When Working Hard Is Not Enough for Female and Racial/Ethnic Minority Apprentices in the Highway Trades[1]

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Drawing on employment records, qualitative interviews, and a survey, we explore the experiences of apprentices in the highway trades in Oregon. We demonstrate that female and racial/ethnic minority apprentices have lower rates of recruitment and retention and disproportionately face challenges with interpersonal interactions, hiring practices, and supervisory practices. Yet, we find a pervasive narrative that attributes apprentices' success to "hard work," which contributes to the legitimacy of these inequalities. Consistent with the conceptualization of work organizations as inequality regimes, we argue that the apprenticeship system has policies, practices, and ideologies that are on the surface gender and race/ethnicity neutral, yet lead to the perpetuation of inequalities.

KEY WORDS: construction trades; gender; inequality; organizations; race; workplace.

INTRODUCTION

Acker (2006:443) defined inequality regimes as "loosely interrelated practices, processes, actions, and meanings that result in and maintain class, gender, and racial inequalities within particular organizations." Conceptualizing work organizations as inequality regimes suggests that although organizations and their practices may appear (or are intended to appear) equitable, inequities are pervasive throughout organizational policies, practices, and ideologies. Acker's (2006) concept of inequality regimes builds on her own (and others') previous work on gendered organizations (e.g., Acker 1990; Britton 2000; Martin and Collinson 2002) as well as analyses of racial/ethnic inequality in organizations (e.g., Royster 2003; Vallas 2003a).

This study draws on Acker's (2006) conceptualization of work organizations as inequality regimes and the insights of previous studies of women and people of color in white male-dominated occupations (e.g., Roth 2004; Shih 2006; Wallace and Kay 2012; Williams, Muller, and Kilanski 2012). We examine gender and racial/ethnic inequality in apprenticeships in the highway trades, which are training programs that prepare individuals (apprentices) for occupations in highway construction trades. In the analysis, we draw on a database of records of all apprentices

enrolled in Oregon apprenticeship programs in the highway trades between 2001 and 2010, 44 qualitative interviews with staff and apprentices, and a survey of 177 apprentices. We seek to identify the policies, practices, and ideologies that may contribute to the maintenance of inequality regimes within the apprenticeship program system. Specifically, we ask the following: (1) What are the trends in recruitment and retention of women and people of color in the apprenticeship system? (2) What challenges do women and people of color face in completing their apprenticeships? (3) What narratives do staff and apprentices use to explain the success (and failure) of apprentices? We argue that, while appearing on the surface gender and race/ethnicity neutral, apprentice programs function as inequality regimes that perpetuate gender and racial/ethnic inequality in the highway construction trades. Discrimination occurs in subtle and not so subtle ways through informal interactions, hiring practices, and supervisory practices in the context of a white male-dominated work culture and are legitimized through an individualist discourse that emphasizes hard work as the key to success.

INEQUALITY REGIMES

In the original formulation of the theory of gendered organizations, Acker (1990) challenged previous work on hierarchical organizations by asserting that organizations are not gender neutral. While organizations may conceptualize a "job" as a gender-neutral concept, Acker (1990) argued that at its most basic level, the notion of a "job" is already gendered and operates within a gendered hierarchy. Acker (1990) focused on five processes that reproduce gender inequalities in organizations: division of labor, cultural symbols, workplace interactions, individual identities, and organizational logic. In practice, inequalities are reproduced through means that may be both covert (e.g., gender segregation that appears "natural") and overt (e.g., sexual harassment). The theory of gendered organizations has been widely applied in the literature on gender and work (for a review, see Britton 2000). For example, Williams and her colleagues (2012) focused on organizational logic, that is, the policies and practices found in work organizations, as central to the reproduction of gender inequality among geoscientists in the oil and gas industry. They focused on four dimensions of these jobs: job insecurity, teamwork, networking, and career maps (characterized by individual responsibility for career development). Williams and her colleagues (2012) described the ways in which these characteristics were on the surface gender neutral, but in practice, disadvantaged female geoscientists. The challenges that the female geoscientists faced, particularly with regard to being accepted on the job and creating strong working relationships with coworkers, have been noted across a variety of male-dominated occupations (e.g., Harris and Giuffre 2010; Misra, Lundquist, and Templer 2012; Pierce 1995; Roth 2004; Wallace and Kay 2012). These studies all documented the ways in which interpersonal relationships as well as organizational policies and practices disadvantage women in male-dominated occupations.

Race/ethnicity is a salient, yet underresearched, factor within organizations. Vallas (2003b) argued that while research has explored racial/ethnic inequalities

operating through job, wage, and promotion differentials, other areas such as inter-actions, interventions, and relations at work have not been fully addressed. This line of research emphasized the social and cultural processes that exist within particular organizational structures that create or reinforce racial/ethnic inequalities. In his formulation, Vallas (2003b) offered five propositions of social conditions that pro-duce racial inequalities: spatial location, informal relations and the acquisition of skills and training, status hierarchies, corporate human resources responses, and legal and judicial interventions. Thus, there appear to be some similarities as well as differences in the ways that gender and racial/ethnic inequalities are reproduced in organizations. For example, in a study of Silicon Valley engineers, Shih (2006) found that white women, Asian women, and Asian men faced stereotyping and dis-crimination, resulting in job-hopping to find positions in which they would not be discriminated against. These workers were excluded from "old white boys' net-works" and Asian workers developed ethnic-based networks (Shih 2006).

In Acker's (2006) introduction of the concept of inequality regimes, she built on the essential insights of the gendered organizations perspective by theorizing how other systems of inequality, such as class and race/ethnicity, are also omnipres-ent in organizations. Adopting an intersectional approach, the inequality regimes framework can be employed to address inequalities related to gender, race, ethnic-ity, class, sexuality, and other systems of oppression (e.g., Collins 2000; Crenshaw 1991). In theorizing inequality regimes, Acker (2006:444) focused on "the bases of inequality [e.g., gender, race, class], the shape and degree of inequality, organizing processes that create and recreate inequalities [organizing class hierarchies, recruit-ment and hiring, wage setting and supervisory practices, and informal interactions], the invisibility of inequalities, the legitimacy of inequalities, and the controls that prevent protest against inequalities." A few studies have used the inequality regimes framework for empirically assessing work organizations (e.g., Bryant and Jaworski 2011; Healy, Bradley, and Forson 2011; Whitehead 2013). This research docu-mented how organizational cultures (and the interpersonal interactions that sustain these cultures) promote the exclusion of women from the organization and/or dis-crimination in promotion of women and people of color. These studies, along with others that do not explicitly ground their analyses in the inequalities regimes frame-work, provided evidence that the processes described by Acker are relevant across various types of occupations. In the current project, we take up an analysis of some of the specific processes outlined by Acker (2006) and assess how these can be observed in the context of the construction trades.

