4-5-2017

Beauty is Beneficial: An Examination of Candidate Facial Attractiveness, Gender, Qualification, and Customer Visibility on Online Recruitment Intentions

Breanna R. Wexler
University of Missouri-St. Louis, brwkc3@mail.umsl.edu

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Breanna R. Wexler
M.A. Psychology, University of Missouri-St. Louis, 2014
B.A. Psychology, University of Missouri- Columbia, 2012

A Dissertation Submitted to The Graduate School at the University of Missouri-St. Loui
in partial fulfillment of the requirements for the degree
Doctor of Philosophy in Psychology with an emphasis in Industrial/Organizational Psychology

May
2017

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Breanna Wexler

University of Missouri-St. Louis

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Abstract

The present study examined the effects of information included in candidates' online networking profiles on recruiters' perceptions and ratings of their likelihood of inviting the candidate for a job interview. Specifically, this study used a status generalization theory perspective to examine the weighting of information related to candidate physical attractiveness, gender, and qualification to predict perceived expectations for intellectual competence, likability, and social skills. These expectations then predicted whether the candidate should be recommended for a job interview. While participants relied almost exclusively on qualification information when making judgments of intellectual competence, candidates placed increased weight on attractiveness when rating likability and social skills. Using a unique policy-capturing HLM framework, these relationships were examined within high- and low-customer visibility positions and within both masculine- and feminine-typed jobs. The degree of in-person versus face-to-face customer contact required for the position did not affect participants' reliance on attractiveness, and participants did not exhibit gender bias even when the position was described as stereotypically masculine or stereotypically feminine. Finally, this study examined the moderating effects of implicit and explicit attractiveness attitudes on expectations and found that more biased explicit, but not implicit, attitudes strengthened the degree to which participants relied on attractiveness information in making recruitment decisions. Because physical attractiveness discrimination is not directly covered under current employment law, it is important to examine attractiveness biases in organizational contexts to determine if recruitment and selection methods are functioning at the highest degree of validity possible. This has particular implications for training interventions that can be implemented to both reduce attractiveness biases and to increase the validity and fairness of selection systems.

Keywords: attractiveness, gender, bias, implicit, attitudes, status generalization theory

Is Beauty Beneficial? An Examination of Candidate Physical Attractiveness, Gender, Qualification, and Customer Visibility on Recruitment Decisions

The average American male spends thirty-two minutes on a typical day washing, dressing, and grooming, while the average American female spends forty-four minutes in her daily preparation routine (Hamermesh, 2011). This equates to an average of 136 total days for women, and 45 total days for men, spent getting ready in an average lifetime (Salter, 2008). Additionally, according to the American Society of Plastic Surgeons, 15.6 million cosmetic procedures were performed in 2014, and in the same year the cosmetics industry in the United States generated over $55 billion in revenue (Statista report, 2014).

It is no wonder Americans exert extensive physical and financial effort into enhancing their appearance, as more attractive people receive many benefits over their less attractive counterparts (e.g., Benson, Karabenick, & Lerner, 1976; Dabbs & Stokes, 1975; Lerner & Lerner, 1977; Mulford, Orbell, Shatto, & Stockhard, 1998; Ritts, Patterson, & Tubbs, 1992; Sigall & Ostrove, 1975; West & Brown, 1975). Moreover, these benefits can even extend into the employment context. Research suggests that attractiveness discrimination occurs in the recruitment and selection context, meaning that more attractive people may be more likely to be hired than less attractive people (e.g., Cann, Siegfried, & Pearce, 1981; Gilmore, Beehr, & Love, 1986; Wexler, 2015). This is particularly concerning for organizations because the ultimate goal is to recruit and hire the most qualified candidate for a position, regardless of appearance-based characteristics. Additionally, attractiveness bias may have larger effects than other forms of discrimination because unlike discrimination based on race or sex, attractiveness bias

(in itself) is subject to neither legal nor social sanctions, and people do not try to correct for it (Sczesny & Kühnen, 2004).

Analyses in both research and practice have consistently demonstrated that attractive candidates are offered higher starting salaries (e.g., Dipboye, Arvey, & Terpstra, 1977; Frieze, Olson, & Russell, 1991; Hammermesh, 2011; Heilman & Saruwatari, 1979; Ross & Ferris, 1981) than less attractive candidates. Additionally, the costs of bad hiring decisions for organizations are extremely high; it can cost two and one-half times an employee's salary to rectify a bad hiring decision (Yager, The Dice Report). To produce the fairest, most cost-efficient, and most predictive selection systems, it is essential to examine the factors that may elicit biased selection decisions so that these biases can be reduced or even eliminated.

