply to any other firm. Future research can explore the extent to which our findings generalize to other firm and industry contexts, particularly those where work is predominantly individual-driven rather than team-oriented, and organizational practices underlying career advancement benchmarks are less susceptible to peer influence. Third, our estimated effects are valid for the range of racial coworker compositions we observe, but we are limited in our ability to extrapolate our effects to the (arguably few) high-wage work settings in which White coworkers are a minority. Fourth, while we explored potential causal pathways that are drawn from the extant literature and emerged as salient in qualitative interviews but then empirically tested using our administrative data, our data are likely too coarse to identify "good" projects or projects with team dynamics that enable sufficient opportunities for an employee to demonstrate their contribution. Further, because our qualitative interview sample was small and only reflects the experiences of participants still employed at ProfServ, it is possible that we overlooked or underestimated potential causal pathways in the literature that did not align with our qualitative data. Last, while our data is rich within the firm, we cannot adjudicate between voluntary and involuntary turnover, nor can we follow new hires after they leave the firm. We are limited in our understanding of what other labor market opportunities may co-occur with turnover at one firm. Future research studies of fine-grained longitudinal data across firms can help identify precise mechanisms that would expand our understanding of truly voluntary and involuntary career outcomes.

Retaining and promoting a diverse set of employees in elite firms is just as important as recruiting them. That Black women's experiences are distinct from other race-gender groups, and that White men and women may play different roles in shaping these experiences, underscores the need for intersectional approaches to identifying barriers to equity and equality at work. Our findings call on scholars and managers to reconceptualize how the effects of early peer relationships manifest in conventional performance evaluation and staffing processes, and, ultimately, impact career trajectories. We hope future researchers will leverage these insights to test interventions that build more inclusive workplaces, by targeting relationships across intersecting hierarchies of race and gender, organizational practices, and time.

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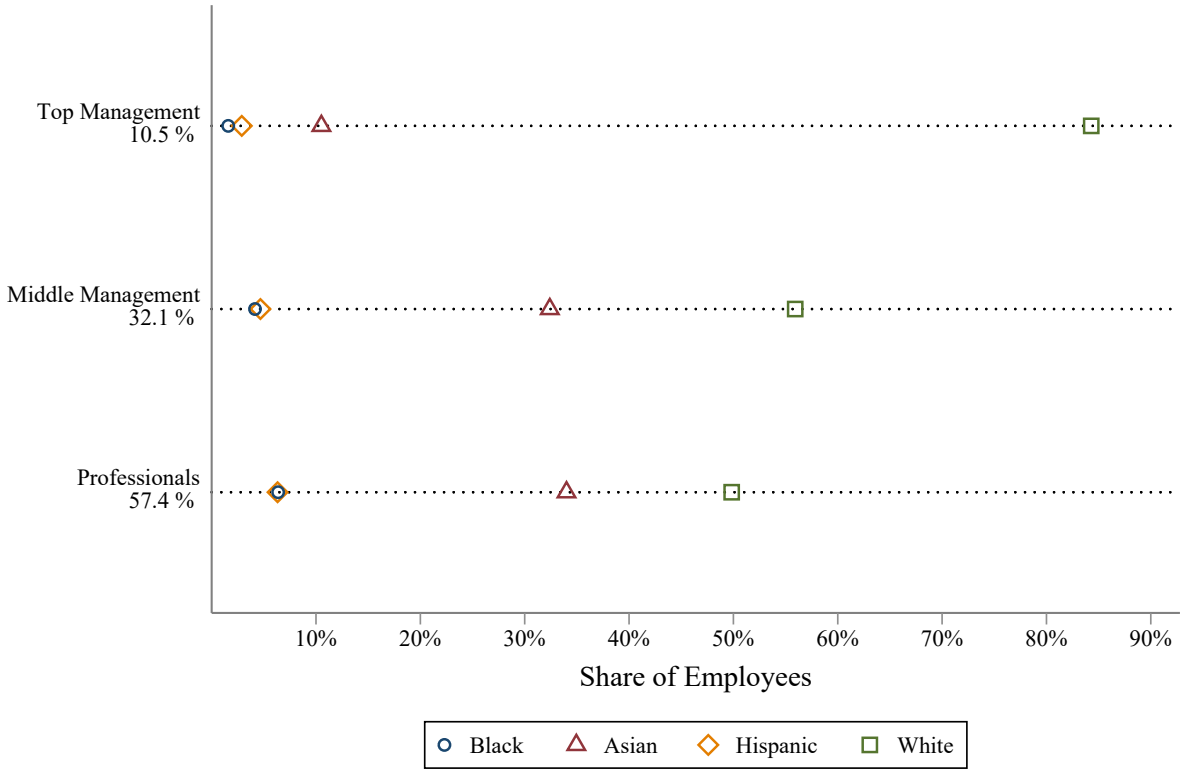
Figures

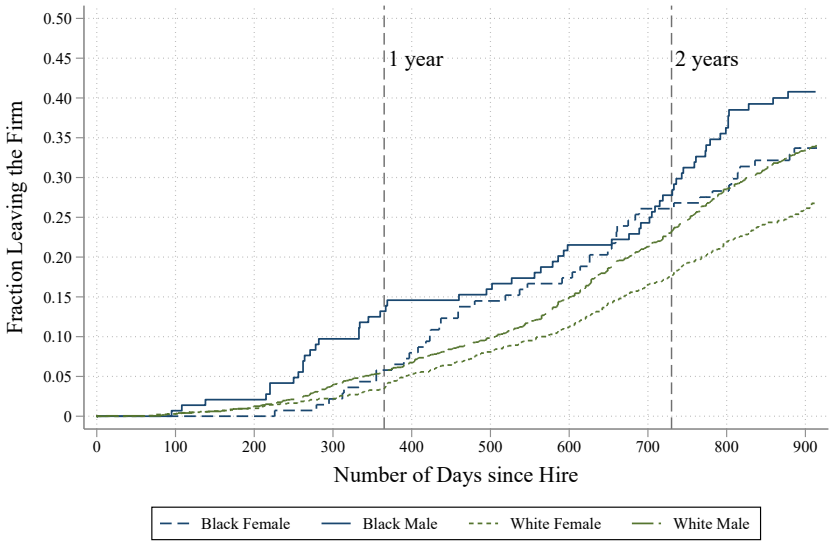
Figure I: Share of Employees by Race and Job Level



Notes. Using the full sample of more than 50,000 U.S. employees (not only new hires), this figure plots the racial composition, i.e., the share of employees of each race, at three levels of seniority: *Professionals*, *Middle Management* and *Top Management*. The representation of these levels of seniority as a share of the total workforce is shown below the categories in the vertical axis. The figure illustrates the increasing racial stratification at the firm along the job ladder. For instance, White employees represent only half of Professionals, but more than eighty percent of the Top Management. Since employees from "Other Race" are omitted from the plot, percentages may not add up to 100% for a certain seniority level.

Figure II: Kaplan Meier Failure Estimates

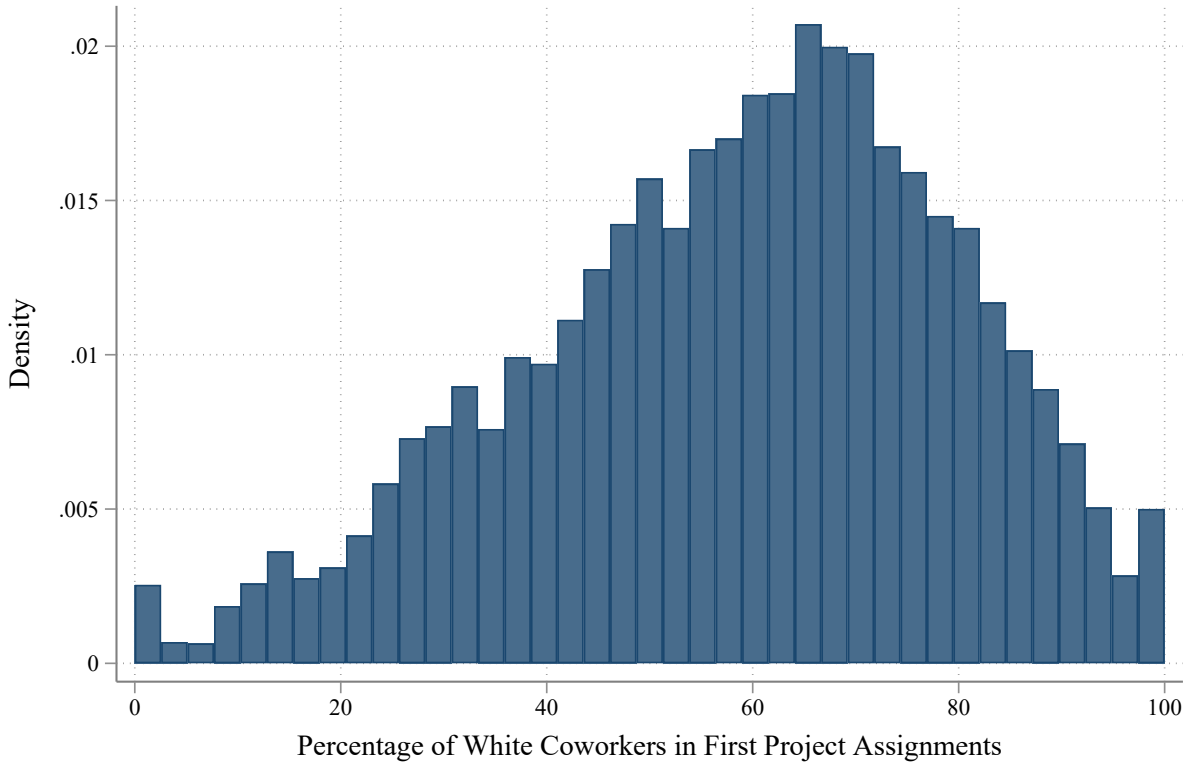
(a) by New Hire Race



(b) by New Hire Race and Gender

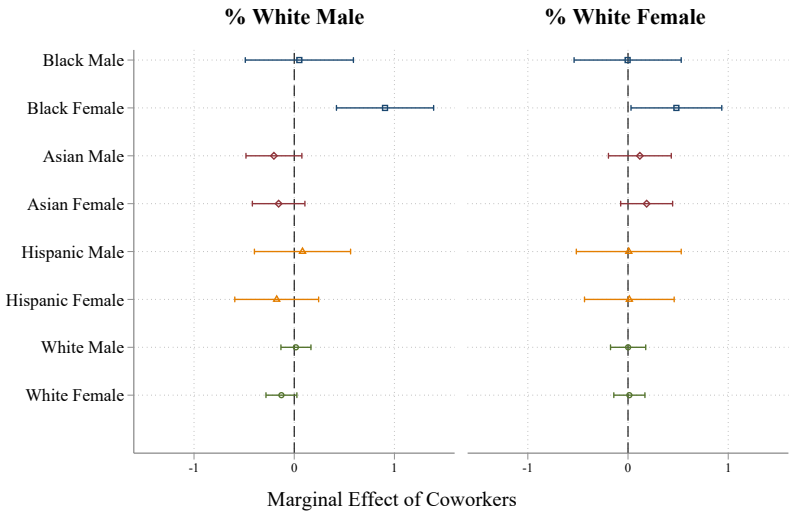
Notes. This figure shows the estimated Kaplan–Meier failure curves for employees by race and gender. In Panel (a), all 5,619 new hires (excluding "Other Race" category) that we have observed for at least two years are considered, and the estimation is done separately for each race. In Panel (b), we only consider the 3,667 Black and White new hires from our sample that we have observed for at least two years, and the estimation is done separately for each combination of race and gender. The y-axis represents the cumulative fraction of employees that have left the firm at a given point in time. The x-axis depicts the number of days since the hiring date.