WOMEN AND PEOPLE OF COLOR IN THE TRADES

The construction industry has traditionally been marked as a masculine occu-pation and has largely been occupied by white male workers (Bilginsoy 2013). As women and people of color have entered the trades, their experiences have provided an opportunity to examine the gendered and racialized dynamics of these occupa-tions. A small body of literature has examined the experiences of women in con-struction in the United States (Berik, Bilginsoy, and Williams 2011; Byrd 1999;

Denissen 2010a, 2010b; Denissen and Saguy 2014; Duke et al. 2013; Hunte 2012; Moccio 2009; Paap 2006, 2008; Price 2002), Canada (Cohen and Braid 2000), the United Kingdom (Greed 2000; Watts 2007), and Australia (Lingard and Francis 2004). A few studies have also examined the experiences of racial/ethnic minority men in construction in the United States (Berik et al. 2011; Paap 2006, 2008; Price 2002; Waldinger and Bailey 1991).

Several scholars have focused on the pervasive harassment (particularly sexual harassment) that women in construction face as well as the strategies they use to respond to negative experiences at work (Denissen 2010a, 2010b; Paap 2008; Watts 2007). Scholars have also documented that heterosexual and queer women in the trades experience homophobic harassment (Frank 2001; Denissen and Saguy 2014). Harassment based on race/ethnicity is also common in the construction trades (Hunte 2012; Paap 2008; Price 2002). For example, in her ethnographic study of construction work, Paap (2008) observed that racist comments were pervasive in construction culture. Several scholars have found that female and racial/ethnic minority workers preferred to maintain good relations with their coworkers by ignoring their coworkers' behavior or altering their own behavior rather than confronting or reporting sexist or racist comments or unwanted sexual behavior, although some experiences required escalation to supervisors (Denissen 2010a; Denissen and Saguy 2014; Paap 2008).

Research has also examined the discrimination faced by white women and women of color (Byrd 1999; Paap 2008; Price 2002; Waldinger and Bailey 1991). As Price (2002:105) noted, "[b]oth white women and women of color told me almost without exception that the hardest part of working in the trades is not the job, but dealing with prevailing attitudes about women not belonging in the trades. Since on-the-job training is a critical counterpart to classroom training, surmounting the attitudes and getting the training is a necessity." In her study of female carpentry apprentices, Byrd (1999) found that many women left their apprenticeship programs in the early stages because employers would not hire female apprentices. The female apprentices who did stay in the program faced ongoing issues with finding work and being assigned low-skill tasks. A quantitative analysis examining retention of apprentices in Oregon indicated that white women were more likely to drop out of apprenticeship programs and received a lower quantity of skills than white male apprentices (Berik et al. 2011). Duke et al. (2013) noted that women in the trades had challenges remaining steadily employed because they lacked access to networks.

Paap (2008) found that men of color also did not receive the informal mentoring on the job site that white men received. In addition, men of color were more likely to be perceived as lazy or bad workers and they were more likely to be blamed when mistakes were made (Paap 2008). Waldinger and Bailey (1991) argued that African Americans have not attained significant inroads into construction workforce because of the informal hiring and training practices and resistance from unions. A small number of studies have examined how gender and race/ethnicity intersect in construction work (Hunte 2012; Price 2002). These studies emphasized that women of color must negotiate both gender and racial/ethnic discrimination and one or the other of these statuses may be more salient across different situations.

APPRENTICESHIPS IN THE HIGHWAY TRADES IN OREGON

To provide context for the study, we briefly describe the apprenticeship system in Oregon. It is important to note, however, there is significant variation in both the rules and practices across different apprenticeship programs.[5] In Oregon, the Bureau of Labor and Industries (BOLI) regulates and supports apprenticeship programs. Apprenticeship programs prepare individuals for careers in various trades (mostly in construction) using a combination of on-the-job training and course work. Highway trades are a specific subset of construction work that include trades such as laborer, equipment operator, and cement mason. This work is generally outdoors and physically intensive. Apprenticeship programs may be union based (i.e., all apprentices are members of a union and employers hire only apprentices from union programs) or "open shop" (apprentices are not union members and work for employers who hire nonunion workers).

To be accepted into an apprenticeship program, individuals typically must be 18 years of age and hold a high school diploma or equivalency certificate. Apprentices choose an apprentice program that will train them in a specific trade. An apprenticeship program typically takes two to five years to complete, depending upon the requirements of the program and the availability of jobs. All apprentices are required to complete a set amount of on-the-job training hours and course work, which differs by apprenticeship program. Apprentices attend classes ranging from basic math and construction safety to specialized classes for their chosen trade. The on-the-job training provides apprentices with hands-on experience under the guidance of a journeyworker (a skilled craftsperson who completed an apprentice program) or other experienced workers on the job sites. Attaining the necessary training on job sites is pivotal to apprentices' success in the program and their ability to become journeyworkers. In addition, the apprenticeship provides wages; generally, all apprentices who are at the same level in their training are paid the same hourly wage. The pay scale increases as apprentices progress through the program.

When individuals apply to a program, they are ranked based on various criteria, which varies from program to program. Programs have an interview or a "point system," which scores aspects of the written application to document completed course work and previous work experience. Individuals are then put on an "eligible list" that determines the order in which apprentices access jobs. As jobs become available with "training agents" (employers associated with the apprenticeship program), applicants at the top of the list are called and registered as apprentices. When apprentices complete a job or are let go for any other reason by their employers, they are put on an "out of work" list that ranks apprentices by time out of work (a version of the out of work list is used by many, but not all, apprentice programs). As job opportunities arise, apprentices are called based on the order of the list. However, as will be discussed below, apprentices can circumvent the out-of-work list in order to maintain steady employment. While on-the-job training is a required part of apprenticeship program, work is not always immediately available and jobs are not guaranteed.

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[5] For more information on apprenticeships in Oregon, see BOLI's Apprenticeship and Training Division page at www.oregon.gov/boli/atd/Pages/index.aspx.

Construction is a cyclical industry and apprentices may be out of work for days, weeks, or months at a time. Once the classroom work and on-the-job hours are complete, apprentices "journey out" and become journeyworkers (or journeymen) who have the credentials, skills, and experience necessary to work in their designated trade. Journeyworkers can work unsupervised and are responsible for training new apprentices. They also can go on to become foremen, supervisors, or superintendents.

Across the United States, the construction workforce primarily consists of white males (Bilginsoy 2013). In Oregon, BOLI and the Oregon Department of Transportation (ODOT) have sought to diversify the highway construction workforce, recently targeting funds for supports that are intended to encourage women and people of color to enter the trades and increase retention of female and racial/ethnic minority apprentices.[6] However, female apprentices and apprentices of color remain a small portion of new apprentices and there are continued issues with retention of these groups (Berik et al. 2011). As noted above, there are many aspects of apprentice programs that are (on the surface) equitable and gender/race neutral: apprentices are accepted into programs using standardized criteria; in some apprentice programs, jobs are assigned using an out-of-work list; in some apprentice programs, employers are not allowed to request specific apprentices; employers may not turn down women or people of color; and apprentices at the same level are paid the same wage (thus eliminating the possibility for a gender or racial/ethnic wage gap between workers with equal experience). However, drawing on Acker's (2006) conceptualization of work organizations as inequality regimes, we examine how gender and racial/ethnic inequalities may persist in apprentice programs, despite these apparently gender/race-neutral policies.

