

Prejudice in hiring decisions:  
The interaction of social identity, job role, and occupational context

by

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To those fighting for equality and the expression of human diversity

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*A camino largo, paso corto.* Small steps are needed to complete a long journey. This journey would not have been possible without the love and help of colleagues, friends and family.

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## **Abstract**

The present research builds on previous work and suggests that prejudice is more complex than previous classical views (e.g., Allport's "antipathy based upon a faulty and inflexible generalization," 1954, p. 9) and integrates research on the effects of social identity, job roles, and occupational context to present a unified framework of the factors that can interact to influence the evaluations of applicants. This research examined prejudice as it occurs in hiring decisions. The hiring process is unique in that it lies between the norms, prejudices and stereotypes in society and the goals and standards of the modern workplace. This dissertation examined the job attainment rates of female and male deans at university settings and also experimentally manipulated social identity, job type and field to demonstrate the interactive emergence of prejudice in hiring decisions.

Study 1a identified the gender of 2,867 deans and assistant deans across schools of arts and science, business, education, engineering, law, medicine, nursing, public health, and social work from the top 100 research universities in the United States. Results indicate women were less likely to attain top dean roles across all university settings, but specifically top roles in business and engineering.

Study 1b examined the vitae of 39 men and women deans in business and law schools and found that they did not differ on the number of publications, awards and other selection criteria, but women presented more comprehensive information than men.

Study 2a and 2b experimentally manipulated the interaction of social identity, job role, and occupational context on applicant hiring evaluations. Study 2a presented 200 introductory psychology students with randomized resumes that indicated the applicant was either male or female, seeking a role as manager or assistant, in the field of education or finance. Analyses revealed women were not evaluated negatively based solely on their gender. Additionally, the three-way interaction of social identity, job role, and occupational context affected the starting salaries for individuals seeking counter-stereotypical jobs, especially when evaluated by female participants.

Study 2b presented the same participants with resumes that indicated the applicant was either a White or Asian male, seeking a job as a production manager or sales manager, in computing or graphic design. Results suggest Asian or White applicants were not evaluated negatively based on their race. However, analyses failed to reveal a significant three-way interaction.

Together, these studies lend support to the interaction of social identity, job role, and occupational context affecting the evaluation of applicants in the hiring process. Implications for the definition of prejudice, the use of base rates and the upcoming 2008 American presidential election are also discussed.

## **Chapter 1**

### **Introduction**

In 1999 two women were named chief executive officers of two very different organizations. Carly Fiorina rose to the top of a male-dominated field, becoming CEO of Hewlett-Packard, Inc. Andrea Jung took the reins of Avon Products, Inc. Six years later Carly Fiorina would be publicly fired. Andrea Jung remains at her post. Both women took over companies that were facing rough times. Jung's predecessor – a man – resigned when Avon's stock plummeted 50 percent. Jung took over Avon, a company facing irrelevance with modern women, with very little operating experience (Byrnes, 2000). Fiorina, on the other hand, was credited with saving Lucent Technologies by revamping the slow-moving communications equipment company and was brought on to HP to help it become more responsive to quickly changing markets and competitors (Burrows, 1999). While these two cases are not identical, we can nevertheless ask what caused these two women in their roles as CEO to experience such different outcomes even though they shared many similarities? A frequent answer in the psychological literature is prejudice.

A common question, however, is whether prejudice and discrimination are still a problem in the United States. Women make up 97 percent of secretaries, 88 percent of K-12 teachers, and 86 percent of paralegals (U.S. Bureau of Labor Statistics, 2005). Asian Americans account for 29 percent of medical scientists, even though they are only 4 percent of the total workforce; African Americans comprise 10 percent of the workforce,

but account for 19 percent of protective service occupations (i.e., firefighters, bailiffs, police officers, etc); Thirteen percent of the workforce is Hispanic, and yet almost a quarter of all bakers are of Hispanic descent (U.S. Bureau of Labor Statistics, 2005). Forty-six percent of all workers are women, and 24 percent of the workforce is Asian American, African American or Hispanic (U.S. Bureau of Labor Statistics, 2005), a percentage in line with overall population figures (U.S. Bureau of the Census, 2001a; 2001b). Based on these statistics, some would argue it is hard to see how racial prejudice or sexism affect the workforce.

The theory of ambivalent sexism suggests that, while positive statements like “women have better communal qualities applicable to work” may not seem harmful in and of themselves, they inherently imply women lack agentic qualities (Glick & Fiske, 1996; Eagly & Karau, 2002). To truly comprehend a situation we must examine both sides of the coin. Accordingly, the above statistics do not fully capture the totality of the state of minorities in the workforce. We need to examine the areas in which these groups are underrepresented to examine the possibility of prejudice and discrimination. What causes Asian Americans to comprise only around 2.5 percent of advertising and insurance sales agents and managers, but 10 percent of engineer managers (U.S. Bureau of Labor Statistics, 2005)? Women account for only 13 percent of corporate officer positions in Fortune 500 corporations (Catalyst, 2000), yet abound in assistorial roles (Census, 2001a). Similarly, minorities account for less than 5 percent of senior executives in the United States (Federal Glass Ceiling Commission, 1995).

Some would suggest that the differences in the representation of women and minorities in different fields are the result of the “pipeline problem” – the lack of

qualified applicants from which to choose. A review of the literature by Reskin (1993) suggested, however, that self-selection does not fully explain gender segregation in the workforce, as the research generally failed to support the notion that men and women have work values that orient them toward different types of jobs and further evidence that workers typically respond to available work despite any stereotypical connotations. This is not to deny, however, the effect that the composition of the labor pool has on the workforce. Instead this dissertation specifically chooses to examine the hiring process as a crucial factor in explaining the discrepancies in the number of women and minorities in different fields and jobs.

#### *Hiring Decisions: Connecting Societal Norms and Organizational Culture*

This research will examine prejudice as it occurs in hiring decisions. The hiring process is unique in that it lies between the norms, prejudices and stereotypes in society and the goals and standards of the modern workplace. Laws, social imperatives and competitiveness drive organizations to adopt diversity as official policy (Cox, 1993). Many organizations abide by the “value-in-diversity” hypothesis that posits a heterogeneous workforce is much more flexible, creative, and can outperform homogeneous firms (Cox, 1993; Richard, 2000). Along these lines, organizational culture and norms generally seem to advocate the diversification of the workforce and promotion of diversity. On the other hand, society is home to stereotypes and prejudices that are socially constructed and transmitted to others (Fiske, 1998). While explicit prejudice may be less common, implicit prejudice and stereotyping continue to be issues today (Dovidio, Gaertner, Kawakami & Hodson, 2002).



The hiring process exposes organizational goals to societal prejudices. Muchinsky (2003) noted that the hiring process is embedded in the larger organizational and social context, and that decisions do not occur in a vacuum. Organizations want more minority workers, and, while there may be a large number of minority applicants, the hiring process is susceptible to society's prejudices and stereotypes that may make the eventual hiring of qualified minority applicants unlikely. Prejudice may prevent minority applicants from being seen as qualified in the eyes of the person in charge of hiring new employees.

Additionally, given that research suggests that the socialization of children can affect the types of jobs they later choose to pursue (Heilman, 1979; Marini & Brinton, 1984), altering hiring practices to reduce prejudicial decisions can trickle down to increase the number of women and minorities in different roles and contexts reducing a source of gender and racioethnic segregation on a large scale (Perry, Davis-Blake, & Kulik, 1994). Blau and Ferber (1992) suggested that using gender prejudiciously in hiring decisions affects the type of jobs people apply for in the future. Given these findings, the hiring process is an apt focus for the study of prejudice because the emergence of prejudice during this process has large organizational and societal implications.

This dissertation brings together three distinct lines of research in the psychological literature – roles, context and social identity – and examines how their interaction affects job-hiring decisions. Through two experiments and archival research I will demonstrate that prejudice in hiring decisions arises through the interaction of these three factors. In Chapter 2, I introduce literature on personnel selection, impression formation and stereotyping, present a brief history of prejudice research, and provide

reviews of the literature of the effect of job roles, occupational context and social identity on prejudice in hiring decisions. In Chapter 3, I examine the effect of role, context and social identity in real-world data. Chapter 4 presents the results of two studies that experimentally manipulate these three factors to demonstrate their effect on hiring decisions. Chapter 5 discusses the implications of these findings on the prejudice and stereotyping literature.

#### *Findings from a Preliminary Study*

Before continuing and examining these specific research questions, I would like to present a preliminary study that examined, among other topics, whether female applicants would be evaluated differently based on the type of job for which they were applying. This initial exploratory work motivated the present research. It sought to demonstrate that women would be evaluated differently based on the type of job, and was designed to show how similar positions could lead to different hiring outcomes. Along those lines, baseball and softball are ostensibly identical sports, yet as indicated by the National Collegiate Athletic Association, have different gendered realities; participation in softball is limited to females, whereas baseball is limited to males. In a survey of female athletes, Salisbury and Passer (1982) found that softball was rated as a highly feminine sport along with volleyball and tennis. Cratty (1983) additionally suggested that sports like baseball are seen as more appropriate for males than females. Given the similarity of the physical activity of the two sports, but the different stereotypes associated with them, this study specifically examined the evaluations of a female applicant interviewing for a position as a softball or baseball coach.

*Participants and design.* Seventy-one male undergraduate business students at a large Midwest public university were recruited to participate in a study on organizational processes. This study used an independent samples t-test (job type: baseball v. softball coach) design.

*Procedure.* Participants were told that, in conjunction with the Business School's Office of Career Development, a student had arranged to participate in mock interviews to help her practice for her upcoming interview at an area high school and so that the experimenters could study the interview process. A research assistant presented the participant with a list of questions to ask the applicant, along with the applicant's resume. The resume provided a job objective that clearly stated that the applicant was seeking a job as a softball or baseball coach at an area high school. Furthermore, the research assistant reiterated the applicant's name and the position she was seeking before bringing the applicant into the room. Participants interviewed the applicant (a female confederate who had memorized scripted answers) for approximately 10 minutes. Following the interview they answered questions on Likert-type scales that ranged from 1 (extremely low) to 7 (extremely high) regarding the applicant's communication skills, motivation, assertiveness, interpersonal skills, degree of fit with the position, overall impression, and how likely it is they would hire the applicant – in that order (see Appendix A). Participants were debriefed and thanked for their participation in the study.

*Results.* An independent samples t-test found no differences between the baseball and softball conditions on all of the measures, except one. In response to the question how likely they were to offer the applicant the position, the t-test found significant results,  $t(69) = -2.278$ ,  $p < .03$ . Participants were less likely to offer the applicant the job

when she was applying for the baseball coach position than when she was applying for the softball position.

While preliminary in nature, this study helps demonstrate the effect that applying to ostensibly similar roles (i.e. coach) can be affected by the connotations that context provides (baseball versus softball). Specifically, while the candidate was rated similarly on all of the facets relating to her employability, when it came time to make a job hiring decision, evaluators were not inclined to offer a female candidate the job as a baseball coach. Additionally, as the following chapter will note, these results speak to the way that job applicants are assessed differently based on characteristics of the person, job and context.

## **Chapter 2**

### **Literature on Prejudice and Hiring Decisions**

The preliminary study data presented in the previous chapter are of particular note given the participants' answers to the questions. Participants noted the applicants' ability on several dimensions, their overall impression of the candidate and, finally, answered how likely it was they would hire the applicant. One could surmise that, after finding no differences between the baseball and softball conditions on all of the individual dimensions, the final hiring decision also would reveal no difference. As we saw, however, this was the one question where the baseball and softball condition participants differed. How could individuals rate the participant as highly qualified on the individual dimensions, but not see the applicant as hireable?

A brief overview of the personnel selection process will situate the present research and make the hiring process more vivid for readers.

#### *Personnel Selection*

Hiring typically involves sorting through a number of applicants and selecting a subset of applicants whose qualifications make them suitable for hiring. Selection is ultimately defined on the premise that some applicants are better for the job than others, and that employers are seeking to hire individuals who will be successful and contribute to the organization (Muchinsky, 1997). The hiring process provides an organization with new members that, as Guion (1998a) noted, "can result in substantial increases in mean

performance levels and productivity. Consequences of unwise decisions can range from inconvenience to disaster” (p. 4). The stakes in making an appropriate hiring decision can be quite high.

To that end, the personnel selection literature has an extensive body of work on how organizations should select adequate candidates for a position. First, Guion (1998a) suggests that hiring decisions should be based on the organization’s needs, scientific research, assessment of applicant qualifications, and decisions based on these assessments. Guion additionally described the steps in hiring and placement as: identification of applicants, preliminary assessment of resumes or applications, formal assessment via tests or interviews, preliminary decision to refer or hold on file, and the final decision to hire the candidate. At each step of the process there is the possibility of rejection. Guion suggested the primary assessment step (resume or application assessment) typically consists of looking for disqualifying information. Good hiring decisions depend on knowing which selection characteristics are important and disregarding irrelevant traits (Guion).

Yet, as organizational decisions are not made in a social vacuum (Muchinsky, 2003), real-life organizations tend to be more intuitive, based on cultural values and often make hiring decisions using factors not validated by science (Guion, 1998b). In fact, Guion complained that a large part of the personnel selection literature focuses on statistical test-based predictions, when in fact many hiring decisions are made by key actors in an organization, and that more research should be done on the influence of individual or group-based judgments on hiring decisions.

Studies have shown that decision makers have stereotypes associated with an applicant's gender, age, race, disability and other social categories (Kulik, Roberson, & Perry, 2007). Furthermore, research suggests that the act of matching an applicant to a job frequently includes an awareness of the applicant's social identity (Perry, 1997). For example, Colella, DeNisi, and Varma (1998) found that when deciding to work with someone with a disability, a person's decision depended on his or her expectations about the perceived fit between the demands of the job and the disability. The effect of stereotypes on impressions can be automatic and influence a hiring decision without the person's explicit knowledge (Greenwald & Banaji, 1995; Kulik, Roberson, & Perry, 2007).