Figure III: Distribution of the Share of White Coworkers

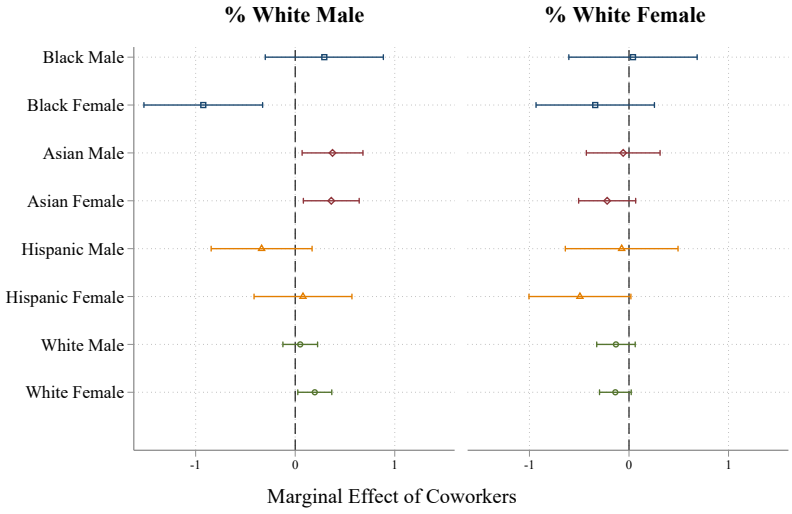


Notes. This figure shows the distribution of a focal employee's share of White coworkers in their first project assignments. This figure is drawn using the full sample of 9,037 new hires. The mean is 58.8. The unconditional standard deviation in the share of initial White coworkers is 20.8 percentage points. After residualizing on the office by year of hire fixed effects, the standard deviation is 14.0 percentage points.

Figure IV: Marginal Effect of White Coworkers



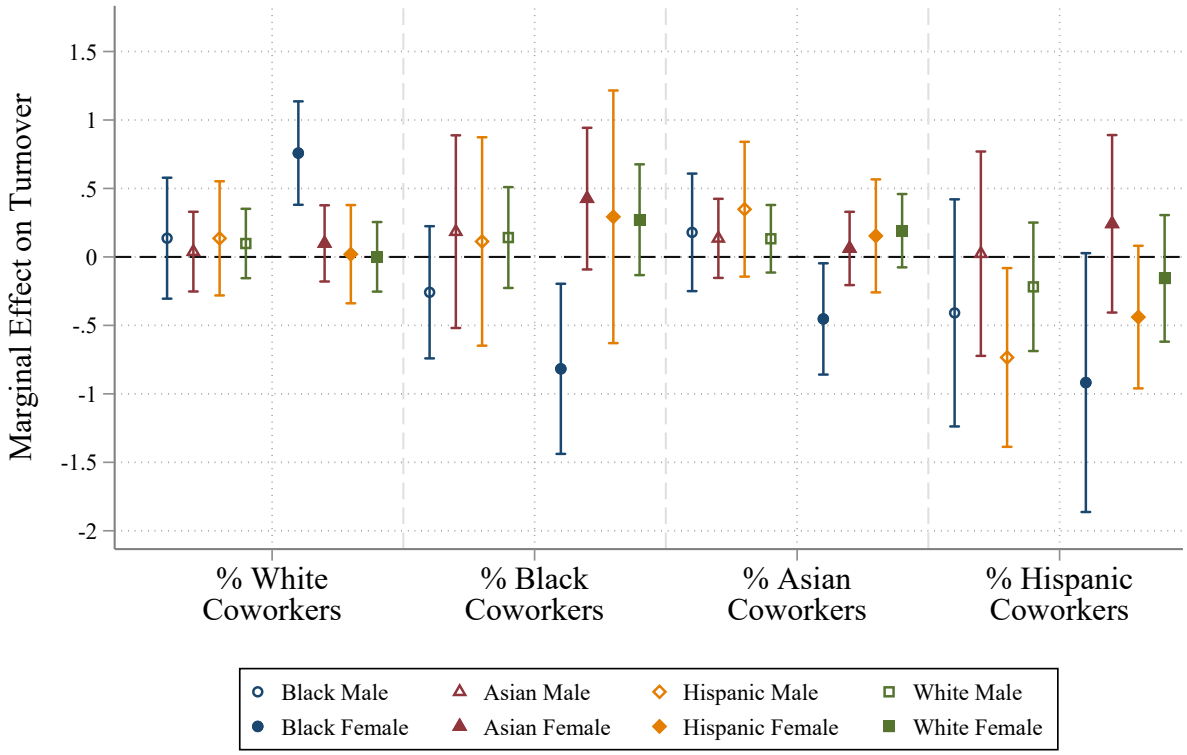
(a) Turnover



(b) Promotion

Notes. This figure separates out the effect of having more White male (on the left) or White female (on the right) coworkers on turnover (Panel (a)) and promotion (Panel (b)). The specification in Panel (a) is the same as in Table VII Column 3, except we interact, respectively, with the share of White male coworkers and the share of White female coworkers, instead of the share of White coworkers, and we control for the other race shares separately by gender. We therefore no longer control for the overall share of female. Similarly, the specification in Panel (b) is the same as in Table VIII Column 3, except we interact, respectively, with the share of White male coworkers and the share of White female coworkers, instead of the share of White coworkers, and we control for the other race shares separately by gender. We therefore no longer control for the overall share of female. Plotted coefficients are the marginal effect of having either more White female (on the right) or White male (on the left) coworkers. For instance, for Black Male the plotted coefficient on the right panel is the sum of the coefficient on % White Female Coworkers, its interaction with Black, with Male, and with both Black and Male. Similarly, for Black Female the plotted coefficient on the right panel is the sum of the coefficient on % White Female Coworkers and its interaction with Black. All standard errors are robust and clustered at the office × year level. 95% confidence intervals are reported.

Figure V: Intersectional Effect of Coworkers on Employees' Turnover



Notes. This figure shows the effect of having more White, Black, Asian, and Hispanic coworkers on the turnover of male and female new hires. The first eight coefficients (to the left of the graph) correspond to Table VII Column 3 estimation, where each coefficient is the sum of the coefficient on % White Coworkers, its interactions with the employee's own race (if not White) and gender (if not female), and the three-way interaction (when applicable). The next eight correspond to a specification where we replace White coworkers with Black coworkers, otherwise keeping the same specification as in Table VII Column 3. We repeat the exercise with Asian and Hispanic coworkers. All standard errors are robust and clustered at the office × year level. 95% confidence intervals are reported.

Tables

Table I: Descriptives: Race and Gender

Panel A: Race and Gender of Employees					
	Share				
% Black Female	2.3				
% Black Male	2.4				
% Asian Female	15.7				
% Asian Male	12.1				
% Hispanic Female	3.1				
% Hispanic Male	3.9				
% White Female	24.5				
% White Male	31.8				
Panel B: Race and Gender of Coworkers					
	Mean	Sd	Median	P25	P75
% Female Coworkers	40.3	14.7	40.1	31.1	48.8
% White Coworkers	58.8	20.8	60.9	45.0	74.0
% Asian Coworkers	27.3	19.6	22.7	12.5	39.1
% Hispanic Coworkers	5.8	7.8	3.9	0.9	8.0
% Black Coworkers	4.9	6.8	2.6	0.2	7.0
% Other Race Coworkers	3.2	4.9	1.6	0.0	4.7

Notes. **Panel A** of this table reports the race and gender of the new hires. In this panel, shares do not add up exactly to 100% because we omit non-Hispanic new hires that identify as an other race, which includes non-Hispanic coworkers that identified as Two or More Races, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, Middle Eastern, North African, Near Eastern, or Indigenous Mexican or Central American. **Panel B** reports statistics on the racial and gender composition of the new hires' coworkers in the first assigned projects. The values are computed over our 9,037 full new hires sample.

Table II: Employee and Project Summary Statistics

Panel A: Sample Size					
	Total				
Number of Employees	>50,000				
Number of New Hires	9,037				
Time Span	2014-2020				
Panel B: New Hires Summary Statistics					
	Mean	Sd	Median	P25	P75
Age at Hire	25	3	24	23	25
Share in Top 20 U.S. Schools	0.12	0.32			
Share in Top 21-100 U.S. Schools	0.35	0.48			
Share with a Masters Degree	0.27	0.44			
Share with a Specialized Degree	0.14	0.35			
Panel C: Project Summary Statistics					
	Mean	Sd	Median	P25	P75
Number of Projects per Month					
Number of Coworkers per Project					
Number of Hours per Project	187	227	120	60	231
Share of Priority Hours	0.22	0.38	0.00	0.00	0.34
Share of Billable Hours	0.71	0.38	0.93	0.49	1.00

Notes. **Panel A** of this table displays the number of employees, the number of new hires, and the time span of the data. **Panel B** displays new hires' age and education characteristics. Age is estimated over our 9,037 new hire sample; share in Top 20 and Top 21-100 schools are estimated over 7,645 new hires for whom we have education data; and share with a Masters or Specialized Degree are estimated over 7,981 new hires for whom we have degree data. Masters Degree and Specialized Degree are not mutually exclusive. **Panel C** displays statistics about the projects assigned to new hires in their first three months. *Number of projects per month* corresponds to the number of distinct first projects the new hire worked on each month. *The share of priority hours* is the share of hours spent on projects classified as priority (rank = 1) over the total number hours that the new hire spent on first assignments. *The share of billable hours* represents the share of hours that are billable to the client over the total hours that the new hire spent on first assignments. In Panel C, statistics are estimated over our sample of 9,037 new hires.

Table III: Turnover and Promotion, by Race and Gender

	% Turnover (2 yr)		% Promotion (2.5 yr)	
	Mean	Sd	Mean	Sd
Panel A Overall	22.3	41.6	68.4	46.5
Panel B: by Race				
Black	27.0	44.4	50.8	50.1
Asian	24.4	42.9	62.3	48.5
Hispanic	24.0	42.8	69.6	46.1
White	20.9	40.7	72.5	44.7
Panel C: by Race and Gender				
Black Female	26.1	44.1	56.3	49.8
Black Male	27.8	44.9	45.1	50.0
Asian Female	22.7	41.9	65.3	47.6
Asian Male	26.5	44.2	58.6	49.3
Hispanic Female	22.3	41.8	70.7	45.7
Hispanic Female	25.4	43.6	68.6	46.5
White Female	17.5	38.0	76.8	42.2
White Male	23.3	42.3	69.4	46.1

Notes. This table reports the average and standard deviation of employees' turnover (within two years) and promotion (within two years and a half). **Panel A** reports these statistics for the full sample. **Panel B** reports statistics separately by race, and **Panel C** separately by gender and race. Turnover (left side) statistics are computed over our 5,839 sample that we observe for at least two years, and Promotion (right side) over our 5,354 sample that we observe for at least two and a half years. In both Panel A and Panel B, "Other Race" employees are not shown.

Table IV: Test of Random Assignment

	Panel A: Employee Race and Gender							
	Black Female	Black Male	Asian Female	Asian Male	Hispanic Female	Hispanic Male	White Female	White Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
% White Coworkers	-0.030	-0.005	0.014	-0.016	0.048	0.001	-0.010	-0.031
	(0.039)	(0.028)	(0.065)	(0.064)	(0.058)	(0.044)	(0.077)	(0.091)
% Black Coworkers	0.030	-0.005	0.066	-0.059	0.040	-0.054	0.064	-0.126
	(0.053)	(0.051)	(0.084)	(0.087)	(0.070)	(0.053)	(0.112)	(0.120)
% Asian Coworkers	-0.029	-0.001	0.159**	0.067	0.015	-0.066	-0.081	-0.095
	(0.036)	(0.030)	(0.067)	(0.067)	(0.059)	(0.045)	(0.079)	(0.093)
	Panel B: Additional Employee Characteristics							
	Master Degree	Specialized Master	Top 20 School	Top 20-100 School	Top 100-1000	Age		
	(1)	(2)	(3)	(4)	(5)	(6)		
% White Coworkers	0.089	-0.000	0.039	0.076	0.057	-1.157		
	(0.073)	(0.058)	(0.050)	(0.081)	(0.091)	(0.525)		
% Black Coworkers	0.078	0.019	-0.053	-0.006	0.153	-1.197		
	(0.090)	(0.064)	(0.060)	(0.118)	(0.126)	(0.656)		
% Asian Coworkers	0.109	-0.012	0.002	-0.004	0.094	-0.615		
	(0.077)	(0.058)	(0.055)	(0.083)	(0.091)	(0.536)		
	Panel C: Project Characteristics							
	Avg. Project Rank							
	(1)							
% White Coworkers	0.074							
	(0.281)							
% Black Coworkers	-0.054							
	(0.386)							
% Asian Coworkers	0.114							
	(0.273)							
Nb. obs	9037	9037	9037	9037	9037	9037	9037	9037

Notes. **Panel A** presents OLS estimates of a linear model where we regress employees' own race and gender on their coworkers' race. **Panel B** presents OLS estimates of a linear model where we regress employees' individual characteristics on their coworkers' race. **Panel C** presents OLS estimates of a linear model where we regress the average project rank over an employee's assignments in their first three months on their coworkers' race. Projects are internally ranked on a scale of 1 to 5, according to how crucial they are to the company's business. All specifications include office × year fixed effects and control for the share of Other race. All standard errors are robust and clustered at the office × year level.

