This study sheds light on the informal mechanisms that contribute to inequality by examining the relationship between gender, race/ethnicity, and networks. Drawing on network theory and status construction theory, the author examines the routes through which employees' sex and race/ethnicity affect the status of their network members. The analyses indicate that women and people of color had network members with lower status than men and Whites because they occupied positions that limited their access to and ability to attract powerful employees. The author concludes that structural rather than personal exclusion explains race/ethnic and sex differences in the status of network members.

Gender, Race, Ethnicity, and Networks

The Factors Affecting the Status of Employees' Network Members

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Although scholars have theorized that gender, race, and ethnicity are embedded in work organizations, empirical analyses typically focus on one side of organizational life—the formal one (Acker, 1990; Nkomo, 1992). More than two decades of research has established that employees' gender, race, and ethnicity affect their formal positions and rewards in work organizations. For instance, women and people of color hold jobs with less rank, authority, opportunity for advancement, and pay than men and Whites (Federal Glass Ceiling Commission, 1995; Reskin & Padavic, 1994). Many studies acknowledge that informal networks help to maintain inequality, but few have data to examine the mechanisms through which employees' gender, race, and ethnicity affect their informal networks (but see Miller, Lincoln, &

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Olson, 1981). Consequently, our understanding of informal stratification lags behind that of formal stratification in work organizations (Granovetter, 1995).

This gap has at least two implications for our knowledge of inequality at work. First, it prevents us from comparing the ways in which White women, women of color, and men of color experience inequality. Research indicates that these groups face different formal barriers at work, but few studies have compared the informal barriers encountered by White women, women of color, and men of color (Browne, 1999; Cox & Nkomo, 1991; Maume, 1999; McGuire & Reskin, 1993). Second, this gap prevents us from addressing the popular claim that White women and people of color are excluded from powerful networks at work and from understanding the nature of that exclusion (Fernandez, 1981; Higginbotham & Weber, 1999; Lincoln & Miller, 1979; Ohlott, Ruderman, & McCauley, 1994).

My study addresses this void in our understanding of inequality by investigating how employees' gender, race, and ethnicity affect the status of their network members. Drawing on network theory and status construction theory, I examine three routes through which employees' gender, race, and ethnicity may affect the status of their network members—directly, indirectly, and interactively. My analyses are based on survey data from 1,150 full-time workers, the majority of whom are women. Respondents are employed by U.S. Finance, a pseudonym, which is a large corporation in the financial services industry.[1]

I focus this article on the status of network members because of its importance to employees' success at work (Campbell, Marsden, & Hurlbert, 1986). For instance, high-status employees occupy central positions within their networks that facilitate their access to resources (Lincoln & Miller, 1979). Individuals with high-status contacts find more prestigious jobs than those with low-status contacts (DeGraaf & Flap, 1988; Lin & Dumin, 1986; Lin, Ensel, & Vaughn, 1981). Employees' advancement also depends on the status of their network members (Brass, 1985; Higginbotham & Weber, 1999; Jackall, 1988; Kanter, 1977). High-status network members can advocate for employees in controversial situations and help employees bypass the corporate hierarchy, allowing them to complete their work quickly. Having high-status contacts also provides employees with *reflected power*, which is power that is obtained by being associated with influential individuals (Kanter, 1977). In sum, having high-status network members is pivotal for employees' acquisition of resources and power in work organizations.

This study examines informal networks rather than formal networks because of their implications for informal stratification at work. The distinction between formal and informal networks, however, is more a matter of degree than kind. Formal networks tend to be public, official, and have clear

boundaries, whereas informal networks tend to be personal, voluntary, and have fluid boundaries. For instance, formal work networks tend to be officially recognized by employers and to focus on the achievement of a work or company goal. They also tend to have an identifiable membership and explicit structure. Participation in informal networks, in contrast, is not formally governed or officially recognized. The goal of such networks can be work related, personal, or social (Ibarra, 1993).

The distinction between formal and informal networks is relevant for this study because exclusion from formal networks has different implications than exclusion from informal networks. An employee who is excluded from a formal network (e.g., whose manager refuses to help him or her) can refer to company policy or written job descriptions to argue that she or he has been treated unfairly. Employees who are excluded from informal networks, in contrast, have little recourse because companies generally do not take responsibility for informal work ties. In fact, during my employment at U.S. Finance, I created a handbook on mentoring that my supervisor was reluctant to distribute because he did not want employees to think that U.S. Finance was responsible for getting them mentors.

THEORETICAL FRAMEWORK

NETWORK THEORY

Network theory adopts a structural perspective on social life that emphasizes how workers' structural location, rather than workers' individual characteristics, determines the composition of their networks (Campbell et al., 1986; Feld, 1981; Ibarra, 1993; Marsden, 1990; Wellman & Wortley, 1990). Thus, if White women and people of color are excluded from powerful networks at work, that exclusion should be structural (e.g., a consequence of the distribution of positions) rather than personal (e.g., rejection by another person). In other words, gender, race, and ethnic differences in the status of employees' network members should be primarily due to gender, race, and ethnic differences in credentials and structural factors such as organizational resources, hierarchical positions, extent of interdepartment communication, and the demographic composition of employees' work environment (Ibarra, 1993; Lincoln & Miller, 1979; Moore, 1990, 1992).