The experimental half of this dissertation focuses on the preliminary assessment of applicants, which is where quick judgments influenced by societal stereotypes, can intervene in the hiring of qualified applicants. Applicants are nothing more than names, positions and descriptions in a resume, and it is up to the person reviewing the application to fill in the gaps and make the decision whether further assessment is needed. The following review of the impression formation literature will inform us how individuals make impressions of others, and ultimately direct our focus on how the manner by which these impressions are formed can cloud our perceptions of others and lead individuals to make prejudiced hiring decisions.

### *Impression Formation and Stereotyping*

Brewer (1988) noted early theories of impression formation did not perceive individuals as having limited cognitive capacity, and presumed them to take in all available information to make a Gestalt impression of the individual. Bottom-up

approaches (e.g. Asch, 1946) – so named since they take individual pieces of information to form a whole impression – seem to overlook the influence of larger top-down forces like racial and gender identities (Steele, 2003).

It is of note that unlike bottom-up approaches that suggest individuals build up from the parts to form an overall opinion, participants in the preliminary study mentioned previously did not seem to base their hiring decision on their ratings of motivation, communication and interpersonal skills, or fit. These results fall in line with the view that individuals form impressions of employability that are not the direct result of individual building blocks. Newer theories of impression formation (e.g. Fiske & Neuberg, 1990) instead point to a more top-down approach. In particular, Fiske and Neuberg noted that category-based impressions are made before individuating information is processed. Brewer (1988) similarly suggested that people have a limited cognitive capacity and therefore will make initial impressions from category-based judgments. Of particular note, Brewer suggested that these initial automatic judgments can be influenced by factors like context and category labels and that subsequent information will be colored by the expectations set by the initial category. In light of this research on impression formation, it makes more sense that participants' evaluations regarding the applicant's motivation, fit and skills did not add up to an equal likelihood of hiring in the baseball condition as it did in the softball condition. Participants did not make their evaluations on a bottom-up approach – but instead had their decisions influenced by the categories that were activated during the interview (stereotypes of baseball, softball and women).

In their model of impression formation, Kunda and Thagard (1996) specifically stated stereotypes could particularly affect the judgment of individuals asked to assess a



person's suitability for a job. Their parallel-constraint-satisfaction theory of impression formation suggests that stereotypes and individuating information exist in a network with connections that are activated or inhibited based on the incoming information. Therefore, while characteristics like "athletic" or "motivated for the job" may have created positive connections, the node "baseball" would have created a strong negative connection with female, prompting an overall negative impression of the applicant.

Bodenhausen and Macrae (1998) echoed the theories from the impression formation literature and note that the activation of stereotypes can lead to the biased interpretation of information. Furthermore, because of limited cognitive capacity, people may inhibit the processing of incoming information after making a stereotyped categorization because it would overwhelm the individual and render him or her unable to interact with the other person. Similarly, Webster (1964) suggested that employers routinely make hiring decisions by comparing applicants to a stereotype of an ideal job candidate.

Overall, it seems that classic bottom-up theories of impression formation have been superseded with newer theories that promote the view that categories, including stereotypes, will affect the way that individuals analyze subsequent incoming information. These top-down approaches suggest that the activation of a category will cause subsequent information to be interpreted to fit the associations with this category. Additionally, some theories posit that the activation of stereotypes will also inhibit or activate a particular type of impression of the candidate. The data from the preliminary study support a top-down view, as individuals in the baseball condition clearly did not form their impression based on the individual building blocks of fit, motivation, and

skills, but seemed to make their hiring decision on other factors. These results fall in line with Kunda and Thagard's (1996) assertion that stereotypes were likely to affect people's impressions when they were asked to make predictions about a person's suitability for a job.

This brief review of the impression formation literature points to the reality that stereotypes can color our impressions of others. But, do these impressions matter? Just how will these potentially incorrect impressions we form of others negatively affect a person who is applying for a job? For this facet of the process, we turn to another oft studied relative of stereotyping – prejudice. Stereotypes are the beliefs we hold about groups. Prejudice, however, leads us down a potentially more sinister path where we prejudge the ability of others based on the stereotypes we harbor. But what is prejudice and how has it historically been defined? And, of particular concern for this dissertation, how correct are these classic views of prejudice in today's world?

#### *A Brief History of Prejudice in the Psychological Literature*

*Classic views of prejudice.* Prejudice has a long and varied past in the psychological literature. Early research on prejudice set out to demonstrate differences between the races. A 1925 article in *Psychological Bulletin* that reviewed more than 70 studies concluded, “the studies taken all together seem to indicate the mental superiority of the white race” (Garth, 1925, p. 359). Prejudice under these circumstances was a natural response to the inferiority of other peoples.

The atrocities of the Holocaust led psychologists in a new direction. The inhumanness of anti-Semitism during World War II prompted psychology to view prejudice as pathology – an individual-level phenomenon rooted in personality.

Psychologists worked toward finding evidence for the “prejudice-prone” personality (Duckitt, 1992, p. 54). Adorno, et al.’s (1950) work on the authoritarian personality was comprised of a personality dimension that measured the extent to which an individual was prone to prejudice.

The view of prejudice as personality-based fell into disfavor based on the work of Pettigrew (1959) and others, who documented the high levels of prejudice in social settings, like the American south. Pettigrew demonstrated that there was not an increased incidence of authoritarian personalities in the South, yet the South had a higher level of prejudice than the North. He suggested that the prejudice found here was not an individual-level problem but a social problem (Eberhardt & Fiske, 1996).

Allport’s classic *The Nature of Prejudice* introduced the notion that prejudice was the result of categorized thinking. Furthermore, he suggested that social categorization was elicited by context (Fiske, 1998). Allport defined prejudice as “an antipathy based upon a faulty and inflexible generalization” (1954, p. 9). In other words, prejudice is a rigid negative attitude toward members of outgroups. This definition, however, would suggest that women or other minority groups are wholly seen unfavorably. Common stereotypes, however, would suggest such is not the case – for example African Americans seen as intellectually inferior, yet athletically gifted. Clearly, a rigid antipathy is not necessarily the way that prejudice operates across many situations. Yet this definition of prejudice became and remained widely accepted in psychology (Eagly & Diekmann, 2005; Esses, Haddock & Zanna, 1993).

*Modern views of prejudice.* Allport’s definition of prejudice as rigid antipathy was challenged by recent work on “subtle” prejudice, intergroup relations and ambivalent

sexism. Work by Bobo and colleagues has shown that attitudes about Blacks by Whites in the United States have become more tolerant over time (Schuman, Steeh, Bobo, & Kryson, 1997). Dovidio and Gaertner (1977) noted that while explicit attitudes toward minorities may have improved, explicit negativity has been replaced by a more subtle, indirect form of prejudice. Eagly and Diekmann (2005) suggested that these indirect forms of modern prejudice do not necessarily fall under Allport's rubric of antipathy. Additionally, Tajfel and colleagues found that in minimal group situations, individuals favored and rewarded the ingroup, instead of punishing and depriving the outgroup (Tajfel, Billig, Bundy, & Flament, 1971). Brewer (1999) similarly argued that outgroups did not elicit negative evaluations but that they did not elicit the positive evaluations that ingroups garnered. Finally, work on ambivalent sexism demonstrated that individuals could hold benevolent sexist beliefs (Glick & Fiske, 1996; Glick, et al., 2000). Glick, Fiske, and colleagues remarked that Allport's definition of prejudice is the foundation of many theories of prejudice. Their theory of benevolent sexism, however, points out that prejudice toward women need not be hostile – sexist thoughts can be affectionate and protective yet can be used to justify women's subordinate status to men (Glick, et al., 2000). Together, these lines of research demonstrate a view of prejudice that does not resonate with Allport's "prejudice as antipathy" definition.

Not only is Allport's definition of prejudice troublesome because of its requisite "antipathy" it is also problematic with its use of "inflexible" generalizations. Allport himself wrote how discrimination allowed "a Negro to work in a kitchen but not a Jew ... a Jew but not a Negro may sit in my parlor" (1954, p. 55). This statement by Allport demonstrates a nascent interactionist view toward prejudice that exists beyond just a rigid

negative viewpoint towards a group in all situations. That is, prejudice emerges under specific instances in daily life. Current work in the social psychological and organizational literature points toward the individual effects that social identity, job roles<sup>1</sup>, and occupational contexts have on prompting prejudice in the evaluation and hiring of potential applicants.

### *Social Identity and Prejudice*

The visually and culturally salient identity groups of race and gender has been a primary focus of psychological research on stereotyping and prejudice (Fiske, 1998). In addition to being a primary focus of psychological research, these two identity groups are social categorizations that are readily used by individuals. In fact, research suggests that people tend to categorize others using a unified category that represents gender and race simultaneously (Stangor, Lynch, Duan, & Glass, 1992). The primacy of gender and race as social categorizations in everyday interactions is detailed extensively elsewhere (see Fiske, 1998; Eberhardt & Randall, 1997; Mackie, Hamilton, Susskind, & Rosselli, 1996) and will not be replicated in this review. Instead, this section will focus on the prejudicial use of social identities in the hiring process.

Bertrand and Mullainathan (2003) sent out fictitious resumes with typical White-sounding names (e.g., Emily and Greg) and similar resumes with African American sounding names (e.g., Lakisha and Jamal) to real job listings in Chicago and Boston. The results were the same across city, industry and position – those with White names received 50 percent more callbacks for interviews than did similar resumes with African American names. A similar study conducted in the lab found that Asian American names

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<sup>1</sup> Job role and position are used as interchangeable terms to refer to the title or function of employment – e.g. “manager” and “sales director.”

were evaluated highly for high-status jobs, while Hispanic and Black applicants received lower evaluations than White names (King, Madera, Hebl, Knight, & Mendoza, 2006).

In an influential study for future gender discrimination work, Goldberg (1968) demonstrated that women evaluated the work of Joan T. McKay as less competent than the work of John T. McKay. Rosen, and Jerdee (1973) replicated this study in a managerial setting and found that women were less likely to be selected for managerial positions and had lower overall ratings. These findings were particularly pronounced for managerial positions that had been construed as “demanding.”

The effects of gender and race not only reduce an applicant’s chances of getting an interview, but also can affect the way the interview is evaluated. In a classic study, Word, Zanna, and Cooper (1974) found that White interviewers sat further away from Black applicants, had shorter interviews with Blacks and produced more speech errors in the interracial interviews. The results further demonstrated that the decreased level of immediate nonverbal behaviors that Blacks received from Whites could negatively affect hiring decisions. Recent research demonstrated that an applicant with a Hispanic name and Hispanic accent was evaluated less positively, and subsequently less likely to be hired, than the same person with a White name and no accent (Purkiss, Perrewé, Gillespie, Mayes, & Ferris, 2006). Furthermore, race does not only affect hiring evaluations, but also promotions to management positions. Powell and Butterfield (2002) found that African American and Hispanic male applicants were less likely to be offered a promotion by an all White review panel, even after controlling for employee qualifications.

So far, the review of the literature on social identities and prejudice in the workplace demonstrates the negative effect on evaluations, hiring and promotions that social identities like race and gender can produce. The research reviewed above on the whole examined social identity as a singular concept. That is, it tended to view a person as only African American, only a woman, etc. In a novel study, Steele (2003) correctly claimed that people are categorizable along multiple dimensions since people tend to have multiple social identities. Steele had an Asian American female play the role of a job applicant seeking a job as a computer technician assistant. Prior to the interview, participants read an information sheet that either highlighted her Asian background – her name was listed as “Chia-Jung Gloria Tsay” and the application indicated she spoke Chinese and English – or her gender – her name was simply listed as “Gloria” and her sex was clearly indicated on the application. In line with stereotypes, participants who were subtly reminded of the applicant’s ethnicity were more likely to give the applicant a higher evaluation, more willing to hire the applicant and provide a higher level of pay than the participants who had been cued to her gender.

All of these findings point to instances where the hiring process is not as straightforward, methodical, and rational as would be ideal (Guion, 1998a). Instead, as Muchinsky (2003) suggested, the hiring process is highly susceptible to the social world around it. The research presented clearly demonstrates the unfair ways that a person’s social identity can depress evaluations toward African Americans, Hispanics and women, and occasionally also boost evaluations in the case of Asian Americans. These findings clearly highlight the harmful role prejudice can play in hiring decisions.

### *Job Roles and Prejudice*

In contrast to the research that demonstrated how different social identity could elicit prejudice in hiring decisions, Eagly and colleagues proposed a different way of conceptualizing prejudice that moves beyond strictly seeing prejudice as anti-Black, anti-women or pro-Asian. They recently confronted Allport's definition of prejudice and agree that antipathy is not a wholly accurate representation of how prejudice is enacted in everyday life (Eagly & Karau, 2002; Eagly & Diekmann, 2005). Eagly and colleagues instead conceptualized prejudice as a phenomenon that emerges at the intersection of the social roles and individual cognition (Eagly, 2004; Eagly & Diekmann, 2005; Eagly & Karau, 2002). Specifically, they suggested that prejudice arises when there is a mismatch between the stereotypes associated with a social group and the attributes of a role. For example, women are discriminated against when applying for leadership positions because the stereotype of women and the attributes of a leadership role are incongruent.

The prejudice that emerges from role incongruity is not necessarily in the form of a negative evaluation. Instead, it materializes as a less favorable evaluation of the incongruous target as compared to an individual for whom the role is not incongruous. For example, Eagly (2004) noted that an African American lawyer would be evaluated positively, but not as favorably as an evaluation for a White lawyer. Overall the prejudice that emerges from role incongruity can be described as an unfavorable attitudinal shift (Eagly & Diekmann, 2005).