METHODS

This project employed a multimethod research design to examine gender and racial/ethnic inequalities in apprenticeship programs in highway trades in Oregon. First, we examined all registrations in the Oregon Apprenticeship System (OAS) database initiated between January 1, 2001 and December 31, 2010 that were not terminated with zero hours of credit, resulting in 11,390 apprentice agreements. Second, we conducted semistructured interviews with a total of 20 individuals currently working in staff positions related to apprenticeship programs relevant to the highway trades in Oregon. Third, we interviewed 24 apprentices (8 white women, 8 men of color, and 8 women of color)[7] who either completed or were terminated from an apprentice program between 2008 and 2011. Fourth, we surveyed past and current apprentices via a mail questionnaire sent to apprentices, using information from the OAS database. A total of 177 apprentices completed our survey.

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[6] The larger study from which the data for this article is drawn was funded by BOLI/ODOT as part of this ongoing initiative.
[7] Throughout the article, the category of "racial/ethnic minority" or "people of color" refers to apprentices who were identified in OAS data or self-identified as African American/black, Asian, Native American, Latino/a, Hispanic, another race/ethnicity (other than white), or as more than one race/ethnicity. The category "white" refers to apprentices who were identified in OAS data or self-identified as "white" or "Caucasian" (and not Latino/a or Hispanic).

OAS Database of Current and Past Apprentices

In Oregon, BOLI collects data on all apprentices registering for apprenticeship programs in the highway trades in a database called the OAS. These data include dates of enrollment and completion (or termination), information about the apprentice program (e.g., type of trade, union or nonunion), and demographic information about the apprentice (e.g., race/ethnicity, gender, region).[8] We used OAS data to examine different rates of apprenticeship completion in the highway construction trades by gender and race/ethnicity. The following trades, defined by BOLI as related to the highway trades, are included in this study: electrician, painter, plumber, sheet metal worker, sign maker/installer, carpenter, cement mason, operating engineer, laborer, and ironworker. We limited our sample to all new registrations in the OAS between January 1, 2001 and December 31, 2010 that were not terminated with zero hours of credit, resulting in an analytic sample of 11,390 apprentice agreements, or 10,472 individual apprentices (some apprentices had multiple agreements). The total sample of agreements included 180 (1.6%) initiated by women of color, 613 (5.4%) initiated by white women, 1,616 (14.2%) initiated by men of color, and 8,981 (78.9%) initiated by white men (see Table I for more detail on the OAS data).

Interviews With Staff

To understand apprenticeship programs from a variety of perspectives, we conducted interviews with individuals currently working in positions related to apprenticeship programs relevant to the highway trades. Staff interviews included participants from organizations including union and open-shop apprenticeship programs, contractors employing apprentices, pre-apprenticeship training programs (designed to prepared individuals, particularly women and people of color, for careers in the trades), and state agencies and departments working on programs or policies related to apprenticeship programs. An initial list of possible participants and relevant organizations was provided by BOLI and letters of invitation were sent by BOLI. We followed up with phone calls to schedule interviews. As we conducted the interviews, we identified a small number of additional individuals to invite to participate. These individuals were contacted by phone or e-mail to set up interviews. Interviews were conducted at the offices of the participants or over the phone. A total of 20 staff interviews with members of 15 different organizations were conducted. Interviews with staff were an average of 42 minutes long. Staff members were interviewed in 2011 by the first and third authors and were asked about policies and practices of the apprenticeship programs as well as the challenges faced by apprentices, particularly women and people of color. See Appendix A for demographics of the staff interviewed.

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[8] The unit of analysis used for the OAS database is individual apprentice agreements, rather than individual apprentices, with a small minority of apprentices having more than one agreement. Because we are interested in the completion of agreements, we primarily focus on apprentice agreements as the unit of analysis and characterize these agreements based on the characteristics of individual apprentices initiating the agreements.

Table I. Apprentice Agreement Characteristics by Gender and Race

	Total (N = 11,390)	Women of Color (N = 180)	White Women (N = 613)	Men of Color (N = 1,616)	White Men (N = 8,981)
			Proportion/Mean		
Total	1.00	0.02	0.05	0.14	0.79
Age at Start	29	33	32	30	28
Trade					
Carpenter	0.18	0.32***	0.21**	0.24***	0.16
Scaffold Erector	0.01	0.02	0.00	0.01	0.01
Cement Mason	0.02	0.03	0.02*	0.03***	0.01
Pile Driver	0.01	0.03*	0.02	0.02*	0.01
Operating Engineer	0.03	0.07**	0.08***	0.03	0.03
Laborer	0.08	0.31***	0.16***	0.18***	0.05
Ironworker	0.05	0.00*	0.01***	0.10***	0.05
Electrician	0.36	0.11***	0.30***	0.22***	0.39
Painter	0.03	0.07***	0.07***	0.04***	0.02
Plumber	0.14	0.02***	0.04***	0.09***	0.16
Sheet Metal Worker	0.08	0.02**	0.08	0.04***	0.10
Sign Maker/ Installer	0.01	0.01	0.00	0.00*	0.01
Agreement Status					
Active	0.20	0.17	0.18	0.21	0.20
Completed	0.39	0.19***	0.26***	0.32***	0.41
Terminated	0.34	0.50***	0.48***	0.41***	0.32
Average Credit Hours					
Total hours by Terminated	1,687	1,021***	1,532**	1,363***	1,798
Hours per Month by Terminated	84	59***	75***	72***	88
Hours per Month by Completed	155	131***	141***	153	156

Source: Oregon Apprenticeship System (OAS) Data.
Note: [a]Reference group for all comparisons is White Men; [b]Sample includes all agreements begun 2001–2010 that were not terminated with 0 hours.
*p ≤ .05; **p ≤ .01; ***p ≤ .001 based on chi-square tests for nominal variables and *t*-tests for continuous variables.

Interviews With Apprentices

We completed a total of 24 semistructured interviews with apprentices who had recently completed or were terminated from apprenticeship programs in the highway trades, systematically sampled from the OAS database. Apprentices who had zero hours of credit were excluded. Among the apprentices interviewed, all white women and men of color had completed or dropped out in 2011; women of color had completed or dropped out of a program between 2008 and 2011 (the expanded date range was necessary due to the small number of women of color in apprenticeship programs). The sample consisted of equal numbers of white women, men of color, and women of color. Within each of these three groups, half of the participants successfully completed an apprenticeship and the other half were terminated from an apprenticeship prior to

completion. Participants were chosen to reflect diversity in gender and racial/ethnic background as well as by type of trade, region of the state, and union and nonunion program. See Appendix B for more detail on the apprentice interview demographics.

Contact information for apprentices was obtained from the BOLI OAS database. Apprentices were mailed a letter to their home describing the study and inviting them to participate. We followed up with phone calls to set up interviews. Apprentices were interviewed in their homes, restaurants, coffee shops, libraries, in the office of the researchers, or over the phone. Because apprentices were contacted using their home addresses and phone numbers, there is no reason to believe their current or former coworkers, employers, or apprentice program staff members were aware of their participation in the study or that participation affected their work relationships. Interviews with apprentices were an average of 30 minutes long and were conducted in 2011 and 2012 by the first and third authors. Apprentices were asked about their experiences on the job sites, relationships with coworkers, perceptions of gender and racial/ethnic discrimination, and the other challenges they faced in their apprenticeships.