Credentials. One way that workers assess the competence of their coworkers is by their credentials (Rosenbaum, 1989). Degrees and awards may not actually increase workers' competence, but people nevertheless associate

competence and power with credentials. Some research indicates that employees' credentials directly affect the status of workers' network members, suggesting that employees' credentials help them to attract network members (Campbell et al., 1986; Lin et al., 1981; but see Ibarra, 1995).

Organizational resources. High-status employees have a strong incentive to interact with workers who control resources because such employees have the potential to provide something of value to them (Blau, 1964; Cook, 1982). For example, a high-status employee in Ibarra's (1997) study remarked, "I develop the network contacts I need to get the job done, period. If I don't need them, I don't talk to them" (p. 97). Thus, employees who control organizational resources should be better able to attract high-status network members than employees who do not control such resources.

Employees' hierarchical location. Occupying a position with high organizational rank, such as that of manager or officer, should help employees acquire high-status network members because such positions typically involve interaction with high-status employees (Jackall, 1988; Kanter, 1977; Lincoln & Miller, 1979; Moore, 1992; Pierce, 1995). For example, executives' offices at U.S. Finance are located at the top of a building where there is little employee traffic. Executives have their own entrance to the building and their own dining room. U.S. Finance also sponsors sporting events in which it reserves seats for managers and executives. Thus, employees with low rank have fewer opportunities than employees with high rank to interact with high-status employees. As a result, employees at the bottom of the corporate hierarchy should have network members who, similar to themselves, have little status.

Extent of communication required in employees' jobs. Communicating with employees outside of the work group should lead workers to come into contact with many employees, increasing the chances of interacting with high-status employees. Employees who occupy jobs requiring communication with others outside of their business unit should also obtain a range of information, increasing their usefulness in the eyes of high-status employees (Ibarra, 1993; Kanter, 1977).

Demographic composition of immediate work environment. Individuals do not freely choose their network members, according to network theory. Rather, the selection of network members is made within a social context of limited alternatives (Feld, 1982; Ibarra, 1993). For instance, the sex segregation of occupations, jobs, and voluntary organizations compels workers to interact with members of their own sex (Bielby & Baron, 1986; King, 1992;

McPherson & Smith-Lovin, 1986; Popielarz, 1999). As a result, workers' networks tend to be sex segregated (Brass, 1985; Ibarra, 1992; Leicht & Marx, 1997; Scott, 1996). Another reason why workers tend to interact with socially similar others may be because of their common interests, similar ways of communicating, and mutual affinity (Tsui & O'Reilly, 1989).[2]

Three aspects of employees' demographic environment are particularly relevant for this study—the availability of managers, women, and people of color. The more managers that are in employees' immediate work environment, the higher their chances are of interacting and spending time with high-status employees. The race and sex composition of employees' immediate work environment should indirectly affect the status of their network members. For instance, the more women with whom employees work, the more women with whom they will interact, and thus the more women they will have in their networks. The more White women and people of color that employees have in their networks, the more low-status network members they should have because White women and people of color tend to occupy low-level positions in work organizations (Brass, 1985; Ibarra, 1992). For instance, women and people of color were underrepresented in high-status occupations and overrepresented in low-status occupations relative to their representation in U.S. Finance as a whole. Equal Employment Opportunity (EEO) reports from U.S. Finance show that only 39% of all managers were women, whereas 80% of all clerical and office workers were women. Furthermore, 7% of all managers were people of color, whereas 24% of all clerical and office employees were people of color. Women comprised 59%, and people of color comprised 15% of all employees at U.S. Finance's home office.

STATUS CONSTRUCTION THEORY

Status construction theory suggests that workers do take each others' gender, race, and ethnicity into account when forming networks.[3] Specifically, individuals rank each other based on the amount of resources they possess—the more resources a person possesses, the more competent he or she is assumed to be by others. Because people's resources are related to their gender and race/ethnicity, workers may assume that individuals' gender and race/ethnicity reflect their ability and worth. These beliefs about competence, known as *status value beliefs*, differentiate and rank people based on their group membership, such as their race and sex (Ridgeway, 1991). When status value beliefs are generalized, high- and low-status individuals import them into their social interactions (Martin, 1985; Ridgeway, 1997; Ridgeway, Boyle, Kuipers, & Robinson, 1998).

If status value beliefs are widespread, White women and people of color could experience two forms of personal exclusion from informal networks at work. First, White women and people of color could be denied entry to powerful networks despite their credentials and organizational positions, a possibility that has some empirical support (Brass, 1985; Fernandez, 1981; Scott, 1996).[4] Second, White women and people of color could receive fewer network benefits than White men from their resources, credentials, and organizational positions (Ibarra, 1992). A Black manager in Fernandez's (1981) study explained, "I cannot afford to be average or to meet the minimum requirements for a position. It's almost mandatory that I am from the right school with a little higher degree and be blessed with the favoritism of my boss" (p. 62).