Table V: The Race and Gender Turnover Gap

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Black	0.064**	0.067**	0.089**	1.331***	1.350***	1.196
	(0.029)	(0.028)	(0.038)	(0.124)	(0.126)	(0.170)
Asian	0.019	0.026	0.025	1.120**	1.154***	1.171**
	(0.016)	(0.016)	(0.021)	(0.057)	(0.059)	(0.081)
Hispanic	-0.005	-0.002	0.010	0.976	0.988	1.138
	(0.026)	(0.026)	(0.038)	(0.080)	(0.081)	(0.139)
Male		0.042***	0.045***		1.198***	1.216***
		(0.011)	(0.014)		(0.049)	(0.066)
Black × Male			-0.042			1.243
			(0.052)			(0.230)
Asian × Male			0.004			0.973
			(0.028)			(0.090)
Hispanic × Male			-0.021			0.783
			(0.049)			(0.126)
White Mean Turnover	0.209	0.209		0.209	0.209	
White Female Mean Turnover			0.175			0.175
Nb. obs	5839	5839	5839	9037	9037	9037

Notes. Columns 1 to 3 present OLS estimates of a model where the dependent variable is a dummy that equals one if an employee left the company within two years of their hire. Column 1 regresses it on employee's race dummies, Column 2 adds the employee's gender dummy, and Column 3 adds the interaction between the two. Individual demographic and project controls are included in every specification. Those are the age of the employee, a dummy for whether the employee has a master, a dummy for whether the employee has a specialized master, a categorical variable of university ranking (top 20, top 21-100, top 101-1000 and beyond top 1000), the average number of colleagues across all first project assignments and, finally, whether the new hire was initially assigned at least one priority project. All regressions also control for office × year fixed effects. Continuous predictors are mean-centered. White mean promotion and White female mean promotion are unadjusted and based on the full sample of 9,037 new hires. Finally, Columns 4, 5, and 6 present Hazard ratios from Cox proportional hazard models, stratified by office. Individual controls are the same as for Columns 1, 2, and 3. All standard errors are robust and clustered at the office × year level and reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table VI: The Race and Gender Promotion Gap

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Black	-0.183***	-0.187***	-0.203***	0.747***	0.739***	0.716***
	(0.037)	(0.037)	(0.050)	(0.068)	(0.067)	(0.089)
Asian	-0.044**	-0.050***	-0.061***	0.873***	0.858***	0.843***
	(0.018)	(0.018)	(0.022)	(0.040)	(0.040)	(0.051)
Hispanic	0.034	0.030	-0.014	1.040	1.029	0.965
	(0.029)	(0.029)	(0.043)	(0.077)	(0.076)	(0.104)
Male		-0.039***	-0.052***		0.895***	0.876***
		(0.013)	(0.017)		(0.032)	(0.040)
Black × Male			0.031			1.065
			(0.068)			(0.189)
Asian × Male			0.020			1.033
			(0.030)			(0.087)
Hispanic × Male			0.080			1.126
			(0.056)			(0.160)
White Mean Promotion	0.725	0.725		0.725	0.725	
White Female Mean Promotion			0.768			0.768
Nb. obs	5354	5354	5354	9037	9037	9037

Notes. Columns 1 to 3 present OLS estimates of a model where the dependent variable is a dummy that equals one if an employee was promoted within two years and a half of their hire. Column 1 regresses it on employee's race dummies, Column 2 adds the employee's gender dummy, and Column 3 adds the interaction between the two. Individual demographic and project controls are included in every specification. Those are the age of the employee, a dummy for whether the employee has a master, a dummy for whether the employee has a specialized master, a categorical variable of university ranking (top 20, top 21-100, top 101-1000 and beyond top 1000), the average number of colleagues across all first project assignments and, finally, whether the new hire was initially assigned at least one priority project. All regressions also control for office × year fixed effects. Finally, Columns 4, 5, and 6 present Hazard ratios from Cox proportional hazard models, stratified by office. Individual controls are the same as for Columns 1, 2, and 3. Continuous predictors are mean-centered. White mean promotion and White female mean promotion are unadjusted and based on the full sample of 9,037 new hires. All standard errors are robust and clustered at the office × year level and reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table VII: The Effect of White Coworkers on New Hires' Turnover, by Race and Gender

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Black	0.063**	0.067**	0.077**	1.318***	1.337***	1.075
	(0.029)	(0.029)	(0.036)	(0.124)	(0.126)	(0.162)
Asian	0.015	0.022	0.018	1.107**	1.140**	1.145*
	(0.016)	(0.016)	(0.021)	(0.057)	(0.059)	(0.082)
Hispanic	-0.008	-0.004	0.003	0.959	0.972	1.114
	(0.026)	(0.026)	(0.038)	(0.080)	(0.081)	(0.138)
Male		0.042***	0.039***		1.194***	1.199***
		(0.011)	(0.015)		(0.049)	(0.070)
Black × Male			-0.030			1.381*
			(0.050)			(0.267)
Asian × Male			0.007			0.984
			(0.029)			(0.094)
Hispanic × Male			-0.015			0.791
			(0.050)			(0.129)
% White Coworkers	0.072	0.069	0.001	0.999	0.998	0.997
	(0.122)	(0.122)	(0.130)	(0.004)	(0.004)	(0.004)
Male × % White Coworkers			0.097			1.002
			(0.084)			(0.003)
Black × % White Coworkers	0.387***	0.388***	0.758***	1.014***	1.014***	1.032***
	(0.134)	(0.135)	(0.170)	(0.005)	(0.005)	(0.008)
Asian × % White Coworkers	0.008	0.012	0.098	1.000	1.001	1.001
	(0.082)	(0.082)	(0.110)	(0.003)	(0.003)	(0.004)
Hispanic × % White Coworkers	0.020	0.015	0.019	1.004	1.004	1.008
	(0.138)	(0.138)	(0.176)	(0.004)	(0.004)	(0.006)
Black × Male × % White Coworkers			-0.719***			0.971***
			(0.261)			(0.009)
Asian × Male × % White Coworkers			-0.157			0.999
			(0.149)			(0.005)
Hispanic × Male × % White Coworkers			0.018			0.993
			(0.234)			(0.008)
White Mean Turnover	0.209	0.209		0.209	0.209	
White Female Mean Turnover			0.175			0.175
Bonferroni Corrected p-value		0.016	0.000			
Nb. obs	5839	5839	5839	9037	9037	9037

Notes. Columns 1 to 3 present OLS estimates of a model where the dependent variable is a dummy that equals one if an employee left the company within two years of their hire. Column 1 regresses it on employee's race dummies and the share of White coworkers in their initial project assignments, interacting these variables. Column 2 adds the employee's gender dummy. Column 3 adds the three-way interaction between employee's race, gender, and share of White Coworkers. Every specification includes office × year fixed effects and individual demographic and project controls, which are the same as in Table V. In addition, we control for the share of Asian, Black, Other Race, and female coworkers in first project assignments, as well as separately the share of missing race coworkers. Finally, Columns 4, 5, and 6 present Hazard ratios from Cox proportional hazard models, stratified by office. Individual controls are the same as for Columns 1, 2, and 3. Continuous predictors are mean-centered. White mean promotion and White female mean promotion are unadjusted and based on the full sample of 9,037 new hires. All standard errors are robust and clustered at the office × year level and reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table VIII: The Effect of White Coworkers on New Hires' Promotion, by Race and Gender

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Black	-0.184***	-0.187***	-0.189***	0.745***	0.737***	0.723**
	(0.038)	(0.037)	(0.049)	(0.068)	(0.067)	(0.092)
Asian	-0.041**	-0.047***	-0.056**	0.874***	0.859***	0.851***
	(0.018)	(0.018)	(0.023)	(0.040)	(0.040)	(0.052)
Hispanic	0.035	0.032	-0.009	1.049	1.038	0.985
	(0.030)	(0.030)	(0.044)	(0.079)	(0.078)	(0.107)
Male		-0.040***	-0.047***		0.896***	0.892**
		(0.013)	(0.017)		(0.032)	(0.043)
Black × Male			0.021			1.050
			(0.068)			(0.188)
Asian × Male			0.019			1.025
			(0.032)			(0.089)
Hispanic × Male			0.075			1.108
			(0.057)			(0.159)
% White Coworkers	0.049	0.053	0.123	1.001	1.001	1.003
	(0.139)	(0.139)	(0.147)	(0.003)	(0.003)	(0.004)
Male × % White Coworkers			-0.093			0.997
			(0.089)			(0.002)
Black × % White Coworkers	-0.246	-0.252	-0.675***	0.995	0.995	0.982***
	(0.160)	(0.161)	(0.234)	(0.005)	(0.005)	(0.006)
Asian × % White Coworkers	0.132	0.128	0.039	1.003	1.003	1.000
	(0.096)	(0.097)	(0.127)	(0.002)	(0.002)	(0.003)
Hispanic × % White Coworkers	-0.219	-0.215	-0.270	0.995	0.995	0.993
	(0.148)	(0.148)	(0.195)	(0.004)	(0.004)	(0.006)
Black × Male × % White Coworkers			0.866**			1.027***
			(0.339)			(0.010)
Asian × Male × % White Coworkers			0.175			1.006
			(0.164)			(0.004)
Hispanic × Male × % White Coworkers			0.080			1.003
			(0.244)			(0.007)
White Mean Promotion	0.725	0.725		0.725	0.725	
White Female Mean Promotion			0.768			0.768
Bonferroni Corrected p-value		0.472	0.033			
Nb. obs	5354	5354	5354	9037	9037	9037

Notes. Columns 1 to 3 present OLS estimates of a model where the dependent variable is a dummy that equals one if an employee was promoted within 2.5 years of hire. Column 1 interacts employee race dummies and the share of White coworkers in their initial project assignments. Column 2 adds the employee's gender dummy. Column 3 adds the three-way interactions between employee's race, gender, and share of White Coworkers. Every specification includes office × year fixed effects and individual demographic and project controls, which are the same as in Table V. We also control for the share of Asian, Black, Other Race, and female coworkers in first project assignments (measured in percentage points), as well as separately the share of missing race coworkers. Finally, Columns 4, 5, and 6 present Hazard ratios from Cox proportional hazard models, stratified by office. Individual controls are the same as for Columns 1, 2, and 3. Continuous predictors are mean-centered. White mean promotion and White female mean promotion are unadjusted and based on the full sample of 9,037 new hires. All standard errors are robust and clustered at the office × year level and reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table IX: Performance Evaluations