All interviews with staff and apprentices were audio recorded and fully transcribed. Pseudonyms were used and identifying information was excluded. We analyzed the staff and apprenticeship interview data with the assistance of the qualitative coding software Dedoose.[9] In our analysis, we drew on the inequality regimes perspective articulated by Acker (2006) and also used inductive coding techniques. We coded for theoretically important themes identified in previous research as well as emerging themes in our data related to the challenges of women and racial/ethnic minorities in the trades.

Survey of Apprentices

The OAS and interview data were supplemented by a survey of past and current apprentices sampled from the OAS database. Conducted in 2012, the survey used a sampling frame of apprentices in the OAS database who initiated an apprenticeship in the highway construction trades between 2006 and 2010. Because we were interested in understanding the experiences of racial/ethnic minority and white men and women who had and had not successfully completed their apprenticeships, we employed a stratified sampling design to ensure equal numbers of participants by race, gender, and completion status. After initial mail-outs, follow-up postcards, and follow-up phone calls, we ended with a total of 177 responses and a response rate of 23%.[10] The mailed survey instrument included a variety of closed and open-ended questions aimed at assessing challenges apprentices face in the highway construction trades. The survey was informed by the challenges described in the qualitative interviews and focused on issues such as being out of work, mentorship,

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[9] Information on the web-based qualitative coding software Dedoose can be found at www.dedoose.com.

[10] This low response rate is due in part to some outdated contact information in the OAS database, as apprentices experience job insecurity and are thus highly mobile.

discrimination on job sites, and interpersonal relationships on job sites (see Table II for more detail on the apprentice survey data).

RESULTS

Using data from the OAS database, interviews with staff and apprentices, and a survey of apprentices, we present our main findings. Following Acker (2006), we address themes from the data that represent several aspects of the inequality regimes perspective. First, to identify trends in recruitment and retention of women and people of color in apprenticeship systems in Oregon, we discuss what Acker (2006) referred to as the shape and degree of inequality, that is, differences in recruitment and retention by gender and race/ethnicity. Next, to identify challenges that women and people of color face in completing their apprenticeships, we focus on three specific processes identified by Acker (2006): informal interactions, hiring practices, and supervisory practices. Finally, to assess the narratives staff and apprentices use to explain the success (and failure) of apprentices, we discuss staff and apprentices' awareness of the visibility and legitimacy of inequalities, also components of Acker's (2006) inequality regimes perspective.

Shape and Degree of Inequality

There are relatively few women and people of color in the highway trades in Oregon. Our analysis of the OAS database demonstrated that of the 11,390 apprenticeship agreements initiated between 2001 and 2010, 79% of these were initiated by white men, whereas 14% were initiated by men of color, 5.4% were initiated by white women, and 1.6% were initiated by women of color (Table I). Further, we found that female and racial/ethnic minority apprentices were not as successful in completing their apprenticeships compared to white men. Across the majority of trades, there were differential rates of completion in apprenticeship programs by both gender and race/ethnicity. Combining all highway trades in the OAS database, we found that 41% of apprentice agreements by white men were completed compared to 32% of those among men of color, 26% of those among white women, and 19% of those among women of color (Table I). Thus, women and people of color were clearly underrepresented in the highway trades and were less likely to complete their programs. To examine the reasons for these differences in recruitment and retention, we explore several aspects of the inequality regimes that explain the perpetuation of gender and racial/ethnic inequality in apprenticeship programs.

Informal Interactions

Acker (2006) noted that informal interactions at work, including exclusion, harassment, and discrimination, were part of the organizational processes that reproduce inequality. Throughout our interviews, we heard that female and racial/ethnic minority apprentices faced challenges in their informal interactions with coworkers. As one white female staff member of an apprenticeship program stated,

Table II. Apprentice Characteristics by Race and Gender

	Total (N = 177)	Women of Color (N = 28)	White Women (N = 59)	Men of Color (N = 47)	White Men (N = 42)
			Proportion/Mean		
Total	1.00	.16	.33	.27	.24
Age at Start	31	34*	31*	31*	27
Trade					
Carpenter	0.18	0.32	0.21	0.24	0.16
Cement Mason	0.02	0.03	0.01	0.03	0.01
Electrician	0.36	0.11	0.30	0.22	0.39
Iron Worker	0.05	0.01	0.02	0.10	0.05
Laborer	0.08	0.31	0.16	0.18	0.05
Operating Engineer	0.03	0.07	0.08	0.03	0.03
Painter	0.03	0.07	0.07	0.04	0.02
Pile Driver	0.01	0.03	0.02	0.02	0.01
Plumber	0.14	0.02	0.04	0.09	0.16
Sheet Metal Worker	0.08	0.02	0.08	0.04	0.09
Sign Maker/Installer	0.01	0.01	0.00	0.00	0.01
Agreement Status					
Active	0.42	0.26	0.41	0.53	0.40
Completed	0.34	0.48	0.24*	0.32	0.43
Terminated	0.24	0.26	0.36	0.15	0.17
Informal Interactions					
Prior experience in construction	0.61	0.44*	0.58	0.66	0.71
Disadvantaged due to race/ethnicity	0.15	0.30*	0.07	0.21†	0.08
Disadvantaged due to gender	0.26	0.50*	0.39*	0.10	0.08
Hiring Practices					
Problems with journeyworkers	0.25	0.35*	0.32*	0.21	0.13
Problems with supervisor/foreman	0.14	0.22	0.23*	0.02	0.08
Felt jobs assigned fairly	0.61	0.57†	0.58	0.55*	0.76
Felt unfairly chosen to let go	0.20	0.26	0.25	0.19	0.12
Supervisory Practices					
Received mentoring on the job	0.61	0.38*	0.57*	0.60	0.79
Received mentoring outside of the job	0.47	0.31	0.34	0.33	0.48
Doing repetitive/ low-skill tasks	0.34	0.35	0.43*	0.31	0.21

Source: Apprentice survey data.
Note: [a]Reference group is White Men †p ≤ .10; *p ≤ .05; **p ≤ .01; ***p ≤ .001 based on chi-square tests for nominal variables and *t*-tests for continuous variables.

"I think anybody who kind of sticks out, whether it's a woman, a person of color, or maybe real skinny guy, for example. I think they all can run into issues. And there's definitely a culture about construction that's about hunting and fishing and good old boys' club" (Ellen, white female, apprentice program staff). Similarly, one apprentice stated, "Well, I think a lot of it is because there's the good old boys' club. The people who have been in it for a long time and they just have a hard time [with

women and people of color]" (Jen, Native American female, completed apprenticeship). The participants in our study understood the apprenticeship system (and the construction trades more broadly) to be a "good old boys' club" (a combination of the phrases "old boys' club" and "good old boys"), that is, an occupation dominated by working-class white men and built upon relationships among these men. Female and racial/ethnic apprentices were not only disadvantaged by visible differences of gender and race/ethnicity, but many were also disadvantaged because of their lack of prior experience in the construction trades. In our survey of apprentices, women of color were the least likely to have prior experience in the trades and white men were the most likely, with 44% of women of color and 71% of white men having prior experience (Table II). The experience of the trades as a "good old boys' club" resulted in subtle (and sometimes not so subtle) exclusion, harassment, and discrimination that some women and people of color faced, damaging their access to relationships with journeymen, foremen, supervisors, and other workers on their job site. This, in turn, affected their opportunities to be mentored and ultimately their ability to remain consistently employed. In what follows, we first explore experiences related to gender and then those related to race/ethnicity.