Although I have highlighted the differences between network theory and status construction theory, there is certainly overlap between the two. For instance, status construction theory recognizes that structural conditions affect whether status value beliefs develop and spread (Ridgeway, 1991, 1997; Ridgeway et al., 1998). Network scholars also recognize that workers' preferences affect with whom they form network ties (South, Markham, Bonjean, & Corder, 1987). However, these theories emphasize different causal factors in network outcomes. Structural factors are central to understanding network composition, according to network theorists. Thus, they would predict that the effects of employees' gender, race, and ethnicity on the status of their network members are indirect through structural factors. In contrast, status construction theorists would argue that employees' status value beliefs about gender, race, and ethnicity are key determinants of network composition. As a result, employees' gender, race, and ethnicity should have direct or interactive effects on the status of their network members.

DATA AND METHODS

U.S. FINANCE

U.S. Finance employs more than 20,000 individuals, has annual revenues of more than $30 billion, and ranks in the top 10 among financial services companies (Hillstrom & Ruby, 1994). Among the approximately 6,000 employees at the home office, 48% were White women, 37% were White men, 11% were women of color, and 4% were men of color. Compared to the occupational distribution nationwide, professionals, clericals, managers, and technicians were overrepresented, and service workers, crafts, sales, operatives, and laborers were underrepresented at U.S. Finance.[5] Among employees

at the home office, for example, 32% were professionals, 29% were clericals, 17% were managers, 16% were technicians, 3% were service workers, 1% were crafts, and less than 1% were sales workers or operatives.[6]

My entry into U.S. Finance was facilitated by my own informal network. In 1992, I began a qualitative research project on mentoring. I knew an intern at U.S. Finance who helped me to arrange interviews with two managers. While I was interviewing one of these managers, he suggested that I apply for a position in his department. I subsequently worked part-time as a research consultant in the human resources department for a year and a half.

DATA COLLECTION

I mailed surveys to a stratified random sample of 1,756 full-time employees at U.S. Finance's home office. I excluded contract workers, part-time employees, independent sales agents, and subsidiary employees from the sample. I oversampled people of color so that I could conduct statistical comparisons across race and ethnicity. In addition to the nine-page survey, employees received a letter from the vice president of human resources, indicating the company's support for the project and emphasizing that participation was voluntary. My cover letter stated that the purpose of the study was to collect information on how employees cooperated with each other at work, that all responses would be confidential, and that U.S. Finance would not have access to the data or know who returned the survey (completed surveys were mailed to my university). My letter also said that participating in the study was voluntary and that the survey would take about 20 minutes to complete. I offered employees the chance to win a $50 gift certificate to an upscale restaurant if they completed and returned the survey. I mailed a reminder postcard approximately one week after employees received the survey and sent a second round of surveys to nonrespondents the following week.

THE SAMPLE

The target sample consisted of 500 White men, 500 White women, 256 men of color (the entire population), and 500 women of color. Thus, men of color made up 15% of the target sample, and each other group made up approximately 28% of the target sample. My final response rate was 65% (1,150 respondents). Of the final sample, 31% are White women, 30% are White men, 26% are women of color, and 13% percent are men of color. More generally, 57% of the sample are women and 39% are people of color.[7]

THE SURVEY

Following past research, the survey began with a name generator to elicit employees' network members (Burt, 1992; Ibarra, 1995; Marsden, 1987).[8] I asked respondents to think of employees at U.S. Finance who had "made an effort to give [them] job, career, or personal help." I left the definition of a network member fairly open to increase the range of network ties listed by respondents. I encouraged respondents to think of people with whom they worked, with whom they did not work, with whom they interacted frequently, and with whom they interacted occasionally. I also defined *help* broadly by asking about job, career, and personal help. I asked about employees who had made an effort to give help rather than about those who actually gave help so that I would increase my chances of including ineffective network members, which is relevant for other articles. To minimize respondent recall bias, I asked about help received in the last 9 months ("since the beginning of the year").[9] I also limited the number of possible network members to eight to make the survey manageable for respondents.

Whereas my name generator may have elicited formal and informal network members, I refer to respondents' helpers as informal network members for two reasons. First, only 29% of respondents' network members had ever been their supervisor or manager (i.e., a formal tie). Second, the provision of help even in formal relationships depends, in part, on employees' informal ties to each other. For instance, although managers at U.S. Finance are supposed to provide career direction to all of their employees, a 1992 poll of more than 12,000 U.S. Finance employees indicated that only 26% had periodic career discussions with their managers. I suspect that the 26% of employees who obtained career direction from their managers had informal ties to their managers.