Bias is defined as an inclination or prejudice for or against one person or group, especially in a way that's considered unfair (Oxford English Dictionary). In other words, attractiveness bias in employee recruitment and selection results when a rater is inclined to provide higher ratings to more attractive candidates based solely on the candidate's appearance. Unlike objective selection tests that have documented validity for predicting future performance (see Schmidt & Hunter, 1998 for a review), attractiveness relies on subjective evaluations that are not designed to predict future job performance or success in a role. It is therefore alarming that fifty-seven percent of hiring managers told Newsweek in 2010 that qualified but less attractive candidates are likely to have a more difficult time landing a job, while more than half advised spending as much time and money on "making sure they look attractive" as on improving their resume. Additionally, although hiring managers ranked appearance as less important than experience when

determining which candidates to recruit for positions, they ranked appearance as more important than where a candidate went to school (Bennett, 2010). Newsweek claims this is the "new reality of the job market."

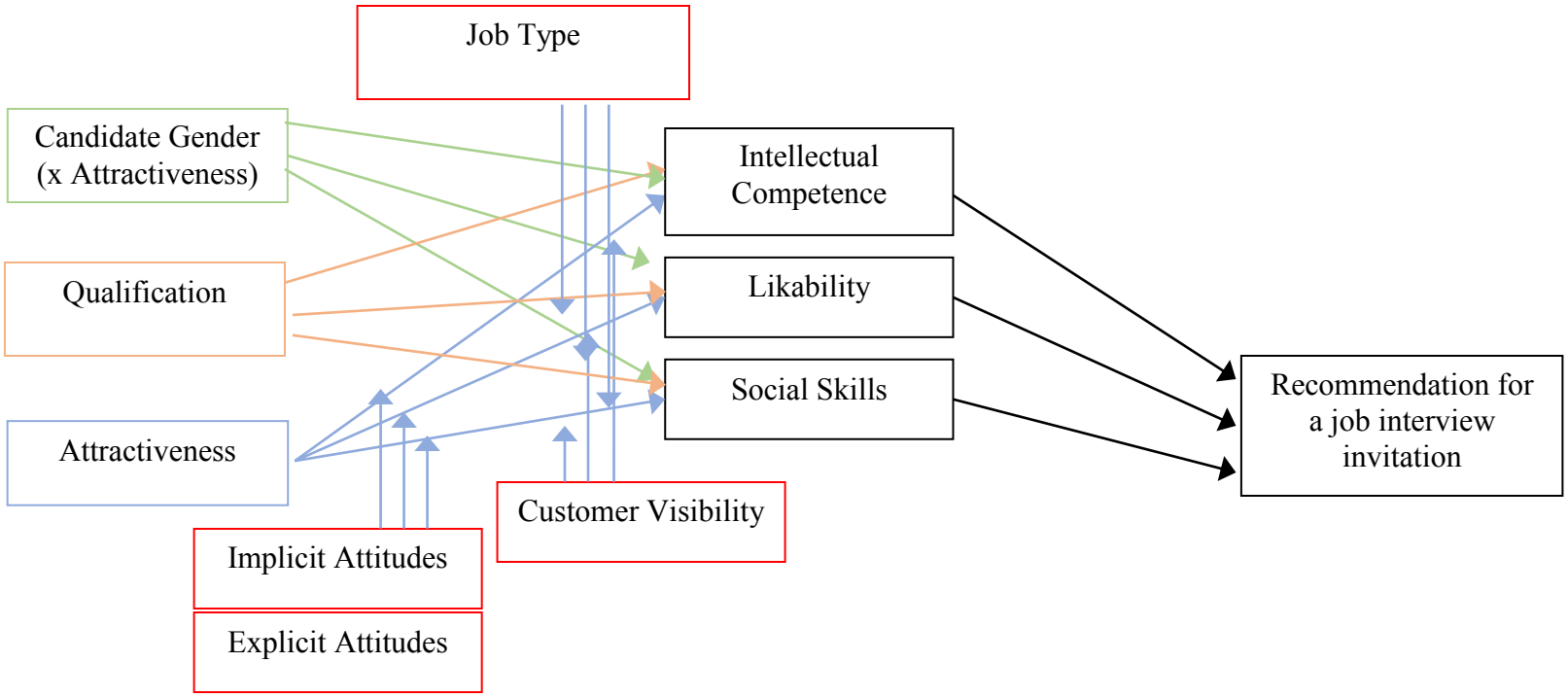
As technology is advancing, people are more likely to have online profiles, both for professional and social purposes. Indeed, over 2.2 billion people worldwide now have profiles on online networking sites (Statista Report, 2015). As a result of the popular usage of online networking sites, an astounding 78% of organizations have turned to examining these online profiles as part of their recruitment and selection processes (see Arndt, 2007; Barnes & Mattson, 2009; Brown & Vaughn, 2011; Cain, Scott, & Smith, 2010; Capiluppi, Serebrenik, & Singer, 2013; Go, Klaassen, & Chamberlain, 2012).