In our survey of apprentices, 50% of women of color and 39% of white women reported experiencing discrimination on the job due to their gender (Table II). Drawing from interviews with apprentices and staff, female apprentices' experiences of discrimination on the job ranged from occasional and mild to regular and severe. Many female apprentices reported a sense that they were viewed as less competent and treated differently from their male counterparts. Some female apprentices were explicitly told that women were not welcome on the job sites whereas others had a more general sense that they were not welcome. For example, one apprentice noted:

> [The biggest challenge in completing the apprenticeship program was] working with the men. Dealing with their attitudes. Some of them have different attitudes. Some, you know, they don't want women working. And then some don't mind you working as long as you do the same as the other men. And some try to baby you and you have to tell them to get out of the way, you know. Some are actually male chauvinists. There's a couple of them that I work with now [as a journeyworker]. So, they don't want to work with you or whatever. But they have no choice. (Donna, African-American female, completed apprenticeship)

In addition, some female apprentices reported they experienced unwanted sexual attention, most commonly in the form of being repeatedly asked out on dates. We also heard secondhand accounts of women being touched and grabbed. Although many women reported negative informal interactions with coworkers as a challenging aspect of their apprenticeship, some female apprentices did not perceive these to be major issues. A few female apprentices did not perceive that they personally faced any discrimination. For example, when asked "Did you face any challenges as a woman in your program?" one apprentice stated, "No, not really. I kind of breezed right through it" (Amy, white female, completed apprenticeship).

Many of the staff and apprentices interviewed for this project noted that although there are still occasional incidences of racial/ethnic prejudice and discrimination, men of color tend to have an easier time being accepted on job sites than women of color and white women. In our survey of apprentices, 21% of men of color and 30% of women of color reported feeling disadvantaged on the job due to

their race/ethnicity (Table II). Similarly, in interviews, men of color only occasionally reported discrimination based on race. When they did, it was often in a nonspecific way that indicated they felt that their race/ethnicity mattered, but did not necessarily have examples of how it affected their work experience. As one apprentice said:

> Well, because, a lot of the times in construction majority are white guys. And, like I said earlier, a lot of times I've been on the job, I've been the only black guy on the job. So that makes you nervous going into a situation like that. But I just kept strong and I'm here to work, learn, and try not to think about it. (Ben, African-American male, completed apprenticeship)

This is similar to the experiences of some women who reported a vague feeling of being unwelcome on job sites (whereas other women were explicitly told that they were unwelcome). While the firsthand experiences of racial discrimination we collected were interpreted by participants as nonspecific or minor (e.g., racist jokes not directed at the participant), we heard secondhand accounts of incidents that ranged from racial slurs written on bathroom walls, urinating in the water bottle of a male apprentice of color, to one incident where a noose was found on a job site where an African-American male apprentice was working.

Experiences of both gender and racial/ethnic discrimination were most often described by apprentices as best handled on an individual basis. For example, when asked if he had heard racist comments on the job site, one male apprentice said, "Not directed at me and not…Well, actually, I take that back. I've heard [people in] other trades talking negatively about certain things or telling inappropriate jokes. But nothing has ever been directed at me, and I don't let it bother me. Not to the point where I'm going to cause an issue at work" (William, Latino, did not complete apprenticeship). A female apprentice noted, "My, they would say a lot of nasty things. They're just too nasty to really repeat…. They're going to say all these nasty little comments about women and stuff. And just they're looking for my reaction and so I just tried not to react" (Cindy, white female, did not complete apprenticeship). For both racial/ethnic and gender discrimination, apprentices described handling it individually as the best option, although several participants noted that certain kinds of experiences demand escalation to supervisors (for similar findings, see Denisson 2010a; Denisson and Saguy 2014; Paap 2008). However, when these issues are routinely addressed only on an individual level, the result is the perpetuation of a workplace culture in which usually mild but regularly occurring harassment and discrimination based on gender and race/ethnicity are tolerated.

Hiring Practices

Hiring practices were identified by Acker (2006) as a component of organizational culture that contribute to the creation and re-creation of inequalities within work organizations. Our data mirror previous observations of discriminatory hiring practices within white male-dominated occupations (e.g., Roth 2004; Shih 2006; Wallace and Kay 2012; Williams et al. 2012) as apprentices and staff described ways in which informal hiring practices contributed to women and racial/ethnic

minorities' lack of available work and lower rates of program completion. While there are similarities to other occupations, hiring practices in apprenticeship programs are somewhat unique in that apprentices are hired and laid off repeatedly throughout their programs. Apprentices were more likely to be successful if they were able to remain more steadily employed, either by staying with a company and moving from project to project (avoiding the out-of-work list) or by limiting their time on the out-of-work list and finding work quickly after being laid off. In the context of the economic conditions of the last several years, remaining steadily employed has posed a major challenge for workers in the construction trades. Even though apprenticeship programs decreased the number of apprentices they accepted into their programs, there were still many apprentices who did not work consistently. As indicated from the OAS data (Table I), women and people of color worked fewer hours than white men. Specifically, women accrued fewer completed credits at the time of termination and fewer average credit hours per month at the time of completion. Men of color also accrued fewer hours per month than white men. Thus, while there was a lack of available work for all apprentices, this seemed to be particularly true for women and people of color.

Our interview data suggested that spending too much time unemployed between jobs was a major factor that deterred many apprentices from completing their programs. The concern about a lack of work was articulated in interviews with both apprentices and staff, as in the following examples:

> There isn't any guarantee of work. You're off from work [and] you can be off from work for a long period of time. And what do you do in the meantime? You don't have any benefits. You still have got to feed your kids and put a roof over their heads. And it's very hard. It's very hard. (Jen, Native American female, completed apprenticeship)

> 'Cause you can't just sit there and not work, and that's difficult. Most of them don't sit. They'll find something to do, but if construction's not going, they're usually leaving the industry, maybe going into manufacturing or retail. (Scott, white male, apprentice program staff)

As noted in the last quotation, when apprentices were out of work for long periods of time, some left their programs to take other jobs that offer more dependable income (although such jobs often provided lower hourly wages).

The findings from our interviews suggest that interpersonal relationships and informal networks were important for apprentices to obtain work and remain steadily employed throughout their apprenticeships. While most apprenticeship programs operated from an "out-of-work list" in which individuals who have been out of work the longest are the first to be contacted when new jobs become available, interviews with staff and apprentices indicated that there were often deviations from this protocol in which people drew on personal relationships and networking to stay employed. Apprentices perceived that these informal hiring practices sometimes resulted in discrimination by gender and race/ethnicity. As one apprentice articulated:

> It's not like African Americans make up for a large population in Oregon, but it's even smaller in the trades. I also think that in the trades, it's the same thing with women. It was like having two strikes: I'm a woman, and a minority woman. So, yeah, I don't think that the jobs that were offered to another person would have been offered to me. (Linda, African-American female, did not complete apprenticeship)

Some women of color articulated an intersectional analysis of their location in a gendered and racialized organization. Experiences of discrimination were understood as due to their gender, their race, or both (consistent with the findings of Hunte 2012; Price 2002). Overall, we found that 57% of women of color, 58% of white women, and 55% of men of color, compared to 76% of white men, reported that they felt that jobs were fairly assigned during their most recent apprenticeship (Table II).