MEASUREMENT OF DEPENDENT VARIABLE

I drew on the thesis that status reflects organizational position to construct my measure of network members' status (Campbell et al., 1986; Ibarra, 1995; Lin et al., 1981). Respondents reported the organizational rank of each person in their network, choosing among five categories: nonsupervisor, supervisor, manager, director, or officer. I summed employees' responses for their network members to create my measure. The mean, standard deviation, and range of this measure, along with the others in this study, are presented in Table 1. These statistics are weighted to take into account that people of color were oversampled.

I summed network members' statuses rather than calculate the percentage of network members with high status because research suggests that the more

TABLE 1: ANOVA Results by Employees' Sex and Race/Ethnicity

				Means				Means		
Characteristic	*Variable*	*Range*	*Standard Deviation*	*Sample (N = 1,150)*	*Men (N = 464)*	*Women (N = 682)*	*Sex Difference*	*Whites (N = 997)*	*People of Color (N = 149)*	*Race/ Ethnic Difference*
Status of network members	Summed ranks of network members	0 to 40	6.16	10.45	11.74	9.59	*	10.68	8.97	*
Structural factors	Organizational rank[a] (1 = nonsupervisor)	1 to 5	0.97	1.47	1.82	1.23	*	1.50	1.23	*
	Control over resources (0 = none)	0 to 4	1.09	1.43	1.69	1.25	*	1.48	1.09	*
	Intergroup communication (0 = not important)	0 to 4	1.17	2.98	3.10	2.90	*	3.04	2.59	*
	Number of women in network	0 to 8	1.89	2.72	1.90	3.28	*	2.68	3.01	*
	Number of people of color in network	0 to 8	0.89	0.54	0.41	0.62	*	0.42	1.34	*
	Percentage of people of color on floor	0 to 31.74	8.97	14.49	13.60	15.08	*	14.02	17.73	*
	Percentage of women on floor	16.67 to 85.37	14.78	56.98	51.51	60.61	*	56.45	60.56	*

	Percentage of managers on floor	0 to 41.03	9.00	17.68	19.21	16.67	*	17.95	15.82	*
Employees' credentials	Years of education	12.00 to 21.00	1.95	14.76	15.49	14.26	*	14.78	14.58	
	Financial designations (1 = yes)	0 to 1	0.42	0.23	0.31	0.17	*	0.24	0.15	*
	Company tenure (1 = less than 1 year)	1 to 5	1.23	3.95	3.83	4.04	*	3.99	3.71	*
Controls	Presently married (1 = yes)	0 to 1	0.47	0.66	0.74	0.60	*	0.68	0.51	*
	Number of children younger than 18	0 to 3	0.97	0.77	0.88	0.69	*	0.77	0.73	
	Network size	0 to 8	1.93	5.30	5.38	5.25		5.34	5.03	

a. Significant interaction between race/ethnicity, sex, and organizational rank.
*Significant at the .05 level, two-tailed test.

high-status network members employees have, the more resources they have at their disposal (Campbell et al., 1986; Lin et al., 1981). A percentage would have also exaggerated the status of small networks. If I had taken the number of network members who were managers and divided by network size, for instance, a respondent with one network member who was a manager would have had a higher score on the dependent variable (100%) than a respondent with eight network members, of whom four were managers (50%).

MEASUREMENT OF INDEPENDENT VARIABLES

I coded female as 1 and male as 0. Fifty-seven percent of the sample are women. I created dummy variables for Asians, Blacks, Latinos, and racial minorities who were neither Asian, Black, nor Latino. The comparison group for each dummy variable is Whites. The sample contains 37 Asian Americans, 40 Latinos, and 338 African Americans. The 36 respondents who checked the "other" racial/ethnic category include Indian, Native American, and biracial employees. The phone calls that I received concerning the study's focus on African Americans suggest that some African Americans chose the "other" category to keep their race ambiguous.

I measured credentials with three variables: years of education completed, completion of a financial designation, and years of company tenure. The original categories for level of education were: high school diploma or less, some college, associate degree, bachelor's degree, master's degree, doctorate, and other. I converted these categories into their approximate years of education. Forty-five percent of the respondents had at least a bachelor's degree.

Financial designations are technical certifications in financial services. The information presented in certification classes is not offered in college business courses. These designations signal that an employee is well-rounded and are an unofficial requirement for advancement. I coded respondents who had at least one designation as 1 and those who had no designations as 0. On average, 23% of respondents had a financial designation.

The categories for company tenure were less than 1 year, 1 to 3 years, 4 to 6 years, 7 to 9 years, and 10 or more years. U.S. Finance has a fairly stable workforce—50% of respondents had worked at U.S. Finance for 10 or more years.

I created an index of employees' control over resources, adapted from Spaeth's (1985) measure of job power. My index is a summary of four indicators: ability to make purchases costing more than $10,000, ability to provide input into decisions that affected company services or products, ability to make final decisions that affected company services or products, and access

to confidential information. Respondents indicated whether they could engage in these activities by responding yes, coded 1, or no, coded 0. Approximately 6.5% of respondents could make major purchases, 17% of respondents could make final decisions, 58% of respondents had access to confidential information, and 61% of respondents could provide input into important decisions. The reliability coefficient for this scale is .56.