	First review cycle					
	Binary low perf.		Pct. low perf.		Ever low perf.	
	(1)	(2)	(3)	(4)	(5)	(6)
Black	0.076***	0.085***	0.047***	0.046***	0.126***	0.136***
	(0.021)	(0.026)	(0.013)	(0.015)	(0.027)	(0.037)
Asian	0.008	0.014	0.007	0.013**	0.006	0.015
	(0.011)	(0.013)	(0.005)	(0.006)	(0.013)	(0.017)
Hispanic	0.006	0.028	0.001	0.008	0.036*	0.069**
	(0.017)	(0.022)	(0.009)	(0.010)	(0.022)	(0.032)
Male	0.019**	0.025***	0.009**	0.011***	0.046***	0.052***
	(0.008)	(0.008)	(0.004)	(0.004)	(0.010)	(0.012)
Black × Male		-0.019		0.001		-0.021
		(0.045)		(0.025)		(0.053)
Asian × Male		-0.011		-0.014		-0.019
		(0.020)		(0.009)		(0.026)
Hispanic × Male		-0.039		-0.012		-0.060
		(0.033)		(0.016)		(0.041)
% White Coworkers	0.114	0.071	0.054	0.030	0.060	-0.022
	(0.072)	(0.074)	(0.035)	(0.036)	(0.097)	(0.098)
Male × % White Coworkers		0.083		0.044*		0.149**
		(0.051)		(0.025)		(0.066)
Black × % White Coworkers	0.197**	0.249*	0.118**	0.137**	0.330**	0.399**
	(0.100)	(0.130)	(0.054)	(0.059)	(0.134)	(0.163)
Asian × % White Coworkers	0.003	0.008	0.030	0.057*	-0.055	-0.014
	(0.054)	(0.062)	(0.026)	(0.030)	(0.063)	(0.077)
Hispanic × % White Coworkers	0.052	0.097	0.013	0.060	0.207**	0.286**
	(0.096)	(0.112)	(0.049)	(0.050)	(0.103)	(0.126)
Black × Male × % White Coworkers		-0.077		-0.023		-0.086
		(0.206)		(0.108)		(0.252)
Asian × Male × % White Coworkers		0.020		-0.046		-0.035
		(0.100)		(0.050)		(0.122)
Hispanic × Male × % White Coworkers		-0.070		-0.084		-0.111
		(0.174)		(0.077)		(0.183)
White Mean Dep. Var	0.061		0.023		0.144	
White Female Mean Dep. Var		0.036		0.012		0.098
Nb. obs	4713	4713	4713	4713	5570	5570

Notes. This table presents OLS estimates of linear models where the dependent variables are: a binary indicator for whether an employee was marked as a low performer in their first review cycle (Columns 1 and 2), the percentage of reviews for which an employee was marked as a low performer in their first review cycle (Columns 3 and 4), and a binary indicator for whether an employee was marked as a low performer in any review (Columns 5 and 6). Columns 1, 3, and 5 have the same specification and controls as Column 2 in Table VII. Columns 2, 4, and 6 have the same specification and controls as Column 3 in Table VII. Continuous predictors are mean-centered. White mean promotion and White female mean promotion are unadjusted and based on the sample of 5,839 new hires whom we observe for at least two years. The number of observations in each model may deviate slightly from 5,839. 269 employees are missing performance review information. Columns 1-4 also exclude employees hired in 2014. All standard errors are robust and clustered at the office × year level and reported in parentheses.* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table X: Work Assignments

	Billable		Non-client		Training		Nb projects		Project rank	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Black	-8.465***	-6.527***	1.905**	2.170*	2.586***	2.126***	-0.148	-0.106	-0.026	-0.015
	(1.671)	(1.991)	(0.856)	(1.242)	(0.649)	(0.816)	(0.097)	(0.119)	(0.053)	(0.078)
Asian	-3.648***	-3.822***	0.651	0.360	1.795***	1.950***	-0.057	-0.169*	-0.016	-0.028
	(0.864)	(1.183)	(0.547)	(0.692)	(0.283)	(0.360)	(0.078)	(0.091)	(0.033)	(0.043)
Hispanic	-1.023	-0.525	0.659	0.937	0.348	1.007*	-0.203**	-0.332**	0.000	-0.033
	(1.313)	(2.011)	(0.933)	(1.480)	(0.435)	(0.535)	(0.100)	(0.159)	(0.052)	(0.070)
Male	0.360	0.622	-0.399	-0.662	0.094	0.264	-0.288***	-0.353***	-0.011	-0.022
	(0.571)	(0.778)	(0.370)	(0.537)	(0.192)	(0.204)	(0.052)	(0.062)	(0.024)	(0.034)
Black × Male		-3.229		-0.644		0.898		-0.077		-0.023
		(2.974)		(1.633)		(1.204)		(0.178)		(0.108)
Asian × Male		0.619		0.512		-0.295		0.242*		0.024
		(1.511)		(0.931)		(0.485)		(0.140)		(0.059)
Hispanic × Male		-0.897		-0.537		-1.205		0.225		0.060
		(2.687)		(1.804)		(0.869)		(0.186)		(0.087)
% White Coworkers	5.668	9.205	4.670	3.552	-2.295	-1.755	0.002	0.069	0.321	0.344
	(6.521)	(6.698)	(4.035)	(4.612)	(1.768)	(1.872)	(0.596)	(0.661)	(0.242)	(0.260)
Male × % White Coworkers		-4.976		1.617		-0.882		-0.107		-0.043
		(3.948)		(3.023)		(1.076)		(0.375)		(0.173)
Black × % White Coworkers	-0.257	-18.800**	-9.761	-5.270	8.761***	8.720***	0.348	-0.107	-0.179	-0.149
	(9.059)	(8.994)	(6.421)	(6.964)	(2.737)	(2.961)	(0.483)	(0.649)	(0.263)	(0.361)
Asian × % White Coworkers	-4.582	-9.373*	-2.803	0.444	2.642*	2.339	-0.309	-0.643	-0.019	-0.054
	(3.954)	(5.244)	(2.423)	(3.646)	(1.501)	(2.006)	(0.325)	(0.475)	(0.165)	(0.228)
Hispanic × % White Coworkers	-8.386	-14.617	-3.939	2.654	3.731	-0.305	-0.438	-0.879	-0.017	-0.081
	(7.264)	(9.585)	(4.712)	(5.376)	(2.294)	(2.245)	(0.480)	(0.686)	(0.320)	(0.394)
Black × Male × % White Coworkers		34.270**		-9.264		0.449		0.836		-0.084
		(13.405)		(8.950)		(5.193)		(0.829)		(0.486)
Asian × Male × % White Coworkers		8.987		-6.656		0.327		0.746		0.062
		(7.075)		(4.674)		(2.416)		(0.625)		(0.317)
Hispanic × Male × % White Coworkers		11.186		-12.656		7.880*		0.862		0.114
		(13.533)		(7.907)		(4.311)		(0.791)		(0.450)
White Mean Dep. Var	138.04		15.18		5.79		4.23		3.21	
White Female Mean Dep. Var		138.6		16.12		5.14		4.37		3.29
Nb. obs	5824	5824	5824	5824	5824	5824	5824	5824	5816	5816

Notes. This table presents OLS estimates of linear models where the dependent variables are: average monthly billable hours worked (Columns 1 and 2), hours worked on non-client facing activities (Columns 3 and 4), hours spent on training or education (Columns 5 and 6), employees' average number of projects per month in the first two years—or less if they exited the firm before two years (columns 7 and 8), and employees' average project rank per month in the first two years—or less if they exited the firm before two years (columns 9 and 10). Columns 1, 3, 5, 7, and 9 have the same specification and controls as Column 2 in Table VII. Columns 2, 4, 6, 8, and 10 have the same specification and controls as Column 3 in Table VII. Continuous predictors are mean-centered. White mean promotion and White female mean promotion are unadjusted and based on the sample of 5,839 new hires whom we observe for at least two years. The number of observations in each exercise may slightly deviate from 5,839 due to missing values in the dependent variables. All standard errors are robust and clustered at the office × year level and reported in parentheses.* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

A. Appendix Qualitative Methods

Purpose and scope. We conducted qualitative interviews with employees to understand salient aspects of employees' experiences interacting and collaborating with coworkers, aiming to gain insight into which causal pathways could plausibly underlie our main quantitative findings (and before obtaining additional data for quantitative exploration of mechanisms) in this specific organizational context. We used a semi-structured interview format and asked about the nature of the participant's work, their interactions and experiences with coworkers, and team contexts that promote or inhibit their participation and performance. The full interview protocol is listed below.

Recruitment strategy. With our partners at ProfServ, we aimed to conduct 50 interviews from a sample of 600 employees stratified by broad business area, race, and gender. To align our qualitative sample with our quantitative study of archival data, our stratified sample of employees was proportional to the actual size of each business area and 75% of employees were hired in the same period as the quantitative records under study. Within each business area, we stratified the sample by race (Black, Asian, and White each representing one-third) and gender. We oversampled Black employees because we aimed to learn more about their experience with coworkers, in particular. We also ensured that at least 15% of the sample in each business area identified as Hispanic.

Sample. We conducted 18 semi-structured interviews with 17 participants (one participant in two interview sessions), averaging 46 minutes in duration, on Zoom between June and July 2021. Interviews were conducted by three members of the research team: two authors and one research assistant. Relative to our quantitative study data, our qualitative sample broadly aligned in business area within the firm, and 52.9% were hired in the same study period. We collected data on participants' identity characteristics when possible: four participants (23.5%) identified as White non-Hispanic (two women, one man, one nonbinary); seven participants (41.2%) identified as Black (four women, three men); three participants (17.6%) identified as Asian (one woman, two men); three participants identified as White Hispanic (all women). 58.8% of our sample identified as women, which was slightly higher than the 45.6% of women in our quantitative study sample. With participants' consent, all interviews were recorded and transcribed. Participation was voluntary, anonymous, and did not impact their employment.

Analytical approach. We used an inductive grounded theory approach for analyzing these data (Strauss Corbin 1998). Two co-authors first independently read through all transcripts to identify initial themes about factors that enabled and constrained employees' success. Three categories of factors emerged quickly: (1) beliefs about ProfServ's systems, practices, and values, (2) beliefs

about co-workers, and (3) beliefs about themselves and their own actions. A third member of the research team went through and identified codes about all the different ways in which their behavior is influenced by social dynamics. Having identified these rough categories, we used an iterative multi-round process of moving back and forth between the data, relevant literature, and research team discussions to further refine, define, and consolidate codes. This resulted in 36 codes about factors enabling (constraining) employees' success. Across these codes and in the context of discussing determinants of success at ProfServ, 76.5% of participants (100% of White, 69.2% of non-White, 57.1% of Black participants) mentioned performance evaluations, 100% participants mentioned the quality of their work assignments, 47.1% of participants (100% of White, 30.8% of non-White, 28.6% of Black participants) specified dimensions of time spent on work assignments, and 94.1% of participants (100% of White, 92.3% of non-White, 100% of Black participants) hinted at engagement and participation as being salient aspects of their experiences. We report quotes that illustrate salient aspects of participants' experiences and imply potential relationships between their coworkers and intermediate organizational processes.

Limitations. Given numerous factors associated with the global pandemic, participation in our qualitative study was very low—only 2.8% of the 600 invited employees participated. This participation rate fell short of both our and ProfServ's expected rate of approximately 10% and may have impacted our ability to achieve conceptual saturation (Corbin and Strauss, 2008). Given our small sample size—which included only 4 White participants and 4 Black women participants who selected into our sample—we make no claims about the representativeness of the participants' views. Nevertheless, our qualitative interviews provided valuable insight into which aspects of ProfServ were salient for our participants' experiences of advancing their careers, aligned with extant research, and, thus, warranted further quantitative investigation in archival data.

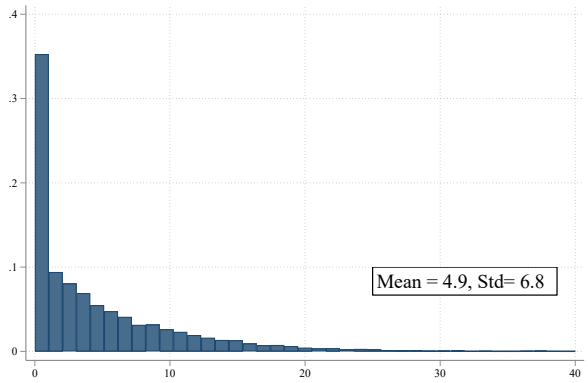
Further, we note that our interviews with current employees can only reflect the experiences of those who are still employed at ProfServ, and do not speak to the experiences of those who have exited and were, therefore, unable to be invited to participate. It is unclear how successfully "surviving" early experiences at ProfServ shapes employees' perspectives, reflections, and recollections. For instance, Black employees who have "survived" may have had more positive experiences than those who have already exited, or may have developed a set of coping strategies that are different than those who have already exited. It is equally likely, however, that current Black employees' perspectives may reflect a broader range of experiences because of more time in the firm or may be more linked to recent institutional changes in the firm.