Hiring practices, such as the out-of-work list, may appear to be race/gender neutral, but our findings suggested that women and people of color had less access to work-related relationships and networks than white men. Research has consistently shown that people demonstrate an affinity for others with the same characteristics as themselves, such as gender and race/ethnicity (e.g., Elliott and Smith 2001), a process that Kanter (1977) referred to as "homosocial reproduction." Thus, as most journeymen, supervisors, and foremen were white men, white male apprentices had an advantage in creating closer personal relationships and building their professional networks. As indicated in our survey data, while only 13% of white men reported that problems with journeyworkers were a challenge they faced in their apprenticeship, 35% of women of color, 32% of white women, and 21% of men of color reported this as a challenge. Female apprentices were also more likely than male apprentices to identify problems with a supervisor or foreman as a challenge (Table II).

Apprentices may use these relationships with journeyworkers and supervisors to remain employed in a variety of ways. For example, once assigned to a job, some apprentices stay on the job or with the company for longer, while others are let go as part of the cyclical reductions in force that occur as projects change or jobs wind down. In our survey of apprentices, we asked apprentices whether or not "You feel that you were unfairly chosen to be let go during a reduction in force." We found that compared to 12% of white men, 26% of women of color, 25% of white women, and 19% of men of color reported that they perceived they were unfairly chosen to be let go (Table II). Further, we found from our interviews that several of the study participants (both staff and apprentices) had the perception that women and men of color were more likely to be let go when a project had a reduction in force, even if there were other apprentices who were more recently hired or less effective workers. For example:

> There's a definite pecking order to how people are hired and retained on a job. Some people [say] "the last one hired, first one fired." But as a woman, or as a man of color, you are always going to be in that group, regardless of if you were the last one hired. . . . The first layoff list, you're going to be on it. (Jen, Native American female, completed apprenticeship)

> When the number of women and the number of people of color are so few and far between, and so absent on the jobs, it makes it so easy for them to overlook them or just completely eliminate them. And you don't find very many women or people of color as project managers or superintendents. And there's kind of a bond, a social and a cultural bond that exists, that's kind of unspoken, unwritten [among white men]. And it's like they have a better understanding of how one of their peers of the same ethnic background may feel if they're let go, but then that same feeling is not associated with a woman or a person of color. (George, African-American male, pre-apprenticeship program staff)

The willingness of foremen, supervisors, and journeymen to develop personal relationships with an apprentice can impact the success of apprentices. The dynamics of gender and race/ethnicity in creating personal relationships are directly related to the ability to stay employed, given that managers show preferences for employees like themselves on dimensions such as gender and race/ethnicity (e.g., Elliott and Smith 2001).

Another way that apprentices avoided returning to the out-of-work list occurred when an apprentice stayed with a company and was reassigned to another job once the first job drew to a close. As one apprentice related:

> And once I got connected with [that foreman], I tended to move job sites with him, or if he moved first to a new job site, he'd always ask the super[intendent] to bring me over there because he really liked having me along and teaching me and I would do a good job for him. (Steph, white female, did not complete apprenticeship)

In some cases, developing a close relationship with one company allowed apprentices to remain working continuously throughout their apprenticeship rather than cycling on and off the out-of-work list. As indicated in the above example, some women (and people of color) did develop strong relationships with journeymen, foremen, and supervisors. However, the OAS data, interviews with staff and apprentices, and our survey of apprentices suggested that, overall, women and people of color were not as successful as white men in remaining consistently employed, due in part to challenges with gaining access to networks with people of a different gender and/or race/ethnicity.[11]

Supervisory Practices

Acker's (2006) inequality regimes framework also highlighted the role of supervisory practices in perpetuating workplace gender inequality. She argued that the race/ethnicity and gender of supervisor and subordinates shape supervisory practices, "influencing in subtle ways the existing patterns of inequality. Much of this can be observed in the informal interactions at work" (Acker 2006:451). For apprentices, the supervisory practices that were most central to their success were receiving mentoring from senior coworkers (journeyworkers, foremen, or supervisors) and being assigned to tasks that furthered their training in their trade. In the apprentice system, apprentices should be taught the skills of the trade and the culture of construction by journeyworkers and other coworkers. However, the degree to which apprentices were mentored varied greatly by trade, company, and job site. In interviews, both staff and apprentices indicated that on-the-job mentoring is critical to the success of apprentices, and consequently, a lack of on-the-job mentoring can be a major issue for many apprentices. As one staff member noted:

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[11] These trends may also be influenced by the fact that some state and federal contracts require employers to ensure that a percentage of apprentices be women and people of color, leading women and men of color to have an advantage in being called for a job before they reach the top of the out-of-work list. This may serve as a counter to other dimensions of job assignment processes that disadvantage women and people of color; however, our overall findings suggest that women and people of color are still disproportionately affected by being out of work.

> There's a lot of journeymen out there that just want apprentices to be their gophers and they don't teach them anything. Or they're just not the most pleasant individuals to work around, so I think it's important that apprentices are placed with journeymen that are willing to teach and be good teachers and to give a variety of experience and not just use them as cheap labor. (Ellen, white female, apprentice program staff)

In our survey of apprentices, we asked whether or not they experienced "Mentoring at your job site, that is, access to someone on the job site who you could talk to about challenges at work, helped you learn about the trades, and/or took time to teach you new skills." Only 38% of women of color, 57% of white women, and 60% of men of color, compared to 79% of white men, reported receiving mentoring on the job. Thus, while challenges with not receiving appropriate mentoring on the job was an issue for many apprentices, our survey and interview data suggested that it was particularly problematic for women and men of color (for similar findings, see Hunte 2012; Paap 2008). As in other occupations, an apprentice's experiences with mentoring largely depended on his or her ability to access personal relationships with individuals in supervisory positions (e.g., Shih 2006; Williams et al. 2012).

One specific problem that some apprentices faced was that in the course of their on-the-job training, they did not have opportunities to learn all the varied skills they needed to be successful journeyworkers. In our survey, we found that white men were the least likely of all groups to identify doing repetitive or low-skill tasks (such as sweeping or flagging traffic) as a challenge to completing their apprenticeship, and white women were the most likely to identify doing repetitive or low-skill tasks as challenges to completion (Table II). This issue was raised many times in our interviews with staff and apprentices. The following are two examples:

> That company is kind of known for not giving apprentices, especially women, a chance to run equipment. Like, for instance, I was supposed to be running [a specific piece of equipment]. I was supposed to [be] learning. That was my job. That was what I was getting paid for. And for the most part they made me just do flagging [directing traffic]. (Cindy, white female, did not complete apprenticeship)

> I really think the largest part of [female apprentices'] frustration is on-the-job training and lack of varied work from their contractors. A lot of women, I think end up getting put with just the easier work. When I was an apprentice, I had to really ask for the other kind of work and that's something that I reiterate to our apprentices. (Ellen, white female, apprentice program staff)

Several participants noted that although they had the experience of performing low-skill tasks on specific job sites, they had the opportunity to learn new skills once they moved to a new job site.