To measure organizational rank, the survey asked respondents to place themselves into one of five categories (coded 1 to 5, respectively): nonsupervisor, supervisor, manager, director, or officer and above. Seventy-eight percent of the respondents were nonsupervisors.

I measured job communication with the question, "How important is it for you to communicate regularly with employees *outside* of your work group in order to do your current job?" The range for this measure is 0 (*not at all important*) to 4 (*essential*). Seventy-one percent of respondents said that communication with employees outside of their work group was essential or very important, 16% said it was somewhat important, and 12% said that it was not important for performing their current job.

To measure the demographic composition of employees' work environment, I calculated the percentage of women, people of color, and managers on employees' floors of employment with data from U.S. Finance.[10] Work floors at U.S. Finance are organized by functional area (e.g., sales is located on one floor and marketing on another floor), which facilitates interaction between workers on the same floor.

I measured women's representation in networks by summing the number of female network members listed by respondents. I measured the representation of people of color in respondents' networks by summing the number of minority network members listed by respondents. Because of the small number of people of color at U.S. Finance's home office, there were not enough minority network members to distinguish between different racial/ethnic minority groups.[11] A majority of the respondents, 64%, had no people of color in their networks.

Control variables. Being married and having children may diminish the amount of time that employees have to interact with their coworkers and thus affect the size and composition of their networks (Thompson & Walker, 1991; Wellman, 1985). I controlled for two family characteristics: marital status and number of young children. The codes for marital status are 1, presently married, and 0, not presently married. Approximately 66% of the respondents were presently married. The number of children younger than age 18 living at home has a range of 0, no children, to 3, three or more

children. Forty-five percent of respondents had children younger than the age of 18 living at home.

I also controlled for network size because an increase in network size would automatically increase an employee's score on the dependent variable. I measured network size by summing the number of respondents' network members.[12]

METHOD OF ANALYSIS

I conducted analysis of variance (ANOVA) to determine if women and people of color had network members with lower status than men and Whites and if there were race/ethnic and sex differences in the factors that were supposed to affect the status of network members. Table 1 presents the ANOVA results, which include weighted means for the whole sample, men, women, Whites, and people of color.[13] I tested for race/ethnic differences in employees' means, sex differences in employees' means, and interactions between sex, race/ethnicity, and the other factors. I present the one-way ANOVA results because there was only one significant interaction in the two-way ANOVA results. The interaction between employees' race/ethnicity, sex, and organizational rank means that although all women fared worse than men in regards to their organizational rank, women of color occupied positions that were even lower in the organizational hierarchy than White women.

I conducted ordinary least squares regression (OLS) to identify the determinants of the status of employees' network members. OLS allowed me to determine the route(s) through which employees' sex and race/ethnicity affected the status of their network members. Table 2 presents the unstandardized and standardized OLS regression coefficients for the status of network members.[14] I used one-tailed tests of significance for all hypotheses. Model 1 includes only employees' sex and race/ethnicity, and Model 2 adds structural opportunities and controls. I organized the models in this way to ascertain if the effects of employees' sex and race/ethnicity on the status of network members were explained by structural factors, as predicted by network theory. To analyze the arguments suggested by status construction theory, I examined whether the effects of employees' sex, race, and ethnicity on the status of network members were significant after the structural factors were added to the regression model. In addition, I tested two-way and three-way interactions of sex and race/ethnicity with measures of structural opportunities (e.g., control over resources and organizational rank). I also tested interactions between employees' sex and race/ethnicity in Models 1 and 2. None of the interactions are presented because none reached statistical significance at the .05 level. I also conducted supplementary regression

TABLE 2: Ordinary Least Squares (OLS) Regressions Predicting the Status of Network Members (standardized coefficients in parentheses)

	Model 1		*Model 2*	
(Constant)	12.312*		–7.804*	
Respondent's sex				
Woman	–.618	(–.046)	.640	(.048)
Respondent's race/ethnicity				
Black	–2.935*	(–.199)	.345	(.023)
Latino	–.857	(–.025)	.298	(.009)
Asian	–1.379	(–.038)	–.421	(–.012)
Other minority	–2.412*	(–.054)	–.267	(–.006)
Structural factors				
Organizational rank			2.948*	(.454)
Control over resources			.426*	(.071)
Intergroup communication			.062	(.011)
Percentage of managers on floor			.061*	(.082)
Percentage of women on floor			.008	(.018)
Percentage of people of color on floor			.001	(.001)
Number of women in network			–.544*	(–.153)
Number of people of color in network			.017	(.003)
Respondent's credentials				
Years of education			.083	(.024)
Financial designations			.449	(.029)
Company tenure			.032	(.006)
Controls				
Presently married			–.137	(–.010)
Number of children younger than 18			.132	(.019)
Network size			2.115*	(.624)
Adjusted R^2	.039		.718	

NOTE: $N = 958$ because of missing data on the floor composition measures.
*Significant at the .05 level, one-tailed test.

analyses to identify the factors that indirectly affected the status of employees' network members. The determinants of the status of employees' network members are dependent variables in these supplementary analyses.