Research in line with the role congruity theory of prejudice abounds. Segal, Gade, and Johnson (1993) found that gay men were at risk for prejudiced reactions in military roles where the effeminate stereotype of gay men was incongruous with the hyper-



masculine role that the military represents (Goldstein, 2001). In a review of the literature examining the role congruity theory of prejudice toward female leaders, Eagly and Karau (2002) divided findings into three general categories: 1) less favorable attitudes towards women in leader roles, 2) women have less access to leadership roles and 3) female leaders face more obstacles to success in leadership roles. These three broad categories of research all point to the way that job roles – in this case leadership roles – can lead to the emergence of prejudice toward women trying to obtain those jobs. Eagly and Karau suggested prejudice emerges for women seeking leadership roles because stereotypes depict women as communal (Eagly, 1987), and leadership as agentic, competitive, and requiring aggressive traits (Schein, 1973; 1975).

First, there is a large body of work that demonstrates that people do in fact have less favorable attitudes toward female leaders. Simmons (2001) found that as recently as 2000, people preferred to have a male boss over a female boss by a factor of more than two (48% vs. 22%). A *Harvard Business Review* survey conducted once in 1965 and again in 1985 demonstrated that views toward female executives, among executives, went from 35% of men having strongly or mildly favorable responses towards women in management in 1965 to 73% in 1985, showing that disapproval toward women in business had subsided but not disappeared (Bowman, Worthy, & Greyser, 1965; Sutton & Moore, 1985). To overcome potential self-presentation bias common in survey data, researchers also examined implicit attitudes. Rudman and Kilianski (2000) found that both men and women had negative implicit attitudes toward female authority figures.

Research also suggests that women have a more difficult time achieving leadership positions. Studies of wages demonstrate that women tend to earn less than men

for the same jobs (Bayard, Hellerstein, Neumark, & Troske, 1999) and female managers were given less authority and earned less than their male counterparts even after controlling for managerial level and tenure (Reskin & Ross, 1995). Cox and Harquail (1991) found that women were less likely to get management promotions compared to men with similar education, performance and experience. Heilman and Lyness (2006) similarly found that women who received promotions actually had higher performance ratings than men, suggesting women were held to more stringent promotion standards.

Women also have greater obstacles preventing their success in management jobs. Foschi (1996) found that participants were less likely to deem women competent and were also less likely to be influenced by decisions made by women. A study by Butler and Geis (1990) found that women in leadership roles were more likely to receive negative nonverbal affective responses and fewer positive affective responses than men in the same situation. Along with being confident, leaders are expected to be confident and assertive (Eagly & Karau, 2002), yet assertive women, as measured by less tentativeness in their speech, are deemed less influential by men (Carli, 1990). Furthermore, even when researchers described women managers as successful, participants evaluated these women as more hostile and less rational than successful male managers (Heilman, Block, & Martell, 1995).

This review of the literature on women and leadership roles demonstrates the prejudices women face in obtaining leadership positions. The extensive body of work conducted demonstrates how the mismatch between an individual's group membership stereotypes and attributes of the job role they are trying to attain, or are being evaluated in, will elicit prejudiced evaluations. The role congruity theory of prejudice, especially as

it pertains toward female leaders, takes the typical view of prejudice in a new direction. Specifically, it moves it beyond the view as a monolithic attitude, toward a situationally elicited attitude. Though as Eagly and Diekmann (2005) pointed out, this does not mean that prejudice will haphazardly emerge in different situations. As it pertains to role congruity theory, prejudice can be predicted because of the requirements of roles. The following section will further expand our view of prejudice by moving it closer to a more holistic view that also sees prejudice as contextually based.

### *Occupational Context and Prejudice*

Organizations and their internal processes are susceptible to the pressures and forces of their environment and context (Scott, 2003). Research by Guthrie and Olian (1991) demonstrated that contextual factors affect the organization's decision to favor one candidate over another. Kanter (1977) argued that organizations engage in "homosocial reproduction" – that is hiring and promoting individuals that preserve the gender, race and other characteristics of those already in the organizations. To that end, Konrad and Pfeffer (1991) found that college administrative positions were more likely to be filled by women or minorities if a woman or a minority previously held the position. A longitudinal study similarly found that California state agencies with female leaders had higher levels of gender integration after a six-year period (Baron, Mittman, & Newman, 1991). Cohen, Broschak, and Haveman (1998) additionally found that women were more likely to be hired and promoted in positions with a higher than average proportion of women.

In an important review paper on the role of contextual factors on selection decisions, Perry, Davis-Blake, and Kulik (1994) suggested that organizational context

determines whether stereotypes are activated during a hiring decision. A major determination in their view on whether gender (and I surmise race will operate similarly) becomes a factor in a hiring decision depends on the current job's demographic composition. Furthermore, they suggest the composition of the applicant pool also will determine whether an applicant's gender becomes a factor in hiring. As an interesting note, Perry and colleagues' review of the effects of context on selection decisions is surprisingly devoid of the word prejudice. While the authors may have preferred to remain outside the scope of determining whether the inclusion of gender in hiring decisions was explicit or implicit, it is important to note that whether or not gender became an explicit or implicit factor in the hiring process, it was, nevertheless, an instance of prejudice; the applicant's qualifications were potentially clouded by gender stereotypes.

Perry, Davis-Blake, and Kulik (1994) called for increased research on the effect of context on hiring decisions, as it has been a relatively understudied phenomenon. Recently, Diekmann and Hirnisey (2007) found that older workers were penalized when they applied for jobs in occupational contexts that were rapidly growing, innovative and constantly changing. These results point to factors about the organization's context can affect the likelihood of women and minorities encountering resistance (or assistance) into particular jobs.

### *Present Research*

Individually Eagly and colleague's conceptualization of roles and prejudice; Perry and colleague's propositions on contexts and selection decisions; and the body of social psychological work on the role of identity stereotypes on hiring and evaluations,

expanded the way we think about prejudice in hiring decisions. Yet these factors do not occur in a social vacuum. In fact, Eagly and Karau (2002) themselves said the need for research examining occupational context variation and how it affects hiring evaluation and selection, a call also raised by Perry and colleagues (1994). To that end, this dissertation will add to work on how occupational contexts can unfairly influence hiring decisions.

The present research builds on previous work, suggests that prejudice is more complex than previous classical views and integrates modern conceptualizations of the effects of roles, contexts and identity, to present a unified framework of the factors that can interact to influence applicant evaluations. Prejudice in the workplace is the result of a social calculus that relies on stereotypes about a social group, attributes of a role, but also heavily depends on awareness of the context. Fiorina's demise at HP may not necessarily have been the result of being a female leader, for we would expect Jung to similarly experience negativity in her role as the CEO of Avon. Instead Fiorina possibly encountered resistance and prejudice because she was a female leader in the computer industry. Jung, however, is a female leader in the cosmetics industry. The present research contends that the emergence of prejudice in the workplace is based on the alignment of social identity, job role and occupational context.

Prejudice in organizational hiring decisions is viewed as a sensemaking process of the stereotypes associated with an applicant's social identity, the role for which he or she is applying and the organizational context in which this job occurs. For the sake of this dissertation, social identity refers to categories of people, which may or may not have biological roots, which are substantially defined by culture and are used by people to

classify themselves and others. Job role refers to the title or type of position the individual is seeking (e.g., manager, CEO, administrative assistant). These roles are defined by the organization, and represent the division of labor and hierarchy within the organization. Finally, organizational context refers to the vocational category, business field or trade defined by the skills and knowledge necessary in that line of work and the outcome produced by the organization (e.g. finance, medical, design, computer technology).

The current studies aim to demonstrate that prejudice in job hiring decisions is the result of making sense of these three distinct factors – the applicant, the job and the field. Prejudice need not be an antipathy, as Allport suggested, but instead is the misalignment of socially-influenced schemas in the mind of the person making a judgment about another person. Put more broadly, prejudice is not necessarily having a negative evaluation of all women or minorities, but instead, is more nuanced. Prejudice is a more dynamic process in which different factors are considered and lead to an outcome. A sexist may not want a female manager, but would be perfectly content with a female secretary. Every Saturday across college campuses Black athletes, nearly 50% of Division I-A college football players, take the field (NCAA, 2006), yet only 4% of their coaches are Black (Wieberg, 2006). Prejudice is not an all-or-nothing phenomenon as Allport suggested, nor is it just the outcome of social group membership and role, as Eagly and colleagues present, or context, as the work of Perry and colleagues demonstrates. Instead, at least as it pertains to the hiring process, prejudice is the unique outcome of the sensemaking of the applicant's social group membership, job role and organizational context by the hirer.

This multi-method examination of prejudice in the job hiring process should illuminate the way that prejudice is the product of the interaction of an individual's socially derived schemas, and the context in which they find themselves. The following chapters will demonstrate this effect by investigating the job attainment of women in different roles and contexts in real-world data and also investigate the effect in the laboratory by experimentally manipulating identity, role and context to demonstrate the causal nature of these factors.

### Chapter 3

#### **Archival and Qualitative Analysis of the Effects of Social Identity, Job Role, and Occupational Context on Job Attainment (Study 1a & 1b)**

To begin the investigation of the effects of job role, context, and social identity on hiring, the first set of studies examined how these factors affected job attainment. Are there instances where certain sectors or particular job roles make it more difficult for a minority group member to obtain a job? Ideally, to answer this question we would examine a large number of similar organizations that, within them have, wide and varied divisions and similar leadership role arrangements. Universities are large organizations with different contexts within their walls, which, despite their numerous divisions are organized in similar leadership hierarchies. A university, with its wide assortment of schools, leadership positions (composed of deans and assistant deans), and organizational similarity to hundreds of universities throughout the United States, provided a unique and opportune sample with which to examine the interaction of social identity, context and job role on the job attainment of female faculty.

Colleges and universities across the country are considered hotbeds of liberal thought and idealism. An article in the *Washington Post* stated, “College campuses are widely viewed as liberal bastions with towns such as Berkeley, Cambridge, and Madison used as shorthand for left-wing communities of faculty and students” (Kurtz, 2005, Attention young liberals section, ¶ 1). Research suggests that acceptance of stereotyping



is more prevalent among those with more conservative gender-role values and higher scores on the right-wing authoritarian scale (Cater, Hall, Carney, & Rosip, 2006). It may therefore come as a surprise that the first study specifically looked for evidence of prejudice in educational institutions. Yet, evidence of prejudice in these “bastions of liberalism,” speaks to the strength of the effect in organizations at large. Any results found in a university setting are bound to be stronger within other, more conservative, organizations.

### Study 1a

Study 1a examined how social identity (gender), context (school within a university) and role (dean or assistant dean) interact, allowing prejudice to unfairly affect the job attainment of female faculty. First, I examined whether men and women are represented proportionately (relative to the number in the field) in leadership positions. Given Eagly and colleagues’ research (Eagly & Diekmann, 2005; Eagly, 2004; Eagly & Karau, 2002), I predicted women would not be represented proportionately in leadership roles. Second, among those in leadership positions, I examined whether men and women are represented differently across those leadership roles (i.e. head dean versus assistant dean). I predicted that women would be less likely to attain top dean roles than they are assistant dean roles, because of the tendency to see women at work in subordinate roles (Eagly & Karau, 2002). Third, among those in leadership positions, I investigated whether men and women were represented differently across divisions of the university. In line with Perry and colleagues’ propositions (1994), I predicted women would be more likely to attain leadership positions in contexts with a large number of female faculty. Finally, in an exploratory test of my theory of the interactive nature of prejudice in hiring

decisions, I sought to determine whether there was a 3-way interaction among gender, role, and context in the attainment of dean positions by female faculty. The specific hypotheses were:

*Hypothesis 1 (Gender):* Women are underrepresented in leadership positions.

*Hypothesis 2 (Gender by Role):* Women will be more likely to be underrepresented in the top dean role than in the assistant dean role.

*Hypothesis 3 (Gender by Context):* The underrepresentation of male and female deans in a context will vary as a function of a gender's typicality in that field – with typical female fields demonstrating an overrepresentation of women, and typical male fields having an underrepresentation of women.

*Hypothesis 4 (Gender by Role by Context):* Job attainment of female faculty into dean roles will vary as a function of the interaction of gender, role and context.

#### *Method*

The *U.S. News and World Report 2006* ranking of the top US research universities was used to select the top 100 universities whose faculty and deans were examined in this archival study. The gender of the top 100 universities' deans was obtained from the universities' web sites. The gender of deans and assistant deans was examined from 10 types of schools/divisions, comprising nine general fields: colleges and graduate schools (combined into the field of arts and sciences), schools of engineering, business and management, law, medicine, nursing, education, social work, and public health.

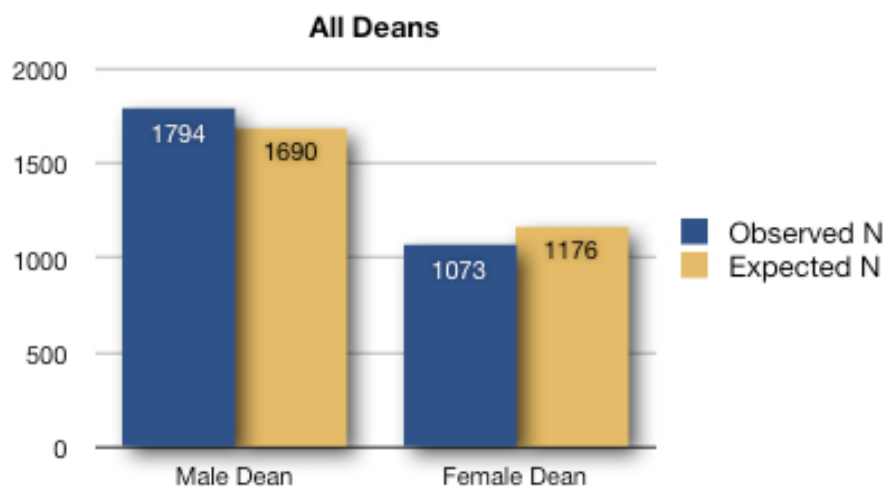
*Data.* The gender, type of dean, and school were collected during August 2007. The distribution of male and female deans varied widely across the nine general fields. There were 673 deans and 2,194 assistant deans for a total of 2,867 deans from the top

100 universities. Women comprised 36.2 percent of all deans; of these, women were 39.7 percent of assistant deans, but only 29.9 percent of top deans (see Appendix B for a full breakdown). The base rate of tenured female faculty in the different fields was taken into account for all analyses (NCES, 2004; see Appendix C).