Although women who participated in the apprentice survey were less likely than men to report having a mentor on the job site, when asked "Did you have anyone that acted like a mentor to you?" most interview participants said they had someone that helped them or taught them on the job site. Two female apprentices noted that a female journeyworker had been a mentor and one female apprentice mentioned a female that taught one of her courses. None of our interview participants of color mentioned having a mentor of the same race/ethnicity as themselves, and women of color were the least likely to report having a mentor on or outside of the job site when surveyed. Unlike the Silicon Valley engineers

studies by Shih (2006), apprentices in the construction trades do not have the option of relying on alternative networks based on race/ethnicity, primarily because of small number of people of color in the trades. While having more women and people of color in mentoring roles may provide important role models for new cohorts of apprentices, it will be necessary to foster cross-gender and cross-race/ethnicity mentoring relationships, given the low numbers of women and people of color in the trades.

In discussing the issue of repetitive or low-skill work, many apprentices acknowledged that performing low-skill work was part of the apprenticeship experience; however, to the degree that women and men of color are the ones disproportionately performing this work (as several of our staff and apprentice participants perceived), it will have negative impact on the quality of their training experience in the apprenticeship program and perpetuate inequalities based on gender and race/ethnicity (see also Berik et al. 2011; Byrd 1999).

The Invisibility and Legitimacy of Inequalities

In the inequality regimes framework, Acker (2006) addressed not only the nature of inequality and the processes that produce inequality, but also the degree to which inequality was visible/invisible and legitimate/illegitimate. She argued that these dimensions of inequality regimes have important consequences for challenging inequality in organizations. The lack of women and people of color in the trades was visible and generally acknowledged by both staff and apprentices. However, the legitimacy of these dimensions of inequality was contested. For example, in regard to the consistent experiences of casual sexism and racism on the job site, we heard two different perspectives on the legitimacy of this behavior. On the one hand, some explicitly identified this (and other) discriminatory behavior as wrong. As one apprentice noted, "there's a lot of like, if you're not white, and you're not a guy, you just sort of have to put up with it [racism and sexism], because 'boys will be boys,' which is wrong" (Lauren, white female, did not complete apprenticeship). However, others viewed discriminatory behavior as a nonproblematic part of construction culture. For example, one apprentice said, "They do [make jokes or negative comments about women on the job site], but I just took it as guys ragging. You know, guys being guys. I mean. I'm a guy's kind of girl, so it really didn't bother me" (Nicole, African-American female, did not complete apprenticeship).

The legitimacy of a lack of women and people of color in the trades was bolstered by a reliance on the belief that success was primarily due to hard work. While apprentices articulated the many challenges that women and people of color faced, when specifically asked why some apprentices do not succeed in their apprenticeship program, "not working hard enough" or "being lazy" were consistently given as the primary reason by apprentices. Sixteen of the 24 apprentices we interviewed mentioned working hard when asked what makes an apprentice successful or unsuccessful. Participants described apprentices without "a good work ethic" as those who did not work hard at the job site, those who could not (or would not) learn the necessary skills, and those who had a bad attitude at work. Overall, success in

apprenticeship programs was most often equated with not being "lazy." As two apprentices stated:

> Head down, ass up. Pretty much. They just got to stay at it. You can't be lazy about it. You have to stay working, you have to stay busy. (Dave, African-American male, completed apprenticeship)

> [The reason people are unsuccessful in completing their apprenticeship programs is because] they don't want to do it. We had 14 people to start with in our class. We only lost two of them through the five years, so it's not bad. I think most people that get in, as long as they put in the work and effort to do it, they get through just fine. It's just when they get lazy. (Julie, white female, completed apprenticeship)

Although there were certainly apprentices who did not work hard and it was a reason why some apprentices did not complete, the findings of this study suggest that working hard is not a sufficient explanation for why some apprentices completed and others did not. There were a myriad of challenges potentially faced by all apprentices that may have inhibited their ability to be successful in their programs. We suggest that the narrative of hard work was one way in which inequalities based on gender and race/ethnicity were legitimized, contributing to apprenticeship programs as inequality regimes. It is notable that female and racial/ethnic minorities take up this ideology (even if it is inconsistent with their own experiences). We suggest that this signals how deeply this ideology is rooted in construction culture.

Interestingly, hard work was *not* the most common explanation for success in staff interviews (mentioned by only four staff participants). More common explanations were a consistent availability of work and knowing about construction culture and/or knowing people in the trades. As one staff member said, "[In order to be successful, apprentices have to] grasp what's expected of them. If you aren't from the construction culture, you don't know what to expect" (Jessica, white female, apprenticeship program staff). Other staff members also mentioned gender and racial/ethnic discrimination. In some ways, these more structural explanations for success on the part of staff members were not very surprising, as these individuals (particularly those who were working for pre-apprentice programs that serve women and people of color) were in a position to be more aware of systematic inequalities than were individual apprentices. However, it was interesting that the primary message heard and internalized by apprentices was individual rather than structural.

Not all apprentices took up the narrative of hard work unproblematically. Some explicitly discussed the same structural issues as in the staff interviews (drawing on their own experiences) such as a lack of work or specifically focused on gender or racial/ethnic inequalities. In an interview, one apprentice went back and forth between a narrative of hard work and acknowledging the importance of personal relationships. She said:

> Well, it's all about just like who you know and who you're buddies with I think. I don't think that being a woman [matters].... I mean, it does [matter]...it is hard. But really if you're like a hard worker and you can get along with people, then you can be very successful in the trade. And then there'll be some rocky patches along the way with people that won't like you because you're a female. But really I've had really good experiences. It's all about networking. And

being a good worker, too. But having friends, I think that's a really big part of it. (Julie, white female, completed apprenticeship)

While working hard is a necessary component of apprentices' success, there are other challenges that must also be overcome. These inequities in the apprenticeship system begin with the low numbers of women and people of color recruited into apprenticeships, continue as female and racial/ethnic minority apprentices disproportionately face challenges throughout their apprenticeship, and culminate with lower completion rates for women and people of color. In sum, many participants insisted that success in apprenticeship programs was due primarily to hard work; however, we saw a great deal of evidence that for many apprentices, and particularly female and racial/ethnic minority apprentices, hard work was not enough.

DISCUSSION

Adopting Acker's (2006) concept of inequality regimes provides a framework for understanding the pervasive inequalities in apprenticeship programs. While apprenticeship programs seek to maintain equal opportunities for all apprentices, our research indicates that this is not occurring, as our data demonstrated differentials in both recruitment and retention of female and racial/ethnic minority apprentices. Understanding apprenticeship programs as inequality regimes is useful in assessing how the organizations and their policies, practices, and ideologies are continuing to reproduce these inequalities. Our findings about the processes that reproduce gender and race/ethnic inequalities in the trades are strikingly similar to research on other occupations (e.g., Bryant and Jaworski 2011; Healy et al. 2011; Shih 2006; Williams et al. 2012). Specifically, we found a workplace culture that is hostile to women and people of color as well as women and racial/ethnic minorities' lack of access to interpersonal relationships and professional networks. Thus, this research provides further evidence to support an inequality regimes perspective for assessing inequality in work organizations. The specific findings from this case study can help inform future research across various white male-dominated occupations.