RESULTS

EMPLOYEES' SEX, RACE, AND ETHNICITY

Model 1 shows that being female did not significantly affect the status of employees' network members, net of their race/ethnicity. The results for employees' race/ethnicity indicate that certain racial/ethnic minorities experi-

enced network penalties—Blacks and minorities who were not Asian, Black, or Latino had network members with significantly lower status than Whites.

In Model 2, the significant coefficient for resource control means that the more resources that employees controlled, the higher was the status of their network members.[15] Employees who controlled corporate resources were probably perceived by high-status employees to be useful network ties. White women and people of color did not receive significantly fewer network benefits, in the form of high-status members, from their control over resources than White men.

The positive coefficient for organizational rank in Model 2 means that the higher employees' organizational rank was, the higher the status of their network members. Employees with high rank have many opportunities to interact with and thus form ties to high-status employees. I found no evidence that White women and people of color were less likely than White men to have high-status network members when they occupied high-ranking positions, however.

Model 2 shows that employees' level of intergroup communication did not directly affect the status of their network members.[16] In addition, White women and people of color did not receive significantly fewer network payoffs for their intergroup communication than White men.

Employees' years of education, financial designations, and company tenure did not significantly affect the status of their network members, net of other factors.[17] I also found no evidence that the effects of employees' credentials on the status of their network members depended on their race/ethnicity or sex.

One measure of the demographic composition of employees' workplace played a direct role in the status of their network members.[18] The higher the percentage of managers on respondents' floors of employment, the higher the status of their network members. Consistent with network theory, this finding indicates that the availability of high-status employees influenced the status of employees' network members.

The negative coefficient for the number of women in employees' networks means that the more women that employees had in their networks, the lower the status of their network members. This finding does not mean that the addition of a woman to employees' networks diminished the status of their network members because the addition of a woman increased network size. Thus, the addition of a woman to an employee's network increased the status of his or her network members but not as much as the addition of a man.

The number of people of color in employees' networks was not directly related to the status of their network members. This finding is surprising given that people of color were less likely than Whites to hold high-level positions—

8% of people of color versus 18% of Whites were managers at U.S. Finance. Although respondents had a small pool of high-status people of color with whom they could form network ties, they had a disproportionate number of high-status people of color in their networks. Minority managers were 4.6 times more likely to be listed as network members relative to their representation at U.S. Finance, whereas White managers were 2.8 times more likely to be listed as network members relative to their representation in U.S. Finance.[19]

CONTROLS

Neither marital status nor number of children significantly affected the status of employees' network members. Furthermore, family characteristics did not interact with employees' gender. The positive coefficient for network size means that having many network members was associated with having high-status network members, which was expected given the manner in which I measured the dependent variable.

In sum, I found no support for status construction theory's prediction that employees' race/ethnicity and sex would interact with structural opportunities or directly affect the status of employees' network members. To determine the factors that explained away the effects of being Black and of being a minority who was not Asian, Black, or Latino on the status of their network members, I analyzed the correlations between the determinants of network status with being Black and with being a minority who was not Asian, Black, or Latino. Being Black was significantly correlated with all five determinants, but its highest correlations were with organizational rank ($r = -.26$, $p < .05$) and control over resources ($r = -.21$, $p < .05$). Thus, Blacks had network members with lower status than Whites mainly because they occupied positions with lower organizational rank and that gave them less control over corporate resources than Whites. Being a minority who was not Asian, Black, or Latino was significantly correlated with one determinant—control over corporate resources ($r = -.08$, $p < .05$). This suggests that minorities who were not Asian, Black, or Latino had lower status network members than Whites because they controlled fewer resources than Whites.

DISCUSSION

High-status network members are important for employees' careers because they provide employees with resources above and beyond those granted by their formal positions and credentials. A vice president at U.S. Finance, for example, said that before big sales meetings she distributed

pictures of the top sales agents to the junior employees in her network so that they could identify these top agents and thus not say anything foolish in front of them. In addition, employees at U.S. Finance could participate in management-training programs only with the recommendation of an upper-level manager. Given that women and people of color are less likely than men and Whites to have high-status network members, they are missing critical information and sponsorship.

My results suggest that structural exclusion is critical to understanding why women and people of color had network members with lower status than men and Whites, as predicted by network theory. I found that the effects of employees' race/ethnicity on the status of their network members were explained away by race/ethnic differences in structural factors. I found no evidence that women had network members with lower status than men once employees' race was taken into account. Furthermore, I found no support for the argument that women and people of color receive fewer network benefits than men and Whites from their structural positions, as predicted by status construction theory. Thus, once people of color and White women had the resources to attract high-status employees and occupied positions that gave them the opportunity to interact with high-status employees, they were just as likely as White men to have high-status network members.