The heightened reliance on these online sites begs the question of how candidates are being perceived through these online avenues. Because many of these profiles include a photograph, physical attractiveness may become salient earlier in the recruiting process than it has in the past. Moreover, this information may affect perceptions of competence even before the selection process begins. Perhaps less attractive people receive fewer recruitment-related communications merely because of the perceptions associated with their online photos. This may be especially true given that hiring managers likely are not held accountable for appearance-based discrimination that occurs during the initial online profile screening stage of the recruitment process.

Study Goals

This study aimed to examine physical attractiveness biases through the lens of status generalization theory. Specifically, this study examined the effects of multiple status characteristics including attractiveness, gender, and qualification information.

Further, these status characteristics were examined within a high- and low-customer visibility context and a masculine or feminine job type context to determine if attractiveness was weighted more heavily for jobs that require a higher degree of customer visibility and for job types congruent with candidate gender. The effects of these status characteristics on the recommendation for a job interview invitation were examined through the mediating effects of status beliefs associated with attractiveness, namely, perceptions of intellectual competence, likability, and social skills. This study also examined the moderating effects of implicit and explicit attractiveness attitudes on perceptions associated with physical attractiveness. See Figure 1 for the full model that was tested in this study.



Level 2 Variables are in red

Figure 1. Proposed Model.

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Contributions

This study is one of few that has examined physical attractiveness as a status characteristic, and, to the author's knowledge, the first study to examine attractiveness in conjunction with both gender and qualification information from a status generalization theory perspective. It was important to examine these status characteristics together to determine how strongly each characteristic contributes to participants' evaluations. In other words, this allowed a status hierarchy to be formed to explain the process of physical attractiveness biases in online recruitment contexts. This has implications for both attractiveness bias theory, as well as for intervention strategies that may be used to reduce appearance-based biases.

Social Media in Recruitment and Selection

Social networking sites (SNSs) allow individuals to 1) construct a public or semi-public profile within a bounded system, 2) articulate a list of other users with whom they share a connection, and 3) view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2007). SNS profiles typically contain photos and information about individuals and allow users to communicate with each other through the SNS (Brown & Vaugh, 2011).

One of the most popular SNSs for professional networking is LinkedIn. LinkedIn allows users to create a unique profile, including a photo, as well as information about their educational and work experiences. Since its inception in 2003, LinkedIn has skyrocketed from 4,500 to over 380 *million* members to date (LinkedIn, 2015). Furthermore, LinkedIn represents all Fortune 500 companies and claims to be the avenue through which these companies have found candidates (Paik, Shahani-Denning, &

Griffeth, 2014). Forbes (2012) has also recognized that LinkedIn's recruiting service is the "fastest growing public provider of corporate recruiting solutions" (Bersin, 2012).

Screening candidates' SNS profiles can provide many benefits to organizations. First, SNSs provide a tool organizations can use to research candidates without incurring a lot of cost (Brown & Vaughn, 2011). Additionally, employers can use the information gathered from SNS profiles to validate the information presented on a candidate's resume by examining the consistency of information (Brown & Vaughn, 2011). More directly relevant to attractiveness bias, the majority of LinkedIn profiles include a photo, usually a professional-type headshot, which reveals a person's facial attractiveness. Other information that is not currently protected under federal law, such as candidate's sexual orientation or smoking habits, may also be accessible through online SNSs, particularly through more social-based sites such as Facebook, and has the potential to introduce bias into the selection procedure (Brown & Vaugh, 2011).