Interview Protocol

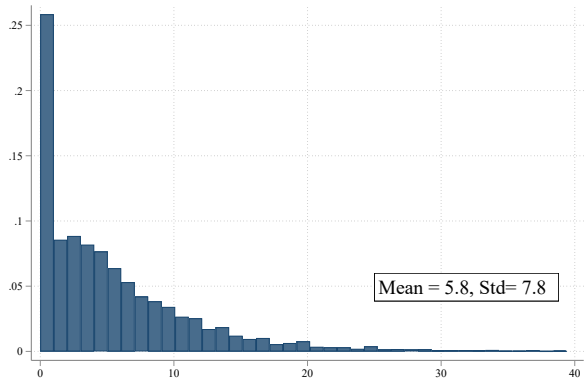
1. Tell me about your career at ProfServ. When did you join? Where in the organization do you work? Provide a brief overview of how your work roles have changed in your career so far.
2. What factors led you to choose working at ProfServ? What factors would most shape a decision to leave?
3. Describe what it looks like to be "successful" or on the "fast-track" at ProfServ.
4. Describe what it looks like to "fit in" at ProfServ.
5. How much say do you feel like you have over what projects and what tasks you take on?
6. What do you look for when you're being staffed on (or looking for) new projects?
7. Describe work-life balance at ProfServ.
8. Tell me about the type of people you turn to for advice, help, and support.
9. How would you compare the strength and size of your "support" network within ProfServ to others that started around the same time?
10. Who tends to participate the most in your teams?
11. How often do you participate? What kinds of things do you typically say or contribute? What role do you tend to take on?
12. How do you tend to feel after team meetings?
13. Provide an example of a team meeting where you provided significant input. What factors influenced your participation then?
14. Provide an example of a team meeting where you did not provide a great deal of input. What factors influenced your participation then?
15. What tends to happen if someone makes a mistake on a project? What tends to happen if someone achieves success on a project?
16. What are some reasons you might want to switch teams? Have you ever tried to do that?
17. Is there anything else you want to share with us?
18. Would you like to share your identity characteristics with us?

B. Appendix Figures

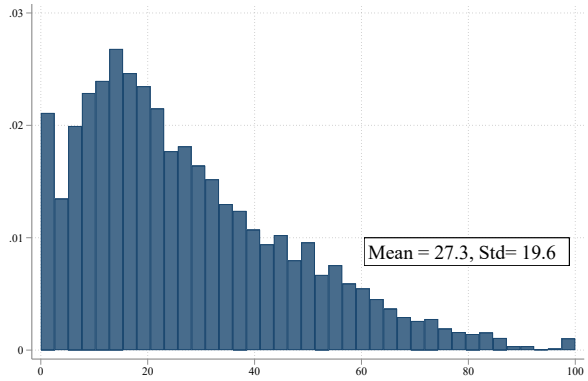
Figure B.1: Racial and Gender Composition of Teams



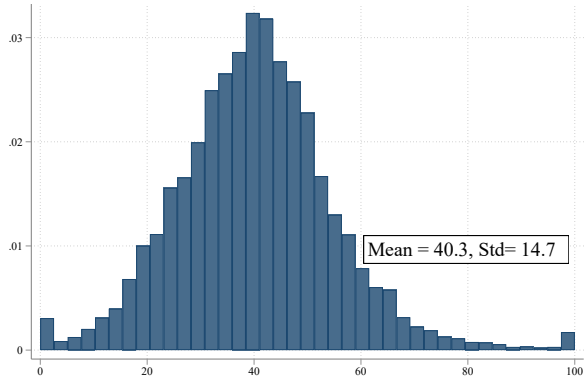
(a) % of Black Coworkers in first project assignments



(b) % Hispanic Coworkers in first project assignments



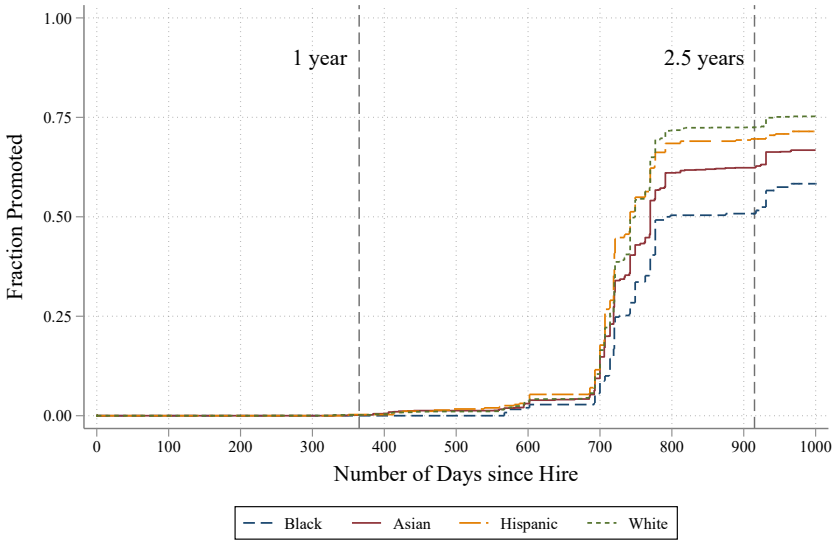
(c) % of Asian Coworkers in first project assignments



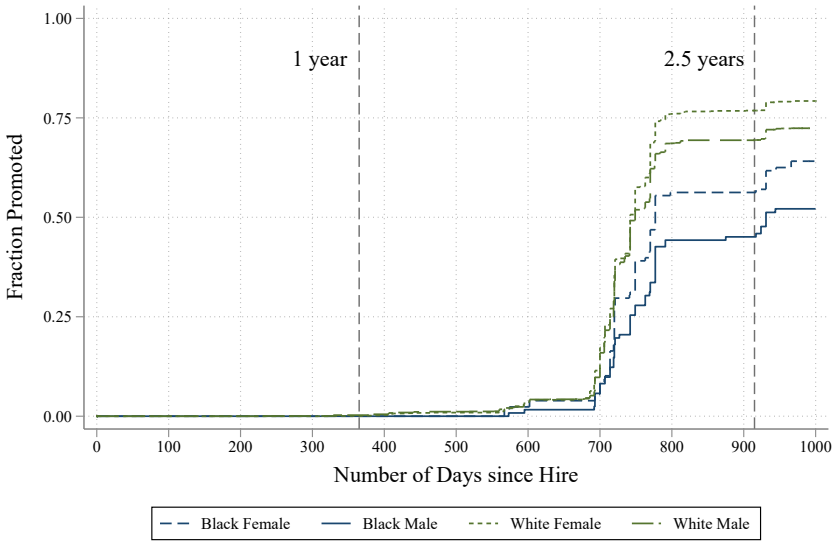
(d) % of Female Coworkers in first project assignments

Notes. This figure shows the distribution of new hires' average percentage of (a) Black Coworkers, (b) Hispanic Coworkers, (c) Asian Coworkers, and (d) Female Coworkers in initial project assignments. The underlying data is our full sample of 9,037 new hires.