### *Results*

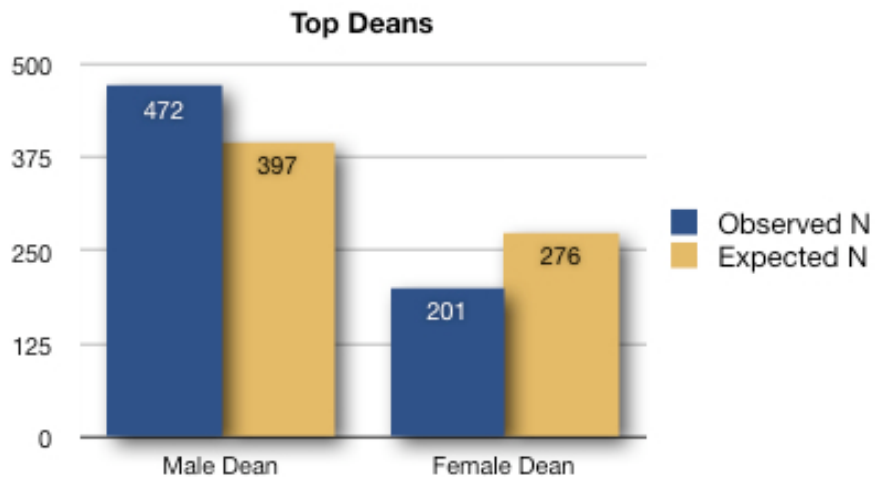
To test hypotheses 1 through 3, separate chi-square goodness-of-fit tests were conducted. The chi-square goodness of fit test compared the expected number of male and female deans with the observed number of deans. Hypothesis 1 (gender) predicted that women would not be proportionately represented in leadership positions. To test this hypothesis, the expected number of deans was calculated based on the average percentage of tenured female faculty across the different schools. A chi-square test of overall dean by gender found that women were underrepresented in leadership positions, with 103 fewer female deans (top and assistant deans combined) than expected,  $\chi^2(1) = 5.39, p < .001$ . (see Figure 3.1).

**Figure 3.1** – Number of Male and Female Deans

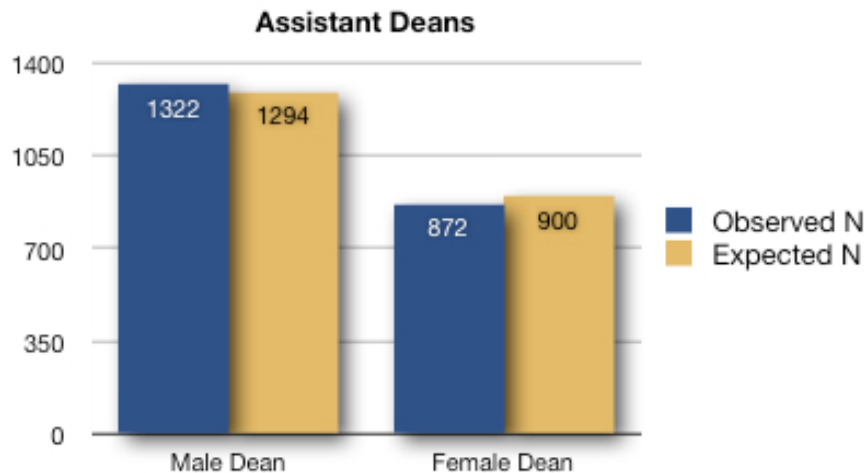


Hypothesis 2 (gender by role) predicted that women have a harder time obtaining top dean positions relative to assistant dean roles. The chi-square test for top dean by gender found that there were 75 fewer female top deans than expected,  $\chi^2(1) = 34.67$ ,  $p < .001$  (see Figure 3.2). In the assistant dean role, women were overrepresented, with 28 more female assistant deans than expected,  $\chi^2(1) = 1.5$ , a non-significant difference (see Figure 3.3). These results provide support for the Gender by Role hypothesis, as female deans were underrepresented in the top dean position.

**Figure 3.2 – Number of Male and Female Top Deans**



**Figure 3.3 – Number of Male and Female Assistant Deans**



To examine Hypothesis 3 (gender by context), nine different chi-square tests were run to test whether women had a tougher time achieving any dean role in different fields. Overall, there were more female deans (top and assistant) than expected in the arts and sciences ( $\chi^2(1) = 35.74, p < .001$ ), engineering ( $\chi^2(1) = 47.54, p < .001$ ), business ( $\chi^2(1) = 7.83, p < .001$ ), and medicine ( $\chi^2(1) = 88.7, p < .001$ ). There were more male deans than expected in nursing ( $\chi^2(1) = 8.09, p < .001$ ).

A hierarchical loglinear analysis was used to test the three-way interaction of gender, role and occupational context. A loglinear analysis was necessary as these variables are categorical and a chi-square test can only analyze, at most, a two-way interaction of categorical variables (Agresti, 2002; Howitt & Cramer, 2005). The three-way loglinear analysis produced a final model that retained all effects. The likelihood ratio of this model was  $\chi^2(0) = 0, p = 1$ . This indicates that the highest-order interaction (the gender  $\times$  job role  $\times$  occupational context interaction) was significant  $\chi^2(8) = 20.34, p < .001$ , providing empirical support for Hypothesis 4 (gender by role by context).

To break down the three-way interaction, chi-square goodness of fit tests of type of dean by gender by field were conducted. For top deans, the analyses revealed that women were underrepresented, based on female faculty tenure rates in those fields, in business, with 15 fewer female top deans than expected,  $\chi^2(1) = 123.9, p < .001$ , law, nearly eight fewer female top deans than expected,  $\chi^2(1) = 4.4, p < .05$  and public health, with five fewer female top deans than expected,  $\chi^2(1) = 4.79, p < .05$ , but not in the arts and sciences, engineering, medicine, nursing, education or social work. Women were overrepresented in assistant dean roles in the arts and sciences, with 78 more female assistant deans than expected,  $\chi^2(1) = 47.77, p < .001$ , engineering, nearly 27 more than

expected,  $\chi^2(1) = 57.18$ ,  $p < .001$ , law, with 18 more than expected,  $\chi^2(1) = 7.96$ ,  $p < .01$ , medicine, nearly 82 more than expected,  $\chi^2(1) = 98.85$ ,  $p < .001$ , and social work, with nearly nine more female deans than expected,  $\chi^2(1) = 4.63$ ,  $p < .05$ . There were seven more male assistant deans than expected in nursing, a statistically significant difference  $\chi^2(1) = 15.95$ ,  $p < .001$ . The number of female assistant deans in business, education and public health did not significantly differ from the expected number. Overall, these results suggest a significant interaction of gender, job role and occupational context on the number of females in dean roles.

These initial analyses proceeded with the assumption that there was no particular variable of interest, and instead examined only associations among the three variables. Ultimately, the crux of this study is to determine whether certain factors impede the job attainment of minorities. To this end, the data can be analyzed using binary logistic regression to determine whether if job role and field can predict the gender of the dean. With the base rate percentage of male/female tenured faculty in the field used as a covariate, the regression was performed in two blocks; the first block added dean and context as variables, and the second block added the interaction of dean and context. The initial block had a Model  $\chi^2(9) = 2368.55$ ,  $p < .001$ . Block 1 also indicated that being top dean was a significant predictor of being male,  $\beta = -.49$ ,  $\exp(b) = .61$  (CI = .45, .84),  $p < .001$ . Relative to education (the most gender balanced of the fields), being in nursing,  $\beta = 8.52$ ,  $\exp(b) = 5001.34$  (CI = 2310.51, 10825.92) or social work,  $\beta = 1.25$ ,  $\exp(b) = 3.5$  (CI = 2.09, 5.85), were significant predictors of being female. Being in business was a significant predictor of being male,  $\beta = -.63$ ,  $\exp(b) = .53$  (CI = .3, .95),  $p < .05$ .

Block 2 introduced the interaction term. This addition produced a model with  $\chi^2(1) = 15.95$ ,  $p < .001$  with a Nagelkerke  $R^2 = .77$ , that accurately predicted 89% of cases. Upon entering this term, dean role and business fell out of significance, but nursing,  $\beta = 8.15$ ,  $\exp(b) = 3473.22$  (CI = 1562.11, 7722.38), and social work,  $\beta = 1.67$ ,  $\exp(b) = 5.34$  (CI = 2.83, 10.05), remained significant predictors of being female. Block 2 yielded numerous significant interactions. The interaction of top dean and engineering was found to be a significant predictor of being male,  $\beta = -3.31$ ,  $\exp(b) = .037$  (CI = .002, .6),  $p < .05$ , as was being top dean in law,  $\beta = -1.65$ ,  $\exp(b) = .19$  (CI = .05, .74),  $p < .05$  and top dean in social work.  $\beta = -1.54$ ,  $\exp(b) = .21$  (CI = .07, .68),  $p < .001$ .

### *Discussion*

The results presented some unexpected patterns in the data, but confirmed that the interaction of social identity, job role and occupational context affected job attainment. Hypothesis 1 was supported, as the data demonstrated women were underrepresented in leadership roles, based on the percentage of female tenured faculty. Hypothesis 2 was fully supported, as women were underrepresented in top dean roles. These results echo assertions by Eagly and colleagues (Eagly, 2004; Eagly & Karau, 2002) that women are underrepresented in leadership positions. Hypothesis 3 was not supported as women were overrepresented in the fields of business, engineering, medicine and the arts and sciences, while men were overrepresented in nursing.

I selected universities because I expected there to be less prejudice in these typically liberal organizations. Finding any evidence of prejudice toward female leaders in these liberal organizations would suggest a greater degree of prejudice in more conservative ones. Yet, these results presented mixed findings. While women were

underrepresented in the top-most administrative positions, they were overrepresented in fields such as engineering and, similarly, men were overrepresented in nursing. These findings do not point to an absence of prejudice, but instead present conflicting prejudices; in fields such as engineering, men were less likely to obtain dean roles in favor of women – a historically underrepresented minority in university settings – while women overall had a difficult time attaining the top dean role. These conflicting directions of prejudice suggest that universities in this country are not devoid of prejudice, but instead echo some of the prejudices of the world outside its walls. However, in trying to right historical wrongs, new wrongs may be introduced.

The cornerstone of this study was not to demonstrate that gender interacted with context or that gender interacted with job roles, but that a unique three-way interaction would affect the job attainment of women. To this end, Hypothesis 4 was fully supported. A loglinear analysis demonstrated that the three-way interaction model was significant. A breakdown of this model showed that women were at a disadvantage for attaining a top dean position in schools of business, law and public health. Women were overrepresented in assistant dean roles in five of the nine schools, including engineering. Interestingly, men were overrepresented in the assistant dean role in nursing schools.

While the results for the representation of women in top dean positions in business and law were in line with hypotheses, the overrepresentation of women in engineering and overrepresentation of men in nursing were unexpected. Both were overrepresented by a factor of three, with men accounting for 8.3% of assistant dean roles, when they are only 2.7% of the nursing school faculty, and women occupying 17.8% of assistant dean roles, when they are only 5.9% of the engineering faculty.



However, recent developments at schools of engineering and nursing may explain the overrepresentation effect. In an analysis of male nurses, Floge and Merrill (1986) suggest that male nurses were highly visible throughout the organization and that they were routinely assigned to more leadership roles than their female counterparts. Recently the Oregon Center for Nursing initiated an advertising campaign that asked, “Are you man enough?” attempting to attract men to the profession (Larkin, 2007). The University of Washington’s School of Nursing has an entire site devoted to promoting men in nursing. Additionally the American Nursing Association (ANA) recently created an award designed to honor the contributions of men to nursing (ANA, 2007). It is possible that there were more men in the assistant dean roles at these schools because of tokenism. They serve as visible markers of the school’s interest in promoting men in nursing.

Similarly, the sciences and engineering came under scrutiny for the absence of large numbers of female faculty and students. In response, schools launched self studies to examine and improve the visibility of women in science and engineering (ADVANCE, 2002). The University of Michigan created the Women in Science and Engineering (WISE) program to increase the number of women pursuing careers in the sciences and engineering (WISE, 2007). Harvard University and the Massachusetts Institute of Technology similarly developed task forces to assess the state of female faculty in the sciences and engineering, and to suggest ways to reduce barriers for female faculty (Harvard, 2005; MIT, 1999). It is plausible that women are overrepresented at the assistant dean level to heighten the visibility of female faculty. Of particular note, while men and women were overrepresented in assistant dean roles in nursing and engineering,

they were accurately represented in the top dean roles, suggesting tokenism does not necessarily push the minority faculty to the top position.

The binary regression provided perhaps the most fascinating results of this study. After taking base rates into account, the binary regression demonstrated it was possible to significantly predict the gender of a dean based on his or her role, field, or the interaction of the two. Simply knowing a person was a top dean or in a school of business significantly predicted gender as male, even when taking the base rates into consideration. When looking at the model that includes interactions, being a top dean in engineering or a top dean in law predicted being male, above and beyond what the base rates alone would predict. The model made predictions that were accurate 89% of the time.

Overall, the results of this study demonstrate that factors beyond base rates were able to influence the distribution of male and female deans across different fields and roles. While women were overrepresented in dean roles in unexpected fields like engineering, they remained underrepresented in top leadership positions. Further analysis demonstrated that the overrepresentation of women in assistant roles, was met with underrepresentation in the top positions of fields like business, engineering and law. It is of particular note that this effect was not limited to females in general, but instead to the minority in a field. Just as women are a minority in business, and had a difficult time attaining the top dean position in that field, men had an equally difficult time attaining the top position in nursing, where they are the minority.