Women and people of color were less likely than men and Whites to have the resources and positions that would put them into contact with high-status employees, however. Table 1 shows that women and people of color had lower organizational rank and were less likely to control corporate resources than men and Whites. The significant interaction between employees' sex, race/ethnicity, and organizational rank means that women of color were particularly disadvantaged in regards to their hierarchical positions at U.S. Finance.[20] This finding is consistent with research showing that women of color receive fewer returns to authority from their credentials than White women, men of color, and White men (McGuire & Reskin, 1993). Women and people of color were also more likely than men and Whites to work on floors with female employees and subsequently to have women in their networks. In sum, although employees' race/ethnicity and sex did not directly affect the status of their network members, they were consequential in that the structural positions that White women, women of color, and men of color occupied at U.S. Finance constrained with whom they interacted and thus with whom they formed network ties.

One implication of these findings is that high-status employees may not have to personally exclude White women and people of color from their networks because their organizations are already doing it.[21] A personal anecdote illustrates this claim. During my employment at U.S. Finance, I observed a

training session for "high potentials," employees identified by senior management as having leadership potential. The training session, which lasted several days, taught participants managerial skills and provided them with the opportunity to form ties to other rising stars. The participants did not exclude White women and people of color from their emerging network because no White women or people of color were invited to the training session. Few White women or people of color occupy the types of managerial positions, those in which they can perform extraordinary tasks, for which they are likely to acquire the label of *high potential* (Collins-Lowry, 1997; Federal Glass Ceiling Commission, 1995; Kanter, 1977).

Whereas the term *exclusion* typically conjures up images of personal bias, my findings point to a more insidious form of exclusion. The impersonal and subtle nature of structural exclusion makes it difficult for companies to recognize and to rectify. In fact, when I presented my results to a group of human resource professionals at U.S. Finance, they were reluctant to discuss the structural changes that would be needed to make informal networks more equitable. Rather than analyzing changes in the recruiting, interviewing, training, and promotion processes, they discussed the types of personality tests (e.g., Meyers-Briggs) that could be used to help White women and people of color develop beneficial network ties. The assumption behind such approaches is that White women and people of color need to be fixed as opposed to the social structure that is generating inequities in networks.

The generalizability of my results is limited, however, by a few factors. My study focused on only one network characteristic and thus is not an exhaustive examination of employees' networks. For instance, White women and people of color may receive less help from their network members than White men even when the composition of their networks is similar. White women and people of color may also experience personal exclusion from the networks that workers use to obtain positions when they first enter an organization. According to Granovetter (1995), the network that an employee uses to gain entry into a work organization may have a snowball effect on that employee's career by affecting his or her subsequent network ties and work rewards.

The generalizability of my findings is limited by my focus on one organization. Although my study found no statistical evidence of personal exclusion, studies of male-dominated workplaces, such as manufacturing and law firms, have documented that White women and people of color are personally excluded from powerful networks (Kanter, 1977; Pierce, 1995). The fact that a majority, 59%, of U.S. Finance's employees were women could explain why employees' sex failed to significantly affect the status of their network

members in this study. Women's numerical dominance at U.S. Finance may have weakened the spread and impact of sex-based status value beliefs.

U.S. Finance may also have been unique in its concern about discrimination lawsuits, which was due to a sex discrimination lawsuit that was successfully filed against one of its competitors. For instance, I was involved in a task force whose mission was to make recommendations on increasing the number of female and minority sales agents, the most lucrative jobs in the company. The main impetus behind the task force was to prevent a lawsuit against U.S. Finance, who ranked well below its competitors in regards to its number of minority and female sales agents. The fear of a discrimination lawsuit may also help to explain the lack of evidence for the personal exclusion of White women and people of color in this study.

CONCLUSION

If you pick up a business magazine today, you are likely to find an article that informs readers about how to improve their "networking" skills. My results indicate, however, that White women and people of color knew how to form network ties—the average number of network members was approximately the same for White men, White women, men of color, and women of color (see Table 1). Structural exclusion from high-ranking and resourceful positions, not a lack of networking knowledge or skills, prevented White women and people of color from forming ties to powerful network members.

To equalize access to informal networks at work, companies need to provide White women, women of color, and men of color with opportunities to interact with and to attract high-status employees by desegregating jobs, offering cross-functional assignments, and providing internships in various parts of the company. Employers also need to reduce their reliance on informal methods to train workers, allocate jobs, and award promotions. Given that informal networks are segregated by sex and race/ethnicity, relying on such informal methods will simply reinforce sex and race/ethnic inequities in promotions and authority (Baldi & McBrier, 1997; McGuire & Reskin, 1993; Wilson, Sakura-Lemessy, & West, 1999).

Marginalized workers could bring about social change through their collective efforts as well. Some research suggests that formal networks could benefit White women and people of color by providing them with job-related information and access to network members who might otherwise be unreachable (Federal Glass Ceiling Commission, 1995; Friedman, Kane, & Cornfield, 1998). The women's caucus at U.S. Finance, however, had erratic attendance and, to my knowledge, never engaged in collective action on behalf

of women at U.S. Finance. My informal conversations with female employees, although anecdotal, indicated that many women did not attend the group's luncheons for fear of being labeled *radical* or *feminist*, which was a detrimental label to have in this conservative organization.