Figure B.2: KM Survival Rates for Promotion



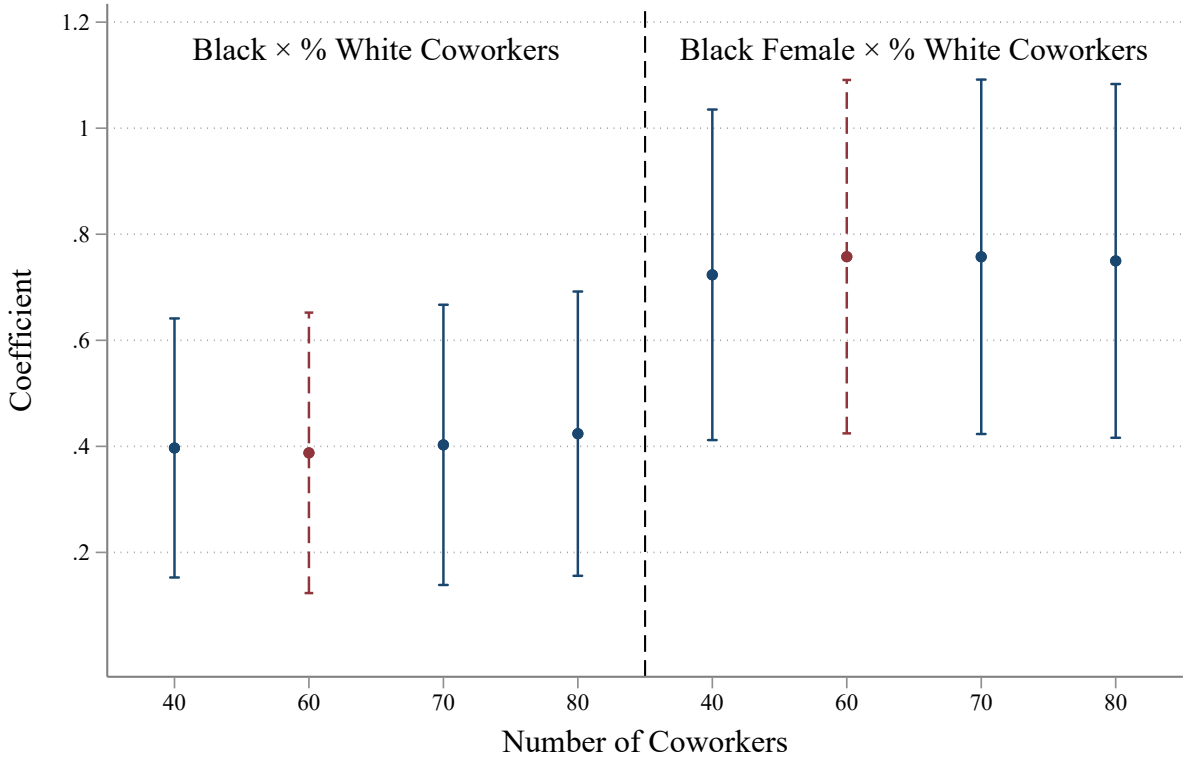
(a) by New Hire Race



(b) by New Hire Race and Gender

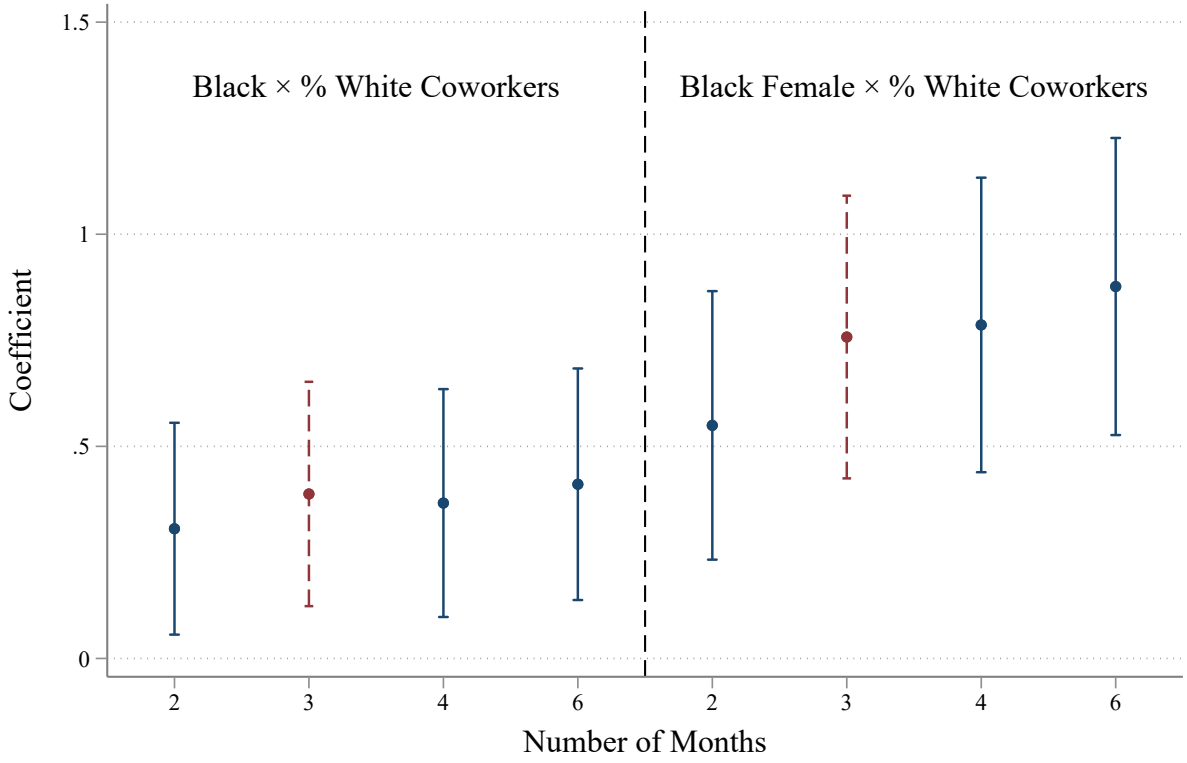
Notes. This figure shows the estimated Kaplan–Meier survival rates curves for employees by race and gender. In Panel (a), all 5,152 new hires (excluding "Other Race" category) that we have observed for at least two and a half years are considered, and the estimation is done separately for each race. In Panel (b), we only consider the 3,390 Black and White new hires from our sample that we have observed for at least two and a half years, and the estimation is done separately for each combination of race and gender. The y-axis represents the probability that an employee of a given race will become promoted. The x-axis represents the number of days since the hiring date.

Figure B.3: Robustness of Turnover Results: Varying Measure of Initial Project Assignment



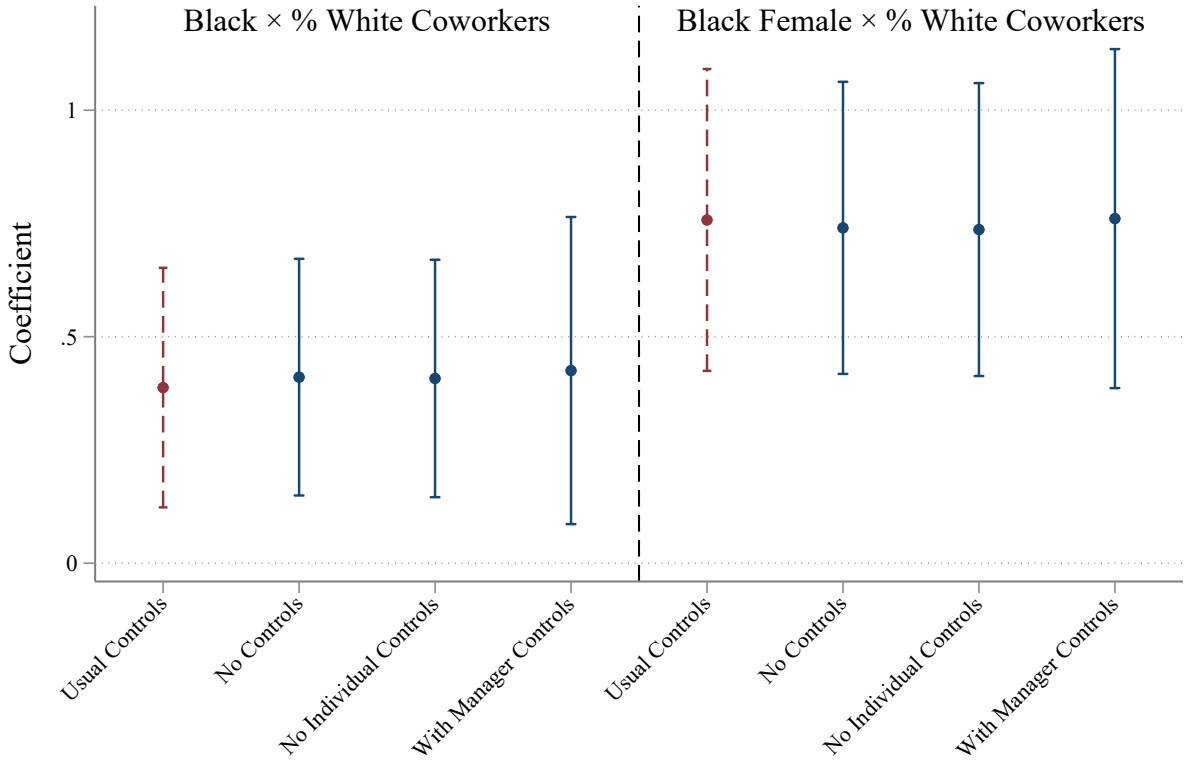
Notes. This figure shows the results of a robustness check where we alter the threshold of coworkers above which a project is excluded from the list of initial project assignments of a given new hire. In the main analysis (Table VII), only projects with up to 60 coworkers are considered. Here, we vary this cutoff (from 40 to 80 coworkers) and plot the resulting coefficient on Black × % White Coworkers (left panel), with otherwise the same specification as in Table VII Column 2, and Black (Female) × % White Coworkers, with otherwise the same specification as in Table VII Column 3. As a benchmark we plot in red (and dashed confidence interval) the coefficients from Table VII, respectively Column 2 for the left panel and Column 3 for the right panel. 95% confidence intervals are reported.

Figure B.4: Robustness of Turnover Results: Varying Time-Window of Initial Project Team



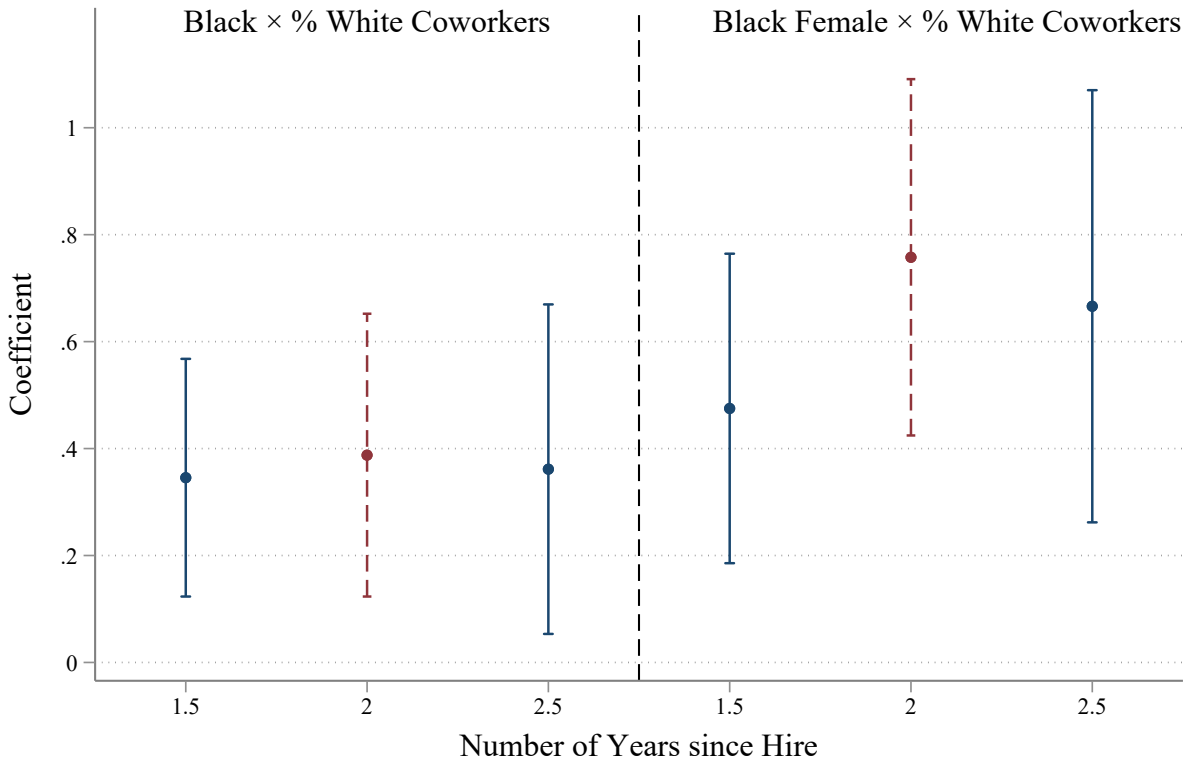
Notes. This figure shows the results of a robustness check where we alter the time window during which we consider assignments to initial project teams. In the main analysis (Table VII), initial projects are defined as the projects that the new hire was assigned to in the first three months since their hire. Here, we vary this cutoff (from 2 to 6 months) and plot the resulting coefficient on Black × % White Coworkers (left panel), with otherwise the same specification as in Table VII Column 2, and Black (Female) × % White Coworkers, with otherwise the same specification as in Table VII Column 3. As a benchmark we plot in red (and dashed confidence interval) the coefficients from Table VII, respectively Column 2 for the left panel and Column 3 for the right panel. 95% confidence intervals are reported.

Figure B.5: Robustness of Turnover Results: Varying Controls



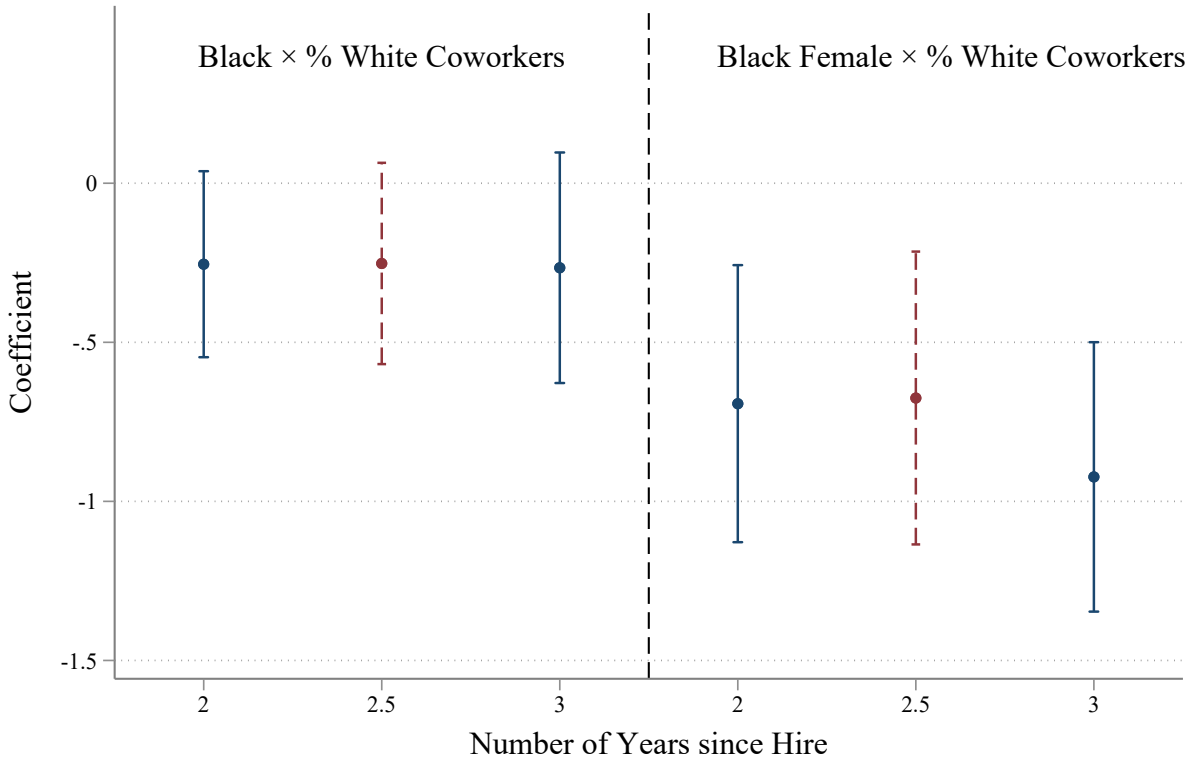
Notes. This figure shows the results of a robustness check where we alter the controls used in the main regression (Table VII). On the left panel, we show the coefficient on Black × % White Coworkers from the same specification as in Table VII Column 2, except we alter the controls as follows: (1) is the benchmark "Usual Controls" specification, that is, estimated with the same controls—and therefore has the same coefficient—as in Table VII Column 2. Those are the age of the employee, a dummy for whether the employee has a master, a dummy for whether the employee has a specialized master, a categorical variable of university ranking (top 20, top 21-100, top 101-1000 and beyond top 1000), the average number of colleagues across all first project assignments, whether the new hire was initially assigned at least one priority project, and the share of Asian, Black, Other Race, Missing Race, and female coworkers in first project assignments (measured in percentage points). (2) removes all the controls from the "Usual Controls" specification; (3) removes individual demographic and project controls from the "Usual Controls" specification, but still controls for the share of Asian, Black, Other Race, Missing Race, and female coworkers; and (4) includes all "Usual Controls," and additionally controls for the share of White, Asian, Black, Other Race, Missing Race, and female managers in first project assignments. We repeat this exercise in the right panel, this time altering the controls from Table VII Column 3 and showing the coefficient for Black (Female) × % White Coworkers. 95% confidence intervals are reported.