While this study cannot definitively pinpoint prejudice as the cause of the skewed distribution of male and female deans across the different schools, it is telling that the

underrepresentation of women happened in fields such as business and engineering, which are stereotypically seen as masculine (Koberg & Chusmir, 1991). This study serves as a crucial first step in validating my hypothesis that prejudice in organizational settings emerges from the interaction of social identity, job role and context. Study 1a demonstrated that the effect of prejudice as an interaction could be detected in complex data obtained from real-world settings. The studies that follow further refine these findings. Study 1b seeks to show that female deans have more extensive qualifications than male deans, strongly suggesting that women have to be more qualified than their male counterparts to obtain the same job. This serves as an important piece of evidence that would point to the results of Study 1a as the result of prejudice. With Study 1a's success in real-world settings, Studies 2a and 2b set out to experimentally demonstrate how the interaction of social identity, job role and occupational context lead to prejudicial evaluations of job candidates.

### Study 1b

Study 1a presented the job attainment of women in different roles and contexts to suggest that prejudice unfairly influenced the positions they obtained. To substantiate that prejudice affected the job attainment of female faculty, Study 1b examined the credentials of female faculty who made it to the position of head dean, and compared them to qualifications of their male counterparts as secondary analysis of the situation. Previous work has shown that women earn less than men with comparable qualifications (Krefting, 2003), suggesting that a woman has to possess even greater qualifications to have equitable pay. Along those lines, I predicted that women who rose to the top

position of dean needed better qualifications to surpass the stereotypes and obstacles in their paths, and would, therefore, be more qualified than male deans.

The deans' vitae were compared on criteria determined by their contents and consultation with the literature on academic administrator selection. Research into dean selection suggests that in-depth personnel reviews identify specifics including research or publication activity and the level of faculty involvement within the university as frequent criteria used in the process (Mangieri & Arnn, 1984; Maghroori & Powers, 2004). Heald (1982) also suggests that commitment to teaching, research, service and recognition are deemed important for dean selection. Twombly's (1992) case study of three schools' dean selection process suggests that the ability to secure research funds is also a skill preferred in a candidate. As a validation of including publications as a criterion, an empirical profile of the nation's law school deans included a list of their publications (Bhandari, Cafardi, & Marlin, 1998). Based on the content of the vitae and the literature on dean selection the criteria for this study were number of publications, presentations, awards, grants, teaching experience, committee stewardship and membership.

*Hypothesis 5:* Female deans will be better qualified as demonstrated by a greater number of publications, awards, and committee memberships, as well as more teaching experience and committee stewardship than their male counterparts.

#### *Method*

The vitae of top deans from the least gender proportionate schools in Study 1a – business and law – were collected from the internet or acquired through electronic solicitation. To eliminate coder bias, names and gendered pronouns were stripped from the vitae. A coder then counted the number of publications, presentations, committee membership and leadership positions, awards, grants, and teaching information.

*Business school sample.* Overall, 40 of 93 (43%) dean's vitae were submitted or collected for analysis. Of the nine female business school deans, four vitae (44%) were submitted or collected for analysis; Thirty-six of 84 (43%) male business school deans' vitae were submitted or collected. The average PhD granting year for female deans was 1985.5, and ranged from 1981 to 1991. These four vitae were compared with the vitae of the 12 deans who received their PhDs between 1981 and 1991. The average PhD granting year for the pool of male deans was 1985.1, and ranged from 1981 to 1990.

*Law school sample.* Overall, 30 of 64 (47%) of law school deans' vitae were submitted or collected. Of the 11 female deans of law school, six (55%) vitae were submitted or collected from the internet; Twenty-four of 53 (45%) of male deans submitted their vitae or were collected from the internet. The average year that female deans reported receiving their JD was 1979 and ranged from 1972 to 1987. The six female deans' vitae were compared with the vitae of the 17 male deans who received their JD between 1972 and 1987. On average male deans from this pool received their JD in 1980.

### *Results*

Because of the small sample sizes, the results from this study are presented as informative trends but should not be considered statistically conclusive. Statistical tests are used as guides for the analysis, but alpha levels are not reported. The analysis for business school deans examined number of refereed publications, number of grants, the dollar amount of those grants, number of presentations, committee memberships and chairs, as well as number of courses taught. The analysis for law school deans was

similar but did not include grants, as they were rarely noted on the vitae. For these vitae, peer-reviewed publications referred to both journal articles and law review articles.

*Business school deans.* The vitae of 16 business school deans were examined; of these, 12 were from male deans (75%) and four by female deans (25%). To quantitatively compare the vitae, independent samples t-tests were used to compare male and female deans' vitae. Because of the small n, equal variances were not assumed. Comparisons of publications, grants, presentations and committee participation revealed no significant results. Female deans, however, had fewer honors than their male counterparts,  $t(11.97) = 2.48$  ( $M = 6$ ,  $SD = 2.7$  vs.  $M = 13$ ,  $SD = 7.85$ ). To protect against the effect of strong outliers, the data were also tested using the Mann-Whitney test, a nonparametric test; this test is recommended when dealing with non-normally distributed data (Field, 2005). This analysis found no significant differences between the vitae of male and female deans.

Not all vitae contained complete information. Of the eight different pieces of information collected (journal articles, presentations, awards, grants received, grant amounts, committee stewardship, committee membership and teaching experience), three of the four female deans included information for all the categories, while only 2 of 12 (17%) men did. All deans, regardless of gender, included a list of journal articles; most deans included information about presentations (100% of women, 75% of men) and honors (100% of women, 83% of men). Differences were readily apparent in the other categories. All four female deans reported the number of grants they had received and three of them listed the amount of their grants (for a reported median of \$496,122). Among the men, however, 7 of 12 (58%) reported receiving grants. The median for these grants, however was much higher at \$1,201,800. In fact, of the five grant amounts listed,

four of them were more than half a million dollars, and three of them exceeded \$1 million, in contrast to only one female having listed grants in excess of \$500,000 dollars. Similarly, all female deans reported the number of committee memberships and chairs, as well as their teaching experience. Only 42% of men reported their committee membership or stewardship; half of the men reported their teaching experience.

*Law school deans.* The vitae of 23 law school deans were analyzed; seventeen of the vitae were from male deans (73.9%) and six from females (26.1%). Quantitative analysis of the vitae using the Mann-Whitney test found no significant differences between the men and women on presentations, teaching and committee participation. Male deans had more publications than female deans,  $U=13.5$  ( $Mdn = 24$  vs. 10), but female deans reported more awards than male deans,  $U=0$  ( $Mdn = 10.5$  vs. 5).

An examination of the types of information law deans chose to provide, demonstrated similar trends to business school deans. Of the seven dimensions measured for law school vitae, 50% of the female dean vitae included all items, compared to only 12% of men. Similar to business school deans, all law school deans included a list of publications. All female deans and 75% of male deans included a list of journal articles, all female deans and 76.5% of men listed book chapters in their vitae and, similarly, all female deans and 71% of men listed presentations. Overall, female deans were more likely to list information from the selected criteria than were men. Women were more likely to list teaching experience (83% vs. 47%), awards (67% vs. 41%), and committee memberships (67% vs. 47%). The percentage of deans who reported committee stewardship were similar (50 vs. 47%).

## *Discussion*

These results present an interesting picture of the attainment of male and female candidates for deanship. Overall, male and female deans seemed equally qualified for the role of dean at their respective institutions. Men and women had very similar qualifications. Yet, an examination of the vitae's overall content demonstrated that men and women chose to include different amounts of information. Therefore, while women were not overqualified compared to men in terms of median number of publications, honors and the other dimensions, female deans were likely to include more information in their vitae.

The data provided mixed support for Hypothesis 5. While female deans were not over- or under-qualified compared to their male counterparts – as Hypothesis 5 was explicitly testing – female deans were inclined to provide more information regarding their qualifications. I hypothesize this tactic was aimed to fully demonstrate the females' qualifications for the job by including a more complete picture of their professional experience. For example, female business school deans were more likely to list the amount of the grants they received regardless of the amount, whereas men seemed to list it only when it a significant sum. Furthermore, women listed not only their ability to raise money, but presented a more complete picture of themselves by more often including their teaching experience and university service. I speculate women were presenting themselves as thoroughly as possible to demonstrate their qualifications for the job. Male deans, on the other hand, provided information on key qualifications such as publications and presentations, but were less likely to show their contributions in other areas.



Therefore, while women and men did not differ in their reported qualifications, women were more likely to report more qualifications than men.

Together, Study 1a and 1b portray an academic landscape where women seem to have a harder time entering certain fields, such as business and law, and demonstrate some of the ways women try to gain access to those fields. The analysis of vitae from women who achieved dean roles in those fields suggests that, while women did not have to report more publications or teaching experience than men, they did seem compelled to report a more complete picture of their qualifications. More research is required to fully examine the reasons women seemed to present a more information.

Study 1, as a whole, demonstrated that the attainment of dean roles by women is subject to the interaction of identity, role and context. Overall, women had a more difficult time attaining top leadership roles than base rates would suggest, solidified by women's seemingly different strategy for presenting themselves in their vitae. Studies 2a and 2b continue examining the interaction of identity, role and context by experimentally manipulating these factors to demonstrate the causal nature of the variables.

## Chapter 4

### **Experimental Studies of the Effects of Social Identity, Job Role and Occupational Context on Hiring Decisions (Study 2a & 2b)**

Study 2a and 2b were designed to reduce the problems associated with archival research and experimentally manipulate social identity, job role, and organizational context. These experiments sought to demonstrate the causal effect of the interaction of these three factors on the evaluation of potential hires. Together, Study 2a and Study 2b aimed to demonstrate the causal and interactive nature of these three factors on hiring decisions, regardless of an applicant's objective qualifications. This study served two purposes: it investigated whether unilateral prejudice was still a factor in evaluating job candidates, and whether the interaction of identity, role and context could unduly affect an applicant's evaluation. Dovidio and Gaertner's (2000) work on the decline of aversive racism and the presence of a three-way interaction in Study 1a led to hypotheses that test for main effects of gender or race on hiring, as well as a three-way interaction of identity, job role, and context.

*Hypothesis 6 (Unilateral Prejudice):* An applicant's evaluation, salary, or likelihood of hire will differ based solely on his or her gender or race.

*Hypothesis 7 (Interactive Prejudice):* An applicant's evaluation, salary, and likelihood of hire will depend on the three-way interaction of social identity, job role, and context.

Study 2a and 2b are methodologically the same, but investigated different identities, roles and contexts to demonstrate the applicability of the findings to a wider number of situations. Both used the Goldberg paradigm, named after Phil Goldberg's

(1968) studies, where bias against women was measured by analyzing ratings of identical articles labeled with either a man or woman's name. Along those lines, participants in the following studies evaluated standardized resumes with different names.

### Study 2a

Study 2a examined how the interaction of gender with manager and assistant positions and financial and educational contexts could unduly affect hiring evaluations. Past research has shown that women are stereotyped to be less successful in top leadership positions (Eagly & Karau, 2002). Additionally, a study by Glick, Wilk and Perreault (1995) suggested jobs in the education sector are rated as more feminine in nature, while Morgan, Schor, and Martin (1993) found that men advanced faster in the financial sector. This study aimed to show that an applicant's likelihood of being hired into a position was the result of the interaction of social identity, job role and context.

### *Method*

*Participants.* Two hundred American undergraduate students at a large Midwest public university were recruited to participate in the study. Seventy-two (36%) of participants were male, 128 (64%) were female. Participants were young, as the subjects were recruited from the introductory psychology subject pool ( $M = 18.82$ ,  $SD = 2.18$ ). The majority of participants identified as European American/White (78%). Asian Americans comprised 9.5% of the sample, with African Americans and Latinos totaling 2% and 1% of the sample, respectively. The remaining participants identified as Multiracial (5.5%) or Other (4%).

*Procedure.* Participants completed the study online, and following the Goldberg paradigm, were informed of the type of job the applicant was applying for and a job

description, along with identical resumes with either a female or male name. The job types were either a manager or an assistant role for an accounting firm or educational organization (see Appendix D for the job descriptions and Appendix E for the resumes). Following each resume, participants evaluated the candidate on 10 randomized dimensions using a Likert-type scale. The dimensions included quality of resume, strength of previous experience, degree of the applicant's fit with the job they are seeking and others (see Appendix F for the questionnaire). The reliability of this scale was high,  $\alpha = .93$ . Participants also indicated what they believed the applicant's salary should be, the likelihood of hiring and overall impression of the candidate on a Likert-type scale.

*Design.* This study used a 2 (social group membership: male v. female) x 2 (job role: manager vs. assistant) x 2 (organizational context: accounting vs. education) design.

### *Results*

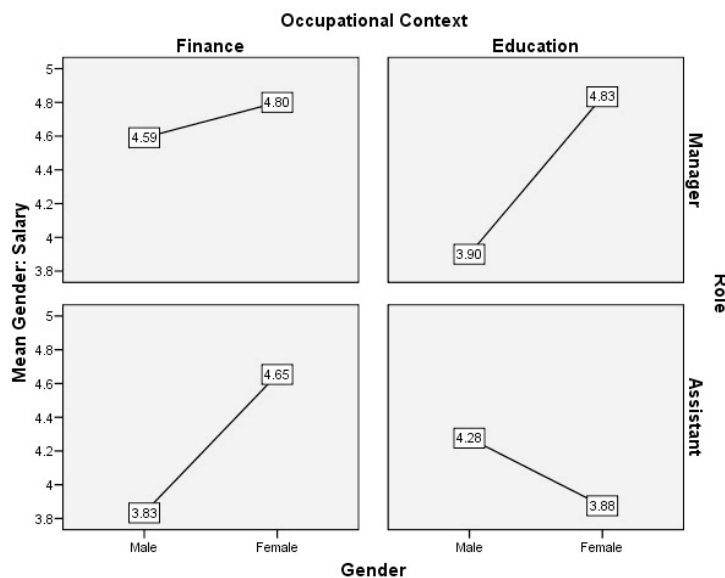
A three-way ANOVA was used to test hypotheses 6 and 7. Hypothesis 6 (Unilateral Prejudice) stated that there would be evidence of unmediated sexism against female applicants. The hypothesis was not supported as there were no significant main effect for gender on salary, likelihood of hire, overall impression or on the hiring scale ( $F(1, 192) = 3.3$ ;  $F(1,192) = .38$ ;  $F(1, 192) = 1.27$ ;  $F(1, 192) = 1.01$ ; all  $p = \text{n.s.}$ ). Hypothesis 7 predicted that the interaction of identity, role and context would unfairly influence applicant evaluations. There was a significant interaction effect among gender, job role, and occupational context on the question of what the applicant's salary should be  $F(1, 192) = 6.46, p=.01$ .