Similar to other white male-dominated occupations, the highway trades face challenges with the recruitment and retention of women and people of color (e.g., Bradley and Healy 2008; Bryant and Jaworski 2011; Harris and Giuffre 2010; Roth 2004; Wallace and Kay 2012; Williams et al. 2012). Our findings demonstrated that female and racial/ethnic minority apprentices face more challenges than their white male counterparts, given their status as "tokens" on the job site (Kanter 1977). Consistent with suggestions provided for other occupations, increased gender and racial/ethnic diversity could have a positive impact on the construction work culture over time. This should be accomplished through an increase in numbers of women and people of color in construction trades combined with mechanisms for addressing organizational processes that reproduce gender and racial/ethnic inequality. Greed (2000) argued that the construction industry would need a "critical mass" of women and people of color in order to change the culture of the industry. She suggested that movement toward this critical mass could be promoted by various change agents, including "top down" governmental agencies as well as "bottom up"

groups organized around gender and/or race/ethnicity. In recent years in Oregon, BOLI has increased efforts at diversifying the transportation workforce through recruitment efforts (e.g., funding for pre-apprentice programs designed to attract women and people of color into the trades) as well as supports to apprentices to improve retention (e.g., financial assistance to apprentices). These interventions are important for addressing recruitment and retention; however, in order to create real change to the current shape and scope of inequalities, further attention must be paid to addressing the processes that perpetuate inequality in work organizations.

Acker (2006) identified key mechanisms that continue the perpetuation of inequality in work organizations, including informal interactions, hiring practices, and supervisory practices. In our study of apprenticeship programs, we found that the construction trades were characterized by a "good old boys' club" culture in which sexism and racism were omnipresent in subtle (and not so subtle) ways. We found that access to networks was central for the ability of apprentices to obtain consistent work and on-the-job mentoring; this access was shaped by apprentices' gender and race/ethnicity. Like Williams et al. (2012), our findings suggested that policies that are on the surface gender neutral, such as the out-of-work list process of assigning jobs and informal on-the-job mentoring of apprentices by journey-workers, must be evaluated in terms of the consequences for perpetuating gender and racial/ethnic inequality.

Our findings suggest that gender and racial/ethnic inequalities are visible but not consistently viewed as illegitimate, which makes change in this context difficult (Acker 2006). While it is obvious that there are few women and people of color on job sites, acceptance of the "good old boys' club" culture and reliance on an individualist discourse that emphasizes "working hard" serve to legitimize these ongoing inequalities. Consistent with previous work on the trades, our findings indicated that apprentices often prefer to deal with discrimination and harassment individually and that it often goes unreported (Denissen 2010a; Denissen and Saguy 2014; Paap 2008). Addressing discrimination and harassment only on an individual-level basis maintains systematic inequalities within apprenticeship programs. In apprenticeship programs and other work organizations characterized by inequality regimes, emphasizing the illegitimacy of inequalities and addressing inequalities at a structural, rather than individual, level will be necessary to fundamentally change the organizations. In Oregon, BOLI is just beginning to assess what might be successful interventions into disrupting the hostile work environment that characterizes too many apprentices' experiences. We suggest that using an inequality regimes framework should inform these interventions.

This research adds to an understanding of how organizational policies, practices, and ideologies reproduce gender and racial/ethnic inequality in work organizations. Notably, this case study of a blue-collar occupation demonstrates similarities with white-collar occupations that have been the primary focus of previous research. Thus, we provide further evidence that the processes identified by Acker (2006) are useful in assessing inequality across a variety of work organizations. However, our study is limited in that there are some nuances to the apprenticeship system that differentiate it from other types of blue-collar work organizations. For example, the sexist and racist elements of construction culture

make for a useful case study; however, further research might assess other occupations that have different organizational cultures, as well as policies, practices, and ideologies that may demonstrate more subtle forms of discrimination. In exploring the experiences of female and racial/ethnic minority apprentices, we contribute to an evolving understanding of how inequality regimes function across occupations. Through assessing these processes, we hope to contribute to conversations about the changes in the construction industry in Oregon as well as broader policy debates aimed at addressing gender and racial/ethnic inequality at work.

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APPENDIX A

Staff Demographic Characteristics

Pseudonym	Gender	Race	Current Employer
Lisa	Female	Latina	Pre-apprenticeship program
Katie	Female	Latina	Pre-apprenticeship program
Emily	Female	White	Pre-apprenticeship program
Brenda	Female	White	Pre-apprenticeship program
Marie	Female	White	Pre-apprenticeship program
George	Male	African American	Pre-apprenticeship program
Angela	Female	Latina	Union apprenticeship program
Ellen	Female	White	Union apprenticeship program

<div align="center">Appendix A. (Continued)</div>

Pseudonym	Gender	Race	Current Employer
Peggy	Female	White	Union apprenticeship program
Robert	Male	African American	Union apprenticeship program
Scott	Male	White	Union apprenticeship program
Kevin	Male	White	Union apprenticeship program
Mike	Male	White	Union apprenticeship program
Jessica	Female	White	Open shop apprenticeship program
Nicholas	Male	White	Open shop apprenticeship program
Chris	Male	White	Open shop apprenticeship program
Michelle	Female	White	Contractor
Susan	Female	White	Contractor
Richard	Male	African American	State of Oregon
James	Male	White	State of Oregon

APPENDIX B

Apprentice Demographic Characteristics

Pseudonym	Gender	Race/ethnicity	Age	Trade	Status
Donna	Female	African American	48	Cement mason	Completed
Karen	Female	Asian	50	Laborer	Completed
Amanda	Female	Latina (Mexican)	29	Laborer	Completed
Jen	Female	Native American	45	Inside electrician	Completed
Nicole	Female	African American	49	Laborer	Terminated
Linda	Female	African American	42	Laborer	Terminated
Irene	Female	African American	46	Inside electrician	Terminated
Carol	Female	African American	—	Laborer	Terminated
Meg	Female	White	26	Inside electrician	Completed
Mary	Female	White	27	Carpenter	Completed
Amy	Female	White	37	Laborer	Completed
Julie	Female	White	31	Inside electrician	Completed
Steph	Female	White	31	Carpenter	Terminated
Sandra	Female	White	47	Laborer	Terminated
Lauren	Female	White	26	Laborer	Terminated
Cindy	Female	White	53	Operating engineer	Terminated
Ben	Male	African American	44	Laborer	Completed
Dave	Male	African American	28	Laborer	Completed
Nathan	Male	Asian (Chinese)	31	Carpenter	Completed
Sam	Male	Latino	33	Painting	Completed
Mark	Male	African American	21	Painting	Terminated
Joe	Male	Latino	22	Painting	Terminated
William	Male	Latino (Spanish)	32	Inside electrician	Terminated
Tom	Male	Native American	31	Laborer	Terminated