Figure B.6: Robustness of Turnover Results: Varying Measure of Turnover



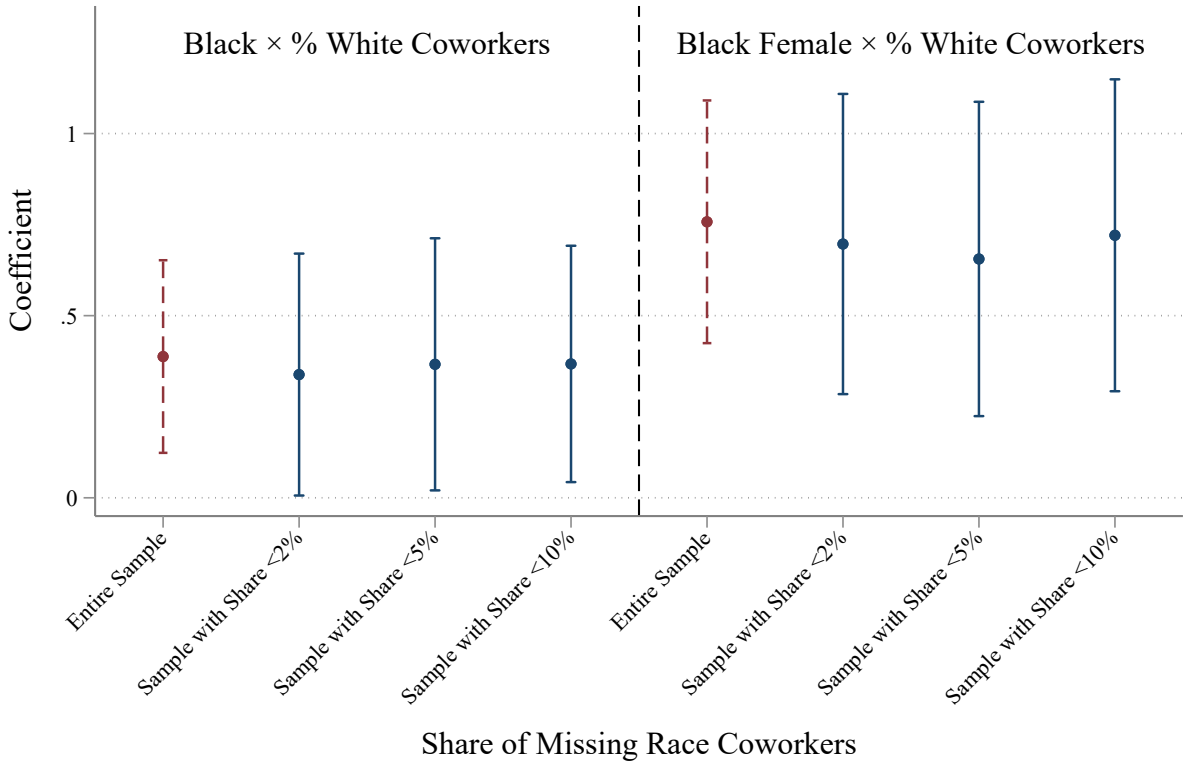
Notes. This figure shows the results of a robustness check where we vary the measure of turnover. In the main analysis (Table VII), turnover is defined as a binary variable indicating whether an employee has left the company within two years. Here, we vary the two-year cutoff and also consider turnover within one and a half and two and a half years and plot the resulting coefficient on Black × % White Coworkers (left panel), with otherwise the same specification as in Table VII Column 2, and Black (Female) × % White Coworkers, with otherwise the same specification as in Table VII Column 3. As a benchmark we plot in red (and dashed confidence interval) the coefficients from Table VII, respectively Column 2 for the left panel and Column 3 for the right panel. 95% confidence intervals are reported.

Figure B.7: Robustness of Promotion Results: Varying Measure of Promotion



Notes. This figure shows the results of a robustness check where we vary the measure of promotion. In the main analysis (Table VIII), promotion is defined as a binary variable indicating whether an employee is promoted in the company within two and a half years. Here, we vary the two-and-a-half-year cutoff and also consider promotion within two years and three years and plot the resulting coefficient on Black × % White Coworkers (left panel), with otherwise the same specification as in Table VIII Column 2, and Black (Female) × % White Coworkers, with otherwise the same specification as in Table VIII Column 3. As a benchmark we plot in red (and dashed confidence interval) the coefficients from Table VIII, respectively Column 2 for the left panel and Column 3 for the right panel. 95% confidence intervals are reported.

Figure B.8: Robustness of Turnover Results: Varying Samples based on Share of Coworkers with Missing Race



Notes. This figure shows the results of a robustness check where we vary the sample, restricting it to employees with low shares of missing race coworkers. In the main analysis (Table VII), we use the entire sample, regardless of the share of coworkers for whom we miss the race. Here, we restrict the sample to those employees with a share of missing race coworkers below 2%, 5%, and 10%, and plot the resulting coefficient on Black × % White Coworkers (left panel), with otherwise the same specification as in Table VII Column 2, and Black (Female) × % White Coworkers, with otherwise the same specification as in Table VII Column 3. As a benchmark we plot in red (and dashed confidence interval) the coefficients from Table VII, respectively Column 2 for the left panel and Column 3 for the right panel. 95% confidence intervals are reported.

C. Appendix Tables

Table C.1: Test of Random Assignment II

	Panel A: Employee Race and Gender							
	Black Female	Black Male	Asian Female	Asian Male	Hispanic Female	Hispanic Male	White Female	White Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
% White Coworkers	-0.024	0.002	0.008	-0.024	0.049	0.005	-0.019	-0.026
	(0.038)	(0.028)	(0.065)	(0.063)	(0.059)	(0.045)	(0.077)	(0.091)
% Black Coworkers	0.033	0.000	0.061	-0.057	0.041	-0.050	0.049	-0.122
	(0.052)	(0.050)	(0.085)	(0.087)	(0.071)	(0.053)	(0.111)	(0.119)
% Asian Coworkers	-0.027	0.003	0.149**	0.058	0.016	-0.065	-0.085	-0.083
	(0.035)	(0.030)	(0.068)	(0.067)	(0.059)	(0.045)	(0.079)	(0.093)
	Panel B: Project Characteristics							
	Avg. Project Rank							
	(1)							
% White Coworkers	0.069							
	(0.280)							
% Black Coworkers	-0.061							
	(0.387)							
% Asian Coworkers	0.117							
	(0.272)							
Nb. obs	9037	9037	9037	9037	9037	9037	9037	9037

Notes. This table presents the same estimates as Table IV Panels A and C, with additional controls for individual demographic characteristics (age, degree, education rank).

Table C.2: The Effect of First Managers Race Composition on Turnover, by Race and Gender

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Black	0.076**	0.079**	0.101**	1.324***	1.333***	1.271
	(0.034)	(0.033)	(0.040)	(0.141)	(0.142)	(0.202)
Asian	0.017	0.025	0.028	1.100*	1.132**	1.164**
	(0.017)	(0.017)	(0.023)	(0.061)	(0.063)	(0.087)
Hispanic	-0.013	-0.010	-0.007	1.029	1.036	1.180
	(0.029)	(0.029)	(0.040)	(0.091)	(0.092)	(0.156)
Male		0.050***	0.052***		1.168***	1.199***
		(0.012)	(0.015)		(0.052)	(0.070)
Black × Male			-0.040			1.104
			(0.058)			(0.233)
Asian × Male			-0.005			0.945
			(0.031)			(0.098)
Hispanic × Male			-0.006			0.793
			(0.051)			(0.138)
% White managers	0.011	0.007	-0.011	0.998	0.998	0.998
	(0.038)	(0.038)	(0.042)	(0.001)	(0.001)	(0.002)
Male × % White Managers			0.030			1.000
			(0.039)			(0.001)
Black × % White Managers	0.036	0.035	0.117	1.003	1.003	1.005
	(0.070)	(0.070)	(0.088)	(0.003)	(0.003)	(0.004)
Asian × % White Managers	0.013	0.015	0.067	1.000	1.000	1.001
	(0.035)	(0.034)	(0.045)	(0.001)	(0.001)	(0.002)
Hispanic × % White Managers	-0.044	-0.043	-0.088	1.000	1.000	0.998
	(0.062)	(0.062)	(0.084)	(0.002)	(0.002)	(0.003)
Black × Male × % White Managers			-0.170			0.996
			(0.141)			(0.005)
Asian × Male × % White Managers			-0.115*			0.998
			(0.069)			(0.002)
Hispanic × Male × % White Managers			0.088			1.005
			(0.109)			(0.004)
White Mean Turnover	0.209	0.209		0.209	0.209	
White Female Mean Turnover			0.175			0.175
Nb. obs	5016	5016	5016	7743	7743	7743

Notes. This table is equivalent to Table VII, but we replace the share of coworkers of a given race with the share of managers of a given race (measured in percentage points). Ns differ from VII due to missingness in manager race data. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table C.3: The Effect of First Team Composition on Turnover: Beyond Tokenism

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Black	0.071**	0.075**	0.101**	1.378***	1.403***	1.203
	(0.032)	(0.032)	(0.040)	(0.139)	(0.141)	(0.190)
Asian	0.011	0.017	0.018	1.128**	1.164**	1.181**
	(0.019)	(0.019)	(0.023)	(0.066)	(0.069)	(0.097)
Hispanic	0.008	0.011	0.014	1.045	1.062	1.242
	(0.030)	(0.030)	(0.045)	(0.096)	(0.098)	(0.172)
Male		0.045***	0.047***		1.226***	1.256***
		(0.012)	(0.016)		(0.057)	(0.082)
Black × Male			-0.058			1.237
			(0.055)			(0.252)
Asian × Male			-0.003			0.970
			(0.033)			(0.106)
Hispanic × Male			-0.006			0.766
			(0.056)			(0.139)
% White Coworkers	0.122	0.115	0.007	0.998	0.998	0.995
	(0.146)	(0.147)	(0.156)	(0.005)	(0.005)	(0.005)
Male × % White Coworkers			0.163*			1.004
			(0.094)			(0.004)
Black × % White Coworkers	0.366**	0.362**	0.783***	1.014***	1.013***	1.034***
	(0.150)	(0.151)	(0.197)	(0.005)	(0.005)	(0.008)
Asian × % White Coworkers	0.030	0.034	0.126	1.002	1.002	1.001
	(0.099)	(0.099)	(0.130)	(0.003)	(0.003)	(0.004)
Hispanic × % White Coworkers	-0.051	-0.061	-0.068	1.000	0.999	1.002
	(0.164)	(0.164)	(0.221)	(0.005)	(0.005)	(0.007)
Black × Male × % White Coworkers			-0.796***			0.968***
			(0.289)			(0.010)
Asian × Male × % White Coworkers			-0.150			1.005
			(0.170)			(0.006)
Hispanic × Male × % White Coworkers			0.031			0.996
			(0.285)			(0.010)
White Mean Turnover	0.208	0.208		0.208	0.208	
White Female Mean Turnover			0.166			0.166
Bonferroni Corrected p-value		0.066	0.001			
Nb. obs	4724	4724	4724	7179	7179	7179