To breakdown the three-way interaction, the conditions were recoded into eight groups and a univariate ANOVA was run. The test found that the factor group had a

significant effect on the suggested starting salary of applicants,  $F(7, 192) = 2.571$ ,  $p = .015$ . Post-hoc pairwise comparisons of the marginal means found significant differences between male managers ( $M = 4.59$ ,  $SD = 1.5$ ) and assistants ( $M = 3.83$ ,  $SD = 1.29$ ) in finance (mean difference of .76,  $p = .04$ ); female managers in finance ( $M = 4.8$ ,  $SD = 1.44$ ) and male managers in education ( $M = 3.9$ ,  $SD = 1.07$ , md of .9,  $p = .03$ ); female managers ( $M = 4.83$ ,  $SD = 1.47$ ) and assistants ( $M = 3.88$ ,  $SD = 1.12$ ) in education (md of .96,  $p = .01$ ); and female assistants in finance ( $M = 4.65$ ,  $SD = 1.44$ ) and education ( $M = 3.88$ ,  $SD = 1.12$ , md of .79,  $p = .04$ ), where a mean difference of 1 is equal to \$5,000. As seen in Figure 4.1, male managers in education and assistants in finance were offered significantly less than their female counterparts.

A contrast was conducted to test whether the unexpected low salary for female assistants in education differed significantly from the other female conditions. This contrast found that this condition was significantly lower than the other 3,  $t(192) = 2.84$ ,  $p < .001$ .

**Figure 4.1 – Marginal Means Overall**



As the sample was heavily female, separate analyses were conducted to compare the salary ratings provided by male and female participants. The univariate analysis by gender found that male participants did not significantly vary in their salary offers by condition,  $F(7, 65) = .49, p = \text{n.s}$  (See Figure 4.2). Pairwise comparisons of the marginal means found no significant differences for male participants.

For female participants, the conditions did significantly predict differences in salary,  $F(7, 119) = 4, p = .001$  (See Figure 4.3). Pairwise comparisons showed that female managers in education earned significantly more than male managers in education (mean difference of 1.69,  $p = .001$ ). Female assistants in finance also made significantly more than male assistants in finance (mean difference of 1.13,  $p = .01$ ). In a reversal of the previous results, among female participants, male assistants in education earned more than their female counterparts (mean difference of 1.01,  $p = .03$ ). The contrast comparing female assistants in education to the other female conditions also was run. Once again, this group was significantly lower than the others,  $t(184) = 3.49, p = .001$ .

With the unexpected apparent influence of the rater's gender on the three-way interaction, the analyses were re-run as a four-way interaction of rater's gender, applicant's gender, job role and context. The 4-way ANOVA was significant for salary,  $F(1, 184) = 3.67, p < .01$ . The 4-way interaction was recoded as a univariate ANOVA with 16 groups. This omnibus test found that the salary differed among the different conditions,  $F(15, 184) = 2.03, p < .02$ .

Hypothesis 7 was partially supported, as a three-way interaction of applicant gender, job role and occupational context affected salary offers. Yet subsequent analyses revealed a four-way interaction that included participant gender.

Figure 4.2 – Marginal Means for Male Participants

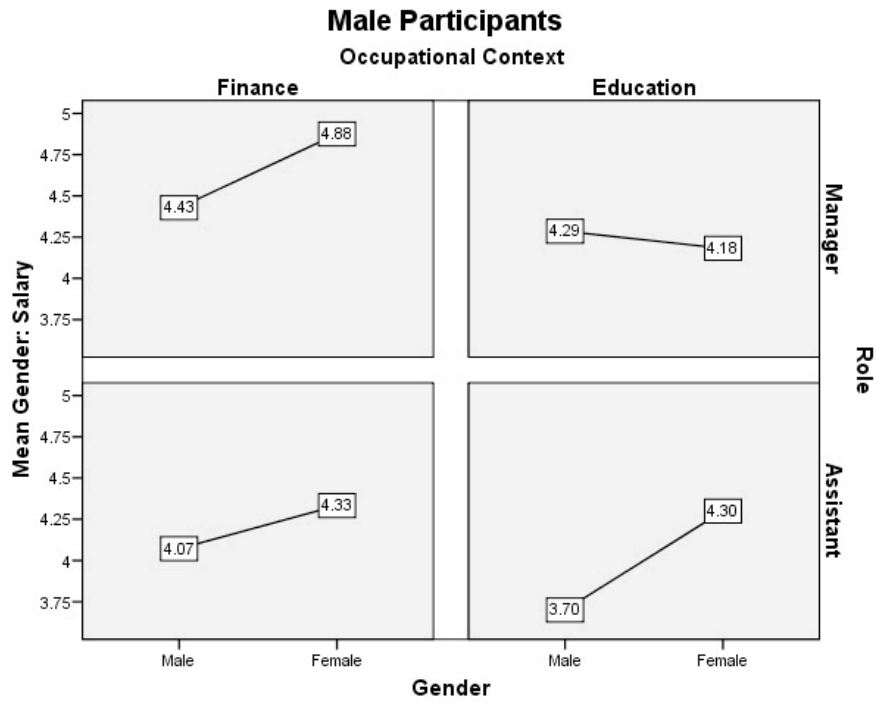
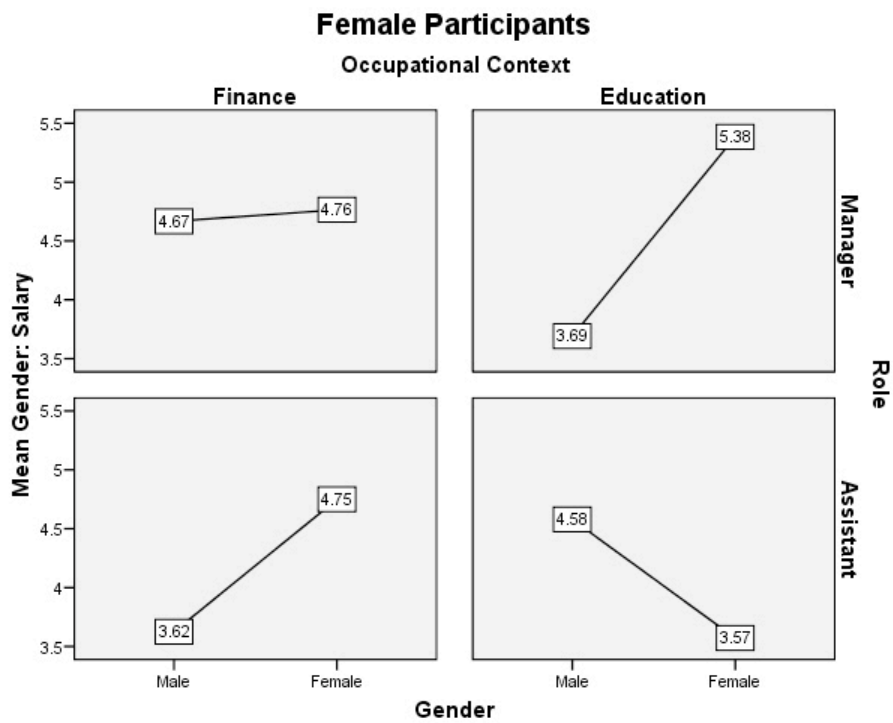


Figure 4.3 – Marginal Means for Female Participants



## *Discussion*

This first experimental exploration of the three-way interaction of social identity, job role and occupational context examined how being female could unfairly impact an applicant's chances of obtaining managerial or assistant roles in education and finance. Study 2a found no main effect of gender on any of the hiring process questions. In other words, men were no more likely to be hired, offered higher salaries, receive higher overall impressions, nor rated as a better candidate on the hiring scale than female applicants. This provides additional experimental support to Dovidio and Gaertner's (1977, 2000) assertions that overt expressions of prejudice are in decline.

While unilateral prejudice against women was absent in this study, the same could not be said for interactive prejudice proposed by this dissertation. There were no significant differences for likelihood of hire, overall impression of the candidate or their score on the hiring scale. The results suggest that prejudice emerged in decisions regarding pay. Previous research has shown that women will earn less than similarly qualified men in the same positions (Krefting, 2003). The results from this study, however, provided a different picture – female applicants in most areas were offered more than their male counterparts. Further analysis demonstrated that the significant differences in pay were due to ratings by female participants.

Previous studies suggested that women in stereotypically male domains were penalized for their success (Heilman & Okimoto, 2007; Heilman, Wallen, Fuchs, & Tamkins, 2004) and women in neutral or stereotypically female arenas were not rated negatively (Heilman, et al., 2004). Yet this study provided opposite findings, women in non-stereotypical roles or contexts – finance and managerial positions – were given



higher starting salaries than men. Provocatively, men in the most counter-stereotypical combination of role and context – assistants in education – were rewarded more, compared to women seeking the same position.

Moreover, women seeking jobs in non-stereotypical roles and contexts were offered higher starting salaries than women seeking stereotype-confirming jobs. Women seeking stereotype-confirming jobs (assistants in education) were offered lower salaries than men who were attempting to obtain the same, yet for them counter-stereotypical, job. This is a thought-provoking finding. While work by Heilman and her colleagues (2004, 2007) suggested that both male and female raters alike would penalize successful women in terms of their likeability, the current sample did not differ on whether the applicants would obtain the job, their qualifications as measured by a scale, or their overall impression of the candidate. This finding is remarkable, in the sense that, according to these results, qualified applicants should fear little in terms of unfair evaluations because of their social identity and the position or field to which they are applying.

Instead, these results seem to imply that the heavily-female sample from this study rewarded counter-stereotypical applicants. Women offered higher starting salaries to women applying for counter-stereotypical jobs. The rewards, however, were not given to only women. Interestingly, counter-stereotypical male applicants – men applying for jobs as assistants in education – were seemingly rewarded and offered larger starting salaries than their female counterparts.

Counterstereotypical behavior typically elicits adverse reactions in the form of social and economic punishment (Rudman & Fairchild, 2004). This was not the case

from the male participants who had no significant differences in their ratings of applicants across conditions. The women in this study, however, were likely to reward other women and some men bucking conventional stereotypes. Previous work (Bettencourt, Dill, Greathouse, Charlton & Mulholland, 1997) did not find participant gender effects on trait evaluations of applicants who were violating stereotypes. The participants in this study also did not differ on trait evaluations of the job applicants, but did reward them with higher salaries. This suggests, though more work is needed, that members of disadvantaged groups (e.g. women) may monetarily reward individuals who obtain counter-stereotypical jobs.

Why were participants willing to increase pay for these candidates, but otherwise rate all applicants as equally qualified and likely to be hired? Research shows that women typically expect to earn less than similarly qualified men (Major & Konar, 1984; Jackson, Gardner, & Sullivan, 1992) and that disadvantaged groups usually develop a lesser sense of entitlement (Major, 1994). Major and Konar found that female management students expected to earn \$2,600 less than male students. In this study, female evaluators offered a salary that was nearly \$5,000 more to counter-stereotypical applicants. That is, while previous research found that women expected to earn less than men, in this study female participants rewarded counter-stereotypical applicants with an amount that was nearly double that by which other women reported they expected to be underpaid.

Expectancy violation theory suggests that members of the majority may provide higher evaluations to minority members who exceed their expectations (Jussim, Coleman, & Lerch, 1987). For example, Jackson, Sullivan, and Hodge (1993) found that a highly qualified Black applicant was rated more favorably than a similarly qualified White

applicant. In this case, counter-stereotypical applicants were rewarded with higher starting salaries by female evaluators. Biernat and Kobrynowicz (1997) suggested that women and minorities can face higher standards from men to prove their ability. This may be the reason why only women rewarded counter-stereotypical behavior in other women and some men.

These other studies suggested that counter-stereotypical individuals were rated more favorably, yet Study 2a found no differences in terms of applicant evaluations or likelihood of hire. Dunton and Fazio (1997) suggested that individuals have a desire to appear as fair and non-prejudiced. Given the desirability of diversity in organizations (Richeson & Shelton, 2007), motivation to appear non-prejudiced in this context should be fairly high, and perhaps lead participants in this study to avoid appearing prejudiced by rating all candidates as equally qualified and everyone just as likely to be hired. Yet participants, particularly women, may have believed that these applicants merited higher pay because of their high capabilities, as conveyed by their previous experience and ability to succeed in counter-stereotypical positions. More research is needed to pinpoint the rationale behind the salary raise that counter-stereotypical applicants received.

Study 2a delivers interesting findings, which seem to echo the findings from Study 1a. Where Study 1a found an overrepresentation of women in assistant engineering dean roles and of men in assistant nursing dean roles, this study found that, overall, counter-stereotypical applicants were rewarded, specifically by members of the minority rewarding counter-stereotypical individuals.

## Study 2b

Study 2b expanded the scope of the research and examines the state of Asian Americans in the job hiring process. Research suggests that Asian Americans are stereotypically seen as having high technical and analytical skills, but having reduced social skills, lower verbal communication skills and generally shy (Sue & Kirk, 1973; Gilbert & Hixon, 1991; Leong & Hayes, 1990). Due to stereotypes of their high technical ability and excellence in mathematics (Leong & Hayes, 1990) and disapproval of individuality (Markus & Kitayama, 1991), Asians are seen as lacking in creative skills (Mannarelli, 2005). Given the stereotypes associated with Asian Americans, Study 2b compared the hiring evaluations of Asian American and European American male applicants for a job at a technology company versus an advertising design firm. The applicants were presented as pursuing a job as either a production manager or sales manager (see Appendices G and H for job descriptions and resumes). This study, like the previous, aimed to demonstrate that evaluations of a job candidate varied as a function of the applicant's social identity and the job role and context, with the greatest unfair job evaluation occurring during the interaction of these three factors.