In conclusion, despite sociologists' long-standing interest in informal organizational life, the "shadow structure" in work organizations remains elusive (Kanter, 1977, p. 164). More research is needed to understand the ways in which gender, race, and ethnicity are embedded in the informal structure of work organizations (Ibarra, 1993; Smith-Lovin & McPherson, 1993). Our understanding of the role that informal networks play in workplace inequality would be enhanced by research on network formation and change. Understanding how employees form network ties and how those networks change across their careers could help us identify the points at which network exclusion is most likely to occur and to identify the impact it has on employees' subsequent work outcomes.

NOTES

1. This study is part of a larger project on workers' networks in which I collected data on the personal and job characteristics of respondents, the personal and job characteristics of network members, the types of help that network members provide to respondents (and vice versa), and the strength of employees' relationships with their network members.

2. Relational demography affects not only network composition but also employee turnover, social integration, organizational attachment, and performance ratings (O'Reilly, Caldwell, & Barnett, 1989; Tsui, Egan, & O'Reilly, 1992; Tsui & O'Reilly, 1989).

3. This theory is one application of expectation states theory, which posits that status value beliefs shape individuals' expectations of each other and thus their interactions (Berger, Fisek, Norman, & Zelditch, 1977).

4. But see Campbell (1988), Ibarra (1995), and Moore (1992).

5. Among employees in private industry in the United States, 11% were managers, 14.5% were professionals, 6% were technicians, 11% were sales workers, 15% were clericals, 9% were craft workers, 15% were operatives, 7% were laborers, and 11% were service workers (Equal Employment Opportunity Commission, 1994).

6. U.S. Finance has more sales workers than indicated by this percentage, but most are not defined as employees of the company. My nondisclosure agreement with U.S. Finance prevents me from providing more detail about the company's workforce.

7. The response rate varied by respondents' race/ethnicity and sex—71% of White women, 67% of White men, 60% of men of color, and 58% of women of color returned the survey. I received a handful of phone calls from employees who were concerned that Blacks were being singled out for the survey. These concerns raise the possibility that Black respondents were different from White respondents (e.g., perhaps the most concerned Blacks did not respond to the survey). Because I am unable to compare respondents to nonrespondents on the determinants of the dependent variable, my results should be interpreted with caution.

8. This type of data is referred to as ego network data because it is based on information from one individual in a network. Ego network data can be collected with random sampling pro-

cedures and analyzed with conventional statistical methods so the results can be generalized to a larger population (Marsden, 1990).

9. Because I only asked about network members who had attempted to provide help over the course of 9 months, I excluded network members who only offered occasional help.

10. I found multicollinearity between the number of employees on workers' floors of employment and the number of women on employees' work floors, which were my original measures of floor composition. I used proportional measures of floor composition to correct this problem. The regression results for the proportional measures were no different from the regression results for the additive measures.

11. Out of all of the network members listed by respondents, 36 are Asian American, 39 are Latino, 61 are other racial minorities, 687 are African American, and 4,904 are White.

12. The mode is eight network members, which suggests that some of the respondents who listed eight network members might have listed more members if they had been able. When a variable is truncated in this way, its effect on the dependent variable may be underestimated.

13. I combined the data for racial/ethnic minorities because of insufficient sample sizes for some of the minority groups.

14. I tested for multicollinearity using the variance inflation factor, condition numbers, and variance-decomposition proportions. I did not conduct a weighted regression because employees' race/ethnicity is a determinant in the multivariate analysis.

15. I conducted a regression analysis that included the indicators of resource control, rather than the index, and found that all four indicators positively affected the status of network members.

16. Supplementary regression analyses showed that the level of intergroup communication afforded by employees' jobs helped employees to develop large networks, which increased their chances of having high-status network members.

17. The supplementary regression analyses show that employees' credentials indirectly influenced the status of their network members, however. Education positively affected employees' organizational rank, control over resources, and network size. Having financial designations and long tenure at U.S. Finance increased employees' organizational rank and control over resources.

18. The sex composition of employees' work floors had an indirect effect on the status of their network members—the higher the percentage of women on employees' work floors, the more women they had in their networks. However, female respondents had more women in their networks than male respondents even after I controlled for the percentage of women on employees' work floors. This suggests that structural availability and a preference for network members similar to themselves led female respondents to include more women in their networks than male respondents.

19. Although 18% of Whites were managers at U.S. Finance, 51% of respondents' White network members were managers. In contrast, 8% of people of color were managers at U.S. Finance, but 37% of respondents' network members who were people of color were managers.

20. Given that I tested 15 three-way interactions that included sex and race/ethnicity, this finding could also be due to chance.

21. Thus, in the absence of structural exclusion, one might find evidence of personal exclusion.

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