Notes. This table presents the same regressions as Table VII, but restricted to the sample of new hires who have at least one Black coworker in their initial team assignments. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.4: Predictors of Turnover and Promotion

	Turnover (2 yr)	Promotion (2.5 yr)
	(1)	(2)
Billable	-0.004***	0.004***
	(0.001)	(0.001)
Non-Client Facing	-0.002***	0.001
	(0.001)	(0.001)
Training	0.001	-0.003*
	(0.001)	(0.002)
Nb. of Projects	-0.004	0.009*
	(0.004)	(0.005)
Project Rank	-0.006	-0.006
	(0.008)	(0.009)
Took Engagement Survey	-0.036*	0.000
	(0.020)	(0.022)
Ever low perf.	0.130***	-0.256***
	(0.023)	(0.026)
Dep. Var. Mean	0.16	0.74
Nb. obs	4424	4118

Notes. This table presents OLS estimates of two models where the dependent variables are our main outcomes. In Column 1, the dependent variable is a dummy that equals one if an employee left the company within two years of their hire. In Column 2, it equals 1 if an employee was promoted within two and a half years of their hire. In both columns, we regress the monthly average of a) billable hours worked, b) hours worked on non-client facing activities, c) hours spent on training or education, d) number of projects, and e) project rank. All these variables are computed over the first two years at the firm—or less if they exited the firm before two year. Then f) a dummy indicating if the employee opted to take the survey in their first year, and, finally, g) an indicator for whether an employee has ever received a low performance rating. Both Columns include office $\times$ year fixed effects and individual demographic controls including the age of the employee, a dummy for whether the employee has a master, a dummy for whether the employee has a specialized master, and a categorical variable of university ranking (top 20, top 21-100, top 101-1000 and beyond top 1000). Standard errors are clustered at the office $\times$ year level and reported in parenthesis. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.5: Engagement

	Survey measures							
	Voice		Fairness		Respect		Took survey	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Black	-0.147***	-0.348***	-0.001	-0.142	-0.067	-0.250***	-0.093***	-0.139***
	(0.054)	(0.081)	(0.083)	(0.105)	(0.054)	(0.088)	(0.027)	(0.041)
Asian	0.002	0.021	-0.067	-0.015	0.009	0.058	-0.112***	-0.127***
	(0.030)	(0.039)	(0.041)	(0.056)	(0.029)	(0.038)	(0.016)	(0.022)
Hispanic	0.024	-0.010	0.023	-0.007	0.005	0.001	-0.023	-0.015
	(0.049)	(0.070)	(0.055)	(0.083)	(0.043)	(0.068)	(0.023)	(0.032)
Male	0.074***	0.068**	0.022	0.044	0.104***	0.112***	0.004	0.000
	(0.022)	(0.027)	(0.030)	(0.039)	(0.022)	(0.030)	(0.011)	(0.013)
Black × Male		0.389***		0.267*		0.353***		0.090
		(0.113)		(0.146)		(0.119)		(0.056)
Asian × Male		-0.048		-0.121		-0.111**		0.032
		(0.049)		(0.074)		(0.048)		(0.027)
Hispanic × Male		0.069		0.065		0.011		-0.016
		(0.085)		(0.111)		(0.089)		(0.043)
% White Coworkers	-0.057	0.017	-0.187	-0.090	-0.025	0.010	-0.100	-0.066
	(0.224)	(0.237)	(0.286)	(0.313)	(0.232)	(0.247)	(0.093)	(0.095)
Male × % White Coworkers		-0.119		-0.160		-0.061		-0.062
		(0.135)		(0.197)		(0.139)		(0.066)
Black × % White Coworkers	0.342	0.221	0.284	0.912	0.219	0.258	0.022	-0.055
	(0.299)	(0.409)	(0.393)	(0.557)	(0.292)	(0.412)	(0.137)	(0.190)
Asian × % White Coworkers	0.348**	0.344*	0.404**	0.529*	0.361**	0.430**	-0.014	-0.039
	(0.150)	(0.192)	(0.187)	(0.270)	(0.154)	(0.195)	(0.086)	(0.115)
Hispanic × % White Coworkers	-0.024	0.160	-0.340	-0.182	0.135	0.280	0.052	0.002
	(0.248)	(0.361)	(0.329)	(0.442)	(0.239)	(0.365)	(0.112)	(0.170)
Black × Male × % White Coworkers		0.356		-1.347*		0.034		0.164
		(0.575)		(0.746)		(0.585)		(0.239)
Asian × Male × % White Coworkers		-0.014		-0.333		-0.167		0.040
		(0.243)		(0.378)		(0.241)		(0.148)
Hispanic × Male × % White Coworkers		-0.394		-0.359		-0.298		0.093
		(0.508)		(0.610)		(0.521)		(0.212)
White Mean Dep. Var	3.76		3.41		3.91		0.92	
White Female Mean Dep. Var		3.72		3.42		3.85		0.93
Nb. obs	4521	4521	4511	4511	4517	4517	4580	4580

Notes. This table presents OLS estimates of linear models where the dependent variables are: average responses to survey measures of voice (Columns 1 and 2), fairness (Columns 3 and 4), and respect (Columns 5 and 6) across all surveys an employee responded to, and a binary indicator for whether the employee took the engagement survey in their first year (Columns 7 and 8), Columns 1, 3, 5, and 7 have the same specification and controls as Column 2 in Table VII. Columns 2, 4, 6, and 8 have the same specification and controls as Column 3 in Table VII. Continuous predictors are mean-centered. White mean turnover and White female mean turnover are unadjusted. Standard errors are clustered at the office × year level and reported in parenthesis. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.6: Table VII Additional Control Coefficients

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Master Degree	-0.008	-0.007	-0.007	0.869*	0.874*	0.878*
	(0.021)	(0.021)	(0.021)	(0.067)	(0.068)	(0.068)
Specialized Master Degree	-0.036	-0.035	-0.035	0.863**	0.865**	0.862**
	(0.025)	(0.025)	(0.025)	(0.060)	(0.060)	(0.060)
Missing Master Degree	0.099***	0.105***	0.105***	1.112	1.146	1.137
	(0.038)	(0.038)	(0.038)	(0.135)	(0.140)	(0.139)
Age	0.010***	0.009***	0.009***	1.020***	1.018**	1.020***
	(0.003)	(0.003)	(0.003)	(0.008)	(0.008)	(0.008)
School ranking; missing	-0.033	-0.037	-0.037	1.077	1.058	1.063
	(0.036)	(0.036)	(0.036)	(0.135)	(0.132)	(0.133)
School ranking: top 21-100	-0.031	-0.032	-0.033	0.994	0.984	0.978
	(0.023)	(0.023)	(0.023)	(0.079)	(0.078)	(0.078)
School ranking: top 100-1000	-0.029	-0.030	-0.031	0.955	0.954	0.944
	(0.025)	(0.025)	(0.025)	(0.075)	(0.075)	(0.075)
School ranking: beyond top 1000	-0.012	-0.012	-0.012	1.036	1.030	1.027
	(0.029)	(0.029)	(0.028)	(0.090)	(0.090)	(0.089)
Number of Colleagues	0.000	0.000	0.000	1.001	1.001	1.001
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Priority Project	0.011	0.010	0.010	0.997	0.994	0.993
	(0.015)	(0.015)	(0.015)	(0.047)	(0.047)	(0.047)
% Female Coworkers	0.026	0.027	0.029	0.999	0.999	1.000
	(0.048)	(0.048)	(0.048)	(0.002)	(0.002)	(0.002)
% Black Coworkers	0.156	0.158	0.151	1.001	1.001	1.001
	(0.153)	(0.153)	(0.153)	(0.005)	(0.005)	(0.005)
% Asian Coworkers	0.127	0.127	0.119	0.998	0.998	0.998
	(0.120)	(0.120)	(0.120)	(0.004)	(0.004)	(0.004)
% Other Race Coworkers	0.187	0.179	0.162	1.003	1.003	1.002
	(0.176)	(0.176)	(0.177)	(0.006)	(0.006)	(0.006)
% Missing Race Coworkers	0.001	0.001	0.001	1.000	1.000	1.000
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
White Mean Turnover	0.209	0.209		0.209	0.209	
White Female Mean Turnover			0.175			0.175
Bonferroni Corrected p-value		0.016	0.000			
Nb. obs	5839	5839	5839	9037	9037	9037

Notes. This table presents the coefficients on the additional controls included in all models from Table VII. Standard errors are clustered at the office × year level and reported in parenthesis. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C.7: Table VIII Additional Control Coefficients

	OLS			Cox		
	(1)	(2)	(3)	(4)	(5)	(6)
Master Degree	-0.013	-0.014	-0.015	0.978	0.974	0.972
	(0.024)	(0.024)	(0.023)	(0.065)	(0.065)	(0.065)
Specialized Master Degree	0.018	0.017	0.018	1.019	1.018	1.019
	(0.027)	(0.027)	(0.026)	(0.066)	(0.066)	(0.066)
Missing Master Degree	-0.088**	-0.094**	-0.094**	0.763**	0.752**	0.751**
	(0.041)	(0.041)	(0.041)	(0.085)	(0.084)	(0.084)
Age	-0.008***	-0.007**	-0.008***	0.978***	0.980**	0.979***
	(0.003)	(0.003)	(0.003)	(0.008)	(0.008)	(0.008)
School ranking; missing	-0.008	-0.005	-0.005	1.005	1.013	1.013
	(0.041)	(0.041)	(0.041)	(0.111)	(0.112)	(0.112)
School ranking: top 21-100	0.031	0.032	0.032	1.026	1.029	1.030
	(0.025)	(0.025)	(0.025)	(0.070)	(0.070)	(0.070)
School ranking: top 100-1000	0.006	0.006	0.007	0.967	0.969	0.972
	(0.029)	(0.029)	(0.028)	(0.066)	(0.066)	(0.067)
School ranking: beyond top 1000	-0.011	-0.011	-0.011	0.939	0.940	0.941
	(0.031)	(0.031)	(0.030)	(0.074)	(0.074)	(0.074)
Number of Colleagues	0.000	0.000	0.000	1.002	1.002	1.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Priority Project	-0.011	-0.010	-0.010	0.959	0.960	0.960
	(0.017)	(0.017)	(0.017)	(0.040)	(0.040)	(0.040)
% Female Coworkers	-0.085*	-0.087*	-0.087*	1.000	1.000	1.000
	(0.050)	(0.050)	(0.050)	(0.001)	(0.001)	(0.001)
% Black Coworkers	0.001	-0.000	0.007	1.000	1.000	1.000
	(0.204)	(0.203)	(0.201)	(0.004)	(0.004)	(0.004)
% Asian Coworkers	0.008	0.008	0.024	1.000	1.000	1.001
	(0.151)	(0.151)	(0.152)	(0.003)	(0.003)	(0.003)
% Other Race Coworkers	0.029	0.041	0.068	0.996	0.996	0.997
	(0.210)	(0.210)	(0.213)	(0.005)	(0.005)	(0.005)
% Missing Race Coworkers	-0.001	-0.001	-0.001	1.000	1.000	1.000
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
White Mean Turnover	0.725	0.725		0.725	0.725	
White Female Mean Turnover			0.768			0.768
Bonferroni Corrected p-value		0.472	0.033			
Nb. obs	5354	5354	5354	9037	9037	9037

Notes. This table presents the coefficients on the additional controls included in all models from Table VIII. Standard errors are clustered at the office × year level and reported in parenthesis. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.