### *Method*

*Procedure.* The same 200 participants from Study 2a also were presented with identical resumes with either a White or Asian male's name and told the applicant is applying for either a sales or internal production position at a computer-programming firm or an advertising design firm. The order of Study 2a and 2b was counterbalanced. The participants were then presented with the same set of questions as in Study 2a. The reliability of the scale under these experimental conditions was also high,  $\alpha = .94$ .

*Design.* This study used a 2 (social group membership: Asian v. White) x 2 (job role: customer relations manager v. production manager) x 2 (organizational context: computer programming vs. advertising design firm) design.

### *Results*

A three-way ANOVA was used to test hypotheses 6 and 7. Hypothesis 6 (Overt Prejudice) stated that there would be evidence of overt prejudice against applicants with Asian surnames. There were no main effects for ethnicity on ratings on the hiring scale,  $F(1, 192) = 1.95$ , salary,  $F(1, 192) = .32$ , likelihood of hiring,  $F(1, 192) = .95$ , or overall impression,  $F(1, 192) = .1$ , all  $p = \text{n.s.}$  Therefore, the hypothesis that aversive prejudice against Asians was not present was not supported.

Hypothesis 7 (Interactive Prejudice) suggested that there would be a three-way interaction of ethnicity, job role and occupational context. The results failed to support the hypothesis as there were no significant three-way interactions on the hiring scale, salary, likelihood of hire, or overall impression. Furthermore, an examination of two-way interactions of ethnicity with job role or context also failed to show any significant effect on the dependent variables. There were main effects for job role on likelihood of hire,  $F(1, 192) = 12.92, p < .001$  and ratings on the hiring scale,  $F(1, 192) = 11.74, p = .001$ . There were also main effects for occupational context on likelihood of hire,  $F(1, 192) = 14.95, p < .001$ , overall impression,  $F(1, 192) = 7.37, p < .01$  and score on the hiring scale,  $F(1, 192) = 30.94, p < .001$ .

Given the findings in Study 2a, in which women were rewarding counter-stereotypical applicants, the data were also analyzed for evidence of a four-way

interaction, adding participant gender. This analysis also failed to find a significant interaction,  $F(1, 184) = .07, p = \text{n.s.}$

### *Discussion*

Study 2b provided mixed support for the hypotheses. Echoing the results from Study 2a, there was no evidence of aversive prejudice against minority group members. In other words, Asian applicants were just as likely as White applicants to be hired. Study 2b, unlike Study 2a, was not able to uncover evidence of interactive prejudice. There was no significant evidence of a three-way interaction between ethnicity, job role and occupational context on likelihood of hire, starting salary, overall impression or rating on the hiring scale.

The absence of the three-way interaction is most likely due to the main effects of role and context on the dependent variables. In other words, participants were more likely to hire, and gave higher ratings to applicants in the design field and to those applying to the internal production roles. It seems that the applicant's credentials were not seen equally across the conditions, making it highly unlikely to find a three-way interaction.

Despite Study 2b's inability to uncover evidence of interactive prejudice, Study 2a provided some support to the idea of prejudice as contingent on the interaction of a person's social identity and the type of role and job field. Moreover, Study 2 strongly demonstrated that evidence of rigid, overt prejudice towards candidates because of their gender or ethnicity was encouragingly absent.

### *Limitations and Future Directions*

Unlike Study 1a and Study 1b, which examined the effect of social identity, job role and occupational context on real-world job attainment of female faculty and hence

had reduced internal validity, Study 2a and 2b experimentally manipulated those factors, allowing us to make a causal inference on the role of these factors on hiring decisions. While Study 2a and 2b's research paradigm may seem artificial, it is important to remember that an initial step in many job-hiring processes is a quick evaluation of resumes, no different than the process participants underwent in the current study.

The individuals making the job evaluations were not human resources professionals, but students from an introductory psychology class. Future studies can examine how seasoned hiring managers would rate applicants under the same conditions. Additionally, this sample was heavily female. While the male sample was adequate to run the analyses, larger numbers of male participants would have been valuable, especially when examining larger-order interactions.

Most importantly, the reason female participants were more likely to prejudiciously reward counter-stereotypical applicants more handsomely is currently unknown. As previously mentioned, research suggests that counter-stereotypical individuals are typically the recipients of backlash. Study 2a and 2b failed to find any backlash against counter-stereotypical applicants. Male participants showed no evidence of backlash toward female applicants, while the only prejudicial actions were by women rewarding counter-stereotypical applicants.

Other work has found that females formed counter-stereotypic impressions of applicants when they relied on first impressions (Morris, 1995). In addition, the promotion of the underrepresented is not uncommon, as previous work has shown that law firms with female hiring managers are more likely to hire women (Gorman, 2005).

Future work must help pinpoint the underlying mechanism that leads women and other minorities to hire or reward counter-stereotypical applicants.

In the chapter that follows, I discuss the implications that Study 1a and 1b and Study 2a and 2b collectively present to the literature on prejudice in the hiring process and psychology's conceptualization of prejudice in general.



## **Chapter 5**

### **General Discussion and Conclusions**

Together these studies presented a multi-method examination of the interactive effects of social identity, job role and occupational context on job attainment and hiring decisions. By examining real-world numbers of female faculty in different leadership positions, the qualifications of female and male deans as presented in their curricula vitae and experimentally manipulating these factors in a lab study, this dissertation aimed to present a comprehensive analysis of prejudice in hiring decisions. The strength of this dissertation lies in its combining of three formerly disparate literatures to suggest that job hiring decisions are not made unilaterally, and that a person's social identity, the job role and the occupational context all interact to alter an evaluator's impression of the candidate.

Study 1a and Study 1b demonstrated how identity, role, and context affected the distribution of female top and assistant deans throughout the different schools at a university. Women were underrepresented at the highest of leadership roles throughout the schools, but were underrepresented in top dean positions at business, law and public health schools. Conversely, they were overrepresented in the arts and sciences, social work and, unexpectedly, in engineering. Study 1a further demonstrated that a dean's gender could be accurately predicted using a regression equation that took into account the dean's role and field. This finding was particularly surprising in that it clearly

demonstrated that knowing a person's title and school provided enough information to predict his or her gender. Study 1b examined male and female dean's qualifications to investigate whether men and women were held to different standards when they were selected as dean. With low response rates, it was difficult to establish statistical certainty, but general trends demonstrated that women presented a more holistic view of their academic careers and credentials.

Studies 2a and 2b experimentally demonstrated the absence of unilateral prejudice against minority group members when applying for a job. Both studies failed to find that participants were willing to unilaterally negatively evaluate female and Asian applicants, suggesting that subjects did not hold a rigid antipathy toward minority groups. Study 2a strongly demonstrated the interaction of social identity, job role and occupational context on salary offers. Specifically, women rewarded individuals seeking stereotype-incongruent positions with higher salaries, regardless of their gender. While Study 2b failed to find that women similarly rewarded counter-stereotypical Asian job seekers, this may be due more to faulty experimental materials than an absence of the phenomenon.

On the whole, the results of these studies clearly demonstrated the existence of an interactive prejudice that emerges when social identity, job role, and occupational context align. This reconceptualization of prejudice abandons Allport's definition, and extends Eagly and colleagues' conceptualization into a more nuanced and context-dependent definition of prejudice.

## Implications

On the whole, the conceptualization of prejudice presented in this dissertation has many implications to the psychological literature on prejudice, the use of base rates, and speak to the upcoming and historic 2008 American elections.

### *Prejudice: Revisited*

As noted earlier, Allport defined prejudice as “an antipathy based upon a faulty and inflexible generalization” (1954, p. 9). This definition has guided much of the psychological research on prejudice (Esses, Haddock & Zanna, 1993). Yet prejudice seems much more complicated than a faulty and inflexible generalization against a group or members of that group. While we may fear an African American male in a dark alley, the same African American male would be celebrated as a champion on the football field. The promotion of a woman as his new boss may get a male employee wound up, but a new female secretary would not faze him in the least.

As Eagly and Diekmann (2005) suggested, prejudice is more than a monolithic attitude toward another group, it is an attitude in context; it is dependent on the interactions that the person has with the target. While Eagly and colleagues pushed the definition of prejudice in the right direction, they did not look at the totality of the work experience. They examined the difficulty that women faced in obtaining leadership roles, yet these roles themselves are dependent on the context. The editor-in-chief position of the Wall Street Journal carries different connotations from the editor of Vogue, even though both are the top positions and encompass similar job responsibilities.

So, what is prejudice? The simple answer is: complex. Prejudice is an interactive attitude that emerges when identity, role and context align and creates a situation where

the person's presence or ability in the job is unfamiliar or uncertain. Putting aside blatant racism and prejudice, it is hard to imagine a person who would have an all-inclusive dislike of another social group in all roles and contexts. Blatant racism and sexism are explicitly banned practices in organizations, yet women and minorities face an uphill battle in attaining corporate leadership positions (Lyness & Heilman, 2006; Morrison & von Glinow, 1990), but easily obtain jobs in more stereotype-consistent roles and contexts (U.S. Bureau of Labor Statistics, 2005).

Absent in this formulation of prejudice is an expression of negativity or antipathy. In fact, this view of prejudice suggests that individuals merely select a person for a job based on the proper alignment of social identity, role and context. That is, a person is more likely to be hired because they match the hiring manager's stereotypical prototype of someone in the role and context, not because of a dislike toward someone who does not match the prototype. This new conceptualization defines prejudice as the act of people valuing their ideas of representativeness, and not necessarily an emotion-laden attitude. This attitude, in my view, is prejudice. The conceptualization of prejudice promoted by this dissertation is not one necessarily laden with emotions of positivity or negativity, but instead an automatic preference for someone who matches what we expect to find in the job given the particular role and context. While it may seem far from the prejudice of Allport's definition, it nonetheless involves the act of prejudging someone as competent or qualified for a role based on the alignment of their social identity, the job role and context.

If the old conceptualization of prejudice proved to be difficult to eradicate from people's minds, this new conceptualization may prove even tougher. Monteith and

colleagues found that after committing prejudiced acts, people are very self-aware of their actions and undergo self-regulatory actions (Monteith, Ashburn-Nardo, Voils & Czopp, 2002; Devine & Monteith, 1993). In addition, Dovidio and Gaertner (2004) note that people are weary of seeming prejudiced in front of others and to themselves. Without the self-regulatory mechanisms or self-awareness of negative prejudice, the interactive prejudiced described in this dissertation may not lead to efforts that minimize these types of actions (Diekman & Hirnisey, 2007).

Making a hiring decision is a prediction about a candidate's qualifications to hold a post within an organization, and is rife with uncertainty. To avoid prejudice, how should a person make a judgment with very limited information? Kahneman and Tversky suggested base rates were the best way to make accurate predictions in uncertain situations.

#### *Base Rates: Revisited*

Kahneman earned a Nobel Prize for their work on people's judgments under conditions of uncertainty. His research with Tversky demonstrated that people tended to disregard base rates when they were making intuitive predictions and were unjustifiably confident in their predictions (Kahneman & Tversky, 1973; Tversky & Kahneman, 1974). Furthermore, they found that individuals were insensitive to probabilities and instead made judgments based on representativeness and availability.

For example, participants were told that descriptions came from a set that consisted of 30 engineers and 70 lawyers, and were read a statement that included "he shows no interest in political and social issues and spends most of his free time on his many hobbies which include carpentry, sailing and mathematical puzzles" (1973, p. 241).

Participants overwhelmingly stated that the description was that of an engineer, ignoring the fact that when the description was chosen at random they had a 70% chance of reading a description about a lawyer. Participants in Kahneman and Tversky's experiments overwhelmingly made predictions based on the representativeness heuristic instead of taking base rates into account. When asked to make predictions people evaluated the situation by figuring out how representative (or typical) the object was given the scenario. In the example above, people selected the engineer because the description seemed to describe an engineer, even though it was statistically unlikely. When they were not read the description and told to predict what the odds were that the description would be of an engineer, they correctly used the base rate information.

Under conditions of uncertainty, people also based their predictions using the availability heuristic (Tversky & Kahneman, 1974). When confronted with a situation where they have to make a decision with very little information people tended to make decisions based on the retrievability of instances. For example, when asked to say whether there were more words with the letter r in the first versus third position of a word, people said that there were more words that started with r, even though there are more words with r in the third position, because it is easier to recall instances of words beginning with specific letter.

Kahneman and Tversky (1974) concluded that the use of heuristics should be better understood in order to prevent errors of judgment under conditions of uncertainty. That is, people in their experiments made predictions that did not take base rates into account, and their suggestion is that predictions that do not take base rates into consideration are prone to errors and should be avoided. Yet, this dissertation suggests

that when making hiring decisions (an uncertain situation), individuals should not take base rates into account. This dissertation strongly argues that the scarcity of female finance managers or Asian art sales managers should not affect a qualified individual's ability to obtain a job. How can these two differing views on the use of base rates be reconciled?

The base rates from Kahneman and Tversky's experiments were empirical certainties unaffected by extraneous variables. Kahneman and Tversky created the sample of engineers and lawyers and therefore knew that the base rates were indicative of their reality. Furthermore, the base rate that there are more words that have r in the third position than in the first, is also an empirical certainty devoid of outside influence. If we make hiring decisions based on the fact that only 13% of corporate officers are women, we are disregarding the fact that this number has increased from 8.7% in 1995 (Catalyst, 2002). These base rates are susceptible to extraneous variables, including prejudice, and their use in these situations is prone to faulty judgments.

Some may argue that it would be imprudent to interview or assess applicants when they do not match the prototype of the average employee. For example, the National Basketball Association (NBA) is 75% Black (Lapchick, Bustamante, & Ruiz, 2007), and the average player is nearly six foot seven inches tall and 221 pounds (NBA, 2007). Should we then disregard and not assess potential players who are not Black, weigh more than 225 pounds, or are less than six and a half feet tall? To deny individuals who fail to meet expectations a chance to demonstrate their qualifications would have lead NBA teams not to recruit players who are 325 pounds, Asian or White, or five feet three inches tall – causing teams and the sport to miss out on the talents of players like

Shaquille O'Neal, Yao Ming, Larry Bird, and Muggsy Bogues. This dissertation does not advocate that companies should hire people who are unqualified for the job, but that hiring based on base rates, prototypes or stereotypes will cause organizations to overlook potentially qualified applicants because they may not match the gender or race of who they typically hire.

As mentioned in the opening pages of this dissertation, organizations want a diverse workforce because of the social imperatives and business opportunities that heterogeneity provides. In order to achieve diversity, however, organizations and particularly those individuals hiring new employees must be receptive to the idea that the best worker for a job may not necessarily look like the person who previously held it. With the changing demographics, hence base rates, of the American workforce, the use of base rates would prevent qualified applicants from obtaining jobs because their predecessors failed or were barred from obtaining those jobs. Individuals would not be hired on their own merits, but based on the inequalities and barriers of the past.

#### *Election 2008*

Imagine the following scenario: Over the 232 years of its existence, an organization has been led by 43 white men. There are no rules forbidding female leadership. A man and woman are standing in the president's office of this organization. With this in mind, answer the following three questions:

Question 1 – Which one would you select as the current president?

Question 2 – Which one could become president?

Question 3 – If the man was black, which one could become president?



The previous section on base rates should lead you to correctly say that when choosing at random (Question 1) a person should go with the base rates – 100% of presidents of the organization have been male – therefore chances are that the man is the current president.

The second question, however, reflects the impetus behind this dissertation. The answer to Question 2 should be that either the man or the woman could become president. There are no rules or laws impeding a man or woman from becoming president of the United States, and little to suggest that the position is best filled by a man – as other world nations have been led by female leaders, including such varied countries as the United Kingdom, Chile, the Phillipines and India. The problem of prejudice emerges when we use previous numbers or examples to guide our decision of a distinct instance. The fact that no previous presidents have been female, does not speak to an individual's qualifications or abilities, and therefore should have no merit in deciding whether she can become president.

The argument is even stronger when considering a minority presidential candidate. While some may argue that the office of the presidency may require power or leadership that is characteristic of a man, can the same be said of race, which many sociologists consider is a social construct (Omi & Winant, 1999)? The presidency has never been held by a Black, Hispanic, or Asian person, so are we to believe that we should use historical base rates to decide who the next president should be and not elect a minority candidate? Is there something in the presidency that requires the holder of the office to be white? Does the color of candidate's skin affect his ability to govern? History and base rates would be faulty guides in the selection of a president under these circumstances. A president should be selected because of his or her ability to lead a

country and not because of their gender or color of their skin. To that end, the answer to Question 3 should also be either person could become president.

At the time of writing, the presidential election cycle is under way in the United States, and the country is facing a question it never before has had to answer: can the electorate decide on a female or African American president? The results of this study suggest that people will look past a person's social identity and not make judgments based solely on gender or ethnicity. The polls seem to resonate with the findings from this study. In a 2007 poll, 94% of respondents said they would vote for an African American and 88% would vote for a woman for the presidency (Gallup, 2007). These numbers seem promising – the vast majority of people would not take a person's gender or race into account when deciding whether they will vote for someone into a position of leadership.

Yet, when asked whether America was ready for a woman president, only 55% of respondents said yes (CBS, 2006) and only 59% said America was ready for a black president (Wolffe & Briscoe, 2007). The disparity between stated willingness to vote for a minority candidate for a leadership position and the stated readiness for a minority candidate suggests there are prejudiced attitudes towards female or minority candidates seeking leadership positions. The backlash against individuals like Rush Limbaugh, who asked on national radio, “will this country want to actually watch a woman get older before their eyes on a daily basis” (Limbaugh, 2007) demonstrates that the country is ready to move on beyond blatant sexist comments. The readiness poll question, however, highlights the reluctance to say that we're ready to appoint minorities into top leadership positions in government. This poll result points to the lingering prejudice in the American

conscience – we say we would vote for a female or minority candidate for president, but are we ready for it?

### Parting Words

The studies presented in this dissertation worked together to demonstrate that social identity, job role and occupational context interact with one another and produce job attainment rates and hiring evaluations that are unfairly influenced by prejudice. While this work added to the growing body of work that discounts Allport's classic definition of prejudice as a rigid antipathy, it helped explain the "curious patterns" (1954, p. 55) of prejudice he described when he observed that a Black person could work in his kitchen, but not a Jew, and why the opposite was true when it came to sitting in his parlor.

Prejudice's simplicity or complexity should not deter us from our resolve to better understand it and come up with ways to eradicate it from our thoughts. In the words of Martin Luther King, Jr.:

"We have ancient habits to deal with, vast structures of power, indescribably complicated problems to solve. But unless we abdicate our humanity altogether and succumb to fear and impotence in the presence of the weapons we have ourselves created, it is as possible and as urgent to put an end to war and violence between nations as it is to put an end to poverty and racial injustice." (1968/1991, p. 628)



Appendix B

Distribution of Deans by Field and Role

| <i>Field</i>    | <b>Top Dean</b> |             | <b>Assistant Dean</b> |             |
|-----------------|-----------------|-------------|-----------------------|-------------|
|                 | Male            | Female      | Male                  | Female      |
| Overall         | 472 (70.1%)     | 201 (29.9%) | 1322 (60.3%)          | 872 (39.7%) |
| Arts & Sciences | 147 (69.3%)     | 65 (30.7%)  | 340 (56.6%)           | 261 (43.4%) |
| Engineering     | 79 (91.9%)      | 7 (8.1%)    | 185 (82.2%)           | 40 (17.8%)  |
| Business        | 82 (89.1%)      | 10 (10.9%)  | 190 (76%)             | 60 (24%)    |
| Law             | 53 (82.8%)      | 11 (17.2%)  | 125 (61.9%)           | 77 (38.1%)  |
| Medicine        | 45 (84.9%)      | 8 (15.1%)   | 346 (68.1%)           | 162 (31.9%) |
| Nursing         | 0 (0%)          | 47 (100%)   | 11 (8.3%)             | 121 (91.7%) |
| Education       | 34 (51.5%)      | 32 (48.5%)  | 70 (50.4%)            | 69 (49.6%)  |
| Social Work     | 16 (51.6%)      | 15 (48.4%)  | 19 (28.4%)            | 48 (71.6%)  |
| Public Health   | 16 (72.7%)      | 6 (27.3%)   | 36 (51.4%)            | 34 (48.6%)  |

Appendix C

Percentage of Tenured Female Faculty by Field (NCES, 2004)

| <b>Field</b>    | <b>Male</b> | <b>Female</b> |
|-----------------|-------------|---------------|
| Overall*        | 58.97       | 41.03         |
| Arts & Sciences | 69.55       | 30.45         |
| Engineering     | 94.1        | 5.9           |
| Business        | 72.8        | 27.2          |
| Law             | 70.9        | 29.1          |
| Medicine        | 84.2        | 15.8          |
| Nursing         | 2.7         | 97.3          |
| Education       | 45.8        | 54.2          |
| Social Work     | 41.3        | 58.7          |
| Public Health   | 49.4        | 50.6          |

\*Overall percentage is average of the individual fields

## Appendix D

### Finance / Education Job Descriptions

#### **Manager/Assistant at an Accounting Firm**

##### Audit Senior Manager at Ernst and Young

The Senior Audit Manager is responsible for overseeing all phases of project management for multiple clients in a wide variety of industries. Responsibilities include planning, directing, and completing audits; developing and managing staff; and reviewing financial statements and related technical accounting issues.

##### Junior Audit Associate at Ernst and Young

The Junior Audit Associate assists in the identification of strategic and operational business risks as well as undertakes project work and reports to the director of audits. The Junior Audit Associate assists in the preparation of audited financial statements together with the relevant working papers and reviewing client's books and records.

#### **Manager/Assistant at an Educational Organization**

##### Senior Education Policy Supervisor at the California State Board of Education

The Senior Education Policy Supervisor develops curriculum frameworks, oversees the production and distribution of instructional materials. The Senior Education Policy Supervisor also provides leadership and resources to increase educators' range of effective teaching and instructional support strategies in order to ensure high academic achievement for all students.

##### Education Policy Assistant at the California State Board of Education

The Education Policy Assistant helps in the development of curriculum frameworks, works with others in the production and distribution of instructional materials. The Education Policy Assistant also assists the senior education policy supervisor in providing resources to increase educators' range of effective teaching and instructional support strategies in order to ensure high academic achievement for all students.

**Finance Resume**

**Andrea/Andrew Jones**

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818/834-1982

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**Education:**

**University of California, Los Angeles, 1999**  
Bachelor of Arts in Economics  
Accounting Minor  
Overall GPA: 3.75, Major GPA: 3.77

**Work Experience:**

**KPMG, LLP, 2004 - Present**  
Internal Audit Professional  
Los Angeles, California

Researched and consulted on various internal auditing and controls, forensics and construction of audit services across a wide-range of industries. Analyzed data for evidenced of deficiencies in controls, duplication of effort, fraud, or lack of compliance with laws, government regulations and management policies.

**Jefferson Wells, 2001 – 2004**  
Audit Analyst  
Los Angeles, California

Executed the day-to-day activities of audit engagements of various clients. Identified and communicated accounting and auditing matters to senior associates and managers.

**Good, Swartz, Brown & Berns, LLP, 1999 - 2001**  
Business Services Researcher  
Sherman Oaks, California

Worked independently and participated in project teams to provide research and baseline analysis in response to requests, primarily from internal divisions. Promoted the sharing of leveraged knowledge and information resources across the firm.



## Education Resume

# Andrew/Andrea Jones

17540 Kingsbury Street  
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### Education:

**University of California, Los Angeles** 1999  
Bachelor of Arts in American Literature and Culture  
Education Studies Minor  
Overall GPA: 3.75, Major GPA: 3.77

### Work Experience:

**United Teachers of Los Angeles** 2004 - Present  
Regional Community Outreach Officer  
UTLA Region III Resource Center, Van Nuys, California

Worked with local parents to encourage families to become more involved in their children's education by providing connections with teachers, and other tips, to help their children be the best they can be at school and home. Coordinated with local teachers to ensure they got to know their students and their families and communities.

**William S. Hart Union High School District** 2001 – 2004  
English and Social Studies Teacher  
William S. Hart High School, Newhall, California

Developed a new course for the high school combining anthropological views of culture and American literature to demonstrate culture throughout different time periods. Additionally taught American and English literature courses.

**Los Angeles Unified School District** 1999 - 2001  
English Teacher  
Van Nuys Middle School, Van Nuys, California

Developed lesson plans for 6<sup>th</sup> and 7<sup>th</sup> grade American Literature courses. Taught 5 classes daily, along with assisting students with additional help during recess and lunch.





## Appendix G

### Technology / Design Job Descriptions

#### **Internal Production / External Sales at a Technology firm**

##### Technical Project Manager at Google

The Technical Project Manager is responsible for managing, monitoring and coordinating regular software releases. The Technical Project manager is also responsible for special projects within the engineering area, driving these projects to completion and documenting decisions and progress.

##### Enterprise Sales Manager at Google

The Enterprise Sales Manager is a technical position that requires excellent sales, marketing, and project management skills to launch and manage sales growth. The Enterprise Sales Manager conducts outbound calls to prospective clients, to make sure their orders are moving forward, and respond to any objections they may have before purchasing.

#### **Internal Production / External Sales at a Design firm**

##### Graphic Design Production Manager at Creative Solutions, Inc.

The Graphic Design Production Manager leads a team of designers to develop and present artistic concepts for printed marketing and advertising materials. Graphic Design Production Managers must be able to manage projects from initial concept stage to completion, from both artistic and management aspects.

##### Graphic Design Sales Manager at Creative Solutions, Inc.

The Graphic Design Sales Manager provides creative direction and advice to new clients, and builds and maintains existing client relationships through open communication. Graphic Design Sales Managers must be comfortable speaking with clients to obtain their creative and artistic visions and successfully relay that vision to the creative staff.

**Design Resume**

**Michael Wood / Wu**

25 Irving St.  
Cambridge, MA 02138  
617-435-4421  
m\_wood@yahoo.com

*Professional Résumé*

**Education**

***Cornell University***, 2001  
Ithaca, NY 14850

Design and Environmental Analysis, B. S.  
Graphic Design, Minor  
GPA: 3.55

**Experience**

***Bee Hive Media***, 2005-Present  
Boston, MA 02116

Design Director

Oversaw and assisted with the creation of designs for client projects, ensuring that all designs are clearly and consistently documented in accordance with design templates for the project. Worked with design team members and clients to make sure their creative vision was achieved.

***One Pica, Inc***, 2003-2005  
Boston, MA 02116

Project Designer

Designed and executed in-house and client marketing and branding projects, as well as coordinated project vendors and maintained project schedule timelines.

***Red Brick Design***, 2001-2003  
Tyngsboro, MA 01879

Graphic Designer

Designed graphics for client websites and print materials, working within pre-established brand and identity structures.

## Technology Resume

# Michael Wood / Wu

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m\_wood@yahoo.com

## *Professional Résumé*

### **Education**

***Cornell University***, 2001  
Ithaca, NY 14850

Computer Science, B.S.  
Information Science, Minor  
GPA: 3.55

### **Experience**

***Akamai Technologies, Inc.***, 2005-Present  
201 Broadway  
Cambridge, MA 02139

Systems Engineer  
Involved in the hardware and software implementation Akamai's globally distributed service network, assuring the service remains fast, reliable and robust.

***Lotus Software***, 2003-2005  
1 Rogers Street  
Cambridge, MA 02142

Software Developer  
Worked as software developer for IBM's Lotus Notes, a client-server collaborative application used in many Fortune 500 companies.

***EMC Corp.***, 2001-2003  
150 Cambridge Park Drive  
Cambridge, MA 02140

Software Engineer  
Wrote functional detailed design specs to provide technical expertise to senior engineers. Assignments included development of new products, along with upgrades, enhancements and bug fixes of existing products

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