As a result of the many cost-effective benefits to using SNS profiles, organizations are starting to take advantage of this process as an antecedent to their formal selection process. In 2009, 48% of the Inc. 500 companies reported using social media sites for recruitment and candidate evaluation, while 78% of small and medium size businesses reported using social media in their recruiting efforts (Barnes & Mattson, 2009). Specifically, 70% of active LinkedIn users report using their LinkedIn account to find additional information about candidates, and 26% report using their account to determine who will be invited for an interview and who will not (Caers & Castelyns, 2010). Finally, 75% of organizations reported that they are "very familiar with" SNSs, while only 57% of organizations reported this response in 2008 (Barnes & Mattson,

2009). Thus, screening candidates via social media outlets is increasing very rapidly and becoming an initial step in the candidate screening process for many organizations. LinkedIn even offers special membership packages for recruiters, currently priced from $119.95 per month to $899.99 per month depending on the organization's recruiting needs.

Past research demonstrates the existence of attractiveness biases during offline recruiting. Johnson and Roach-Higgins (1987) demonstrated that attractive candidates are rated significantly higher than less attractive candidates on their ability to get along with others and their desirability as someone to work with in the company by campus recruiters. Similar biases have been found among professional recruiters, managers, executives, and non-psychology students acting as hiring managers (Desrumaux, Bosscher, & Léoni, 2009; Pansu & Dubois, 2002).

There is currently a limited body of research exploring perceptions of appearance characteristics from SNS profile photos. One recent study found no main effects of attractiveness or amount of information present on LinkedIn – type profiles (Paik et al., 2014). The authors created mock-LinkedIn profiles with low information (139 words) or high information (409 words) and a less attractive photo, no photo, or attractive photo. Participants were recruited through direct messaging on LinkedIn and through the authors' own HR contacts within organizations. However, the authors did not provide details about how their photos were obtained and/or manipulated, so it is unclear whether non-significant results are due to actual non-relationships or methodological limitations. Another study examining appearance and LinkedIn profiles presented participants with candidates with and without beards and asked them to rate the likelihood of inviting the

candidate for an interview. The authors found that bearded candidates were perceived as having more expertise than clean-shaven candidates and that a candidate's perceived expertise significantly predicted intention to invite the candidate for a job interview (van der Land & Muntinga, 2014). Thus, there is some limited evidence that candidate appearance-based characteristics are perceived from SNS profile information, and that this appearance-based information can then affect perceptions and whether or not a candidate is invited for an interview. Also, given that biases have been found in other domains during the recruitment process (e.g., age and gender; Dubois & Pansu, 2004; Riach & Rich, 2002), it is likely that they may be found with attractiveness characteristics as well.

Physical Attractiveness

Both "attractiveness" and "beauty" are defined as "qualities that provide pleasure or delight, especially in appearance" (Dictionary.com). Additionally, the Internet is filled with hundreds of popular press articles and blog posts outlining ways to appear more attractive. Writers claim that the components of attractiveness include traits ranging from sexual dimorphism to symmetry to body scent (see Ames, 2008). While attractiveness is to some degree in the eye of the beholder, there is also agreement on some features (Cunningham, Roberts, Wu, Barbee, & Druen, 1995; Jones & Hill, 1993; Langlois & Roggman, 1990), and research has identified several variables that are associated with perceptions of attractiveness.

The seemingly innate and universal agreement on the facial features that are considered attractive could imply that biological factors underpin the reasons that particular features are considered attractive. Specifically, physical features that indicate

greater reproductive or evolutionary potential are broadly considered more attractive (Grammer, Fink, Møller, & Thornhill, 2003). Two major classes of features found to indicate reproductive potential include symmetry and masculinity/femininity.

Symmetry. One factor that determines facial attractiveness is the degree of facial symmetry. Indeed, most makeup techniques attempt to conceal asymmetries, and virtually all plastic surgery procedures include attempts to correct any existing asymmetries in addition to the surgery's primary objective (Grammer et al., 2003).

Research has consistently found that symmetrical men and women are rated as more physically attractive than asymmetric individuals (Fink, Neave, Maning, & Grammer, 2006; Gangestad & Thornhill, 1997; Gangestad, Thornhill, & Yeo, 1994; Grammer & Thornhill, 1994; Mealy & Bridgstock, 1999; Perrett, Burt, Penton-Voak, Lee, Rowland, & Edwards, 1999; Rhodes, Proffitt, Grady, & Sumich, 1998; Scheib, Gangestad, & Thornhill, 1999). Symmetry is also associated with sexual selection and reproductive success (Gangestad & Thornhill, 1997; Møller, Soler, & Thornhill, 1995; Singh, 1995, Thornhill, Gangestad, & Comer, 1995). For instance, the number of sexual partners during life is negatively related to skeletal asymmetry in men (Gangestad, Bennet, & Thornhill, 2001; Thornhill & Gangestad, 1994).

Facial symmetry is likely considered to be attractive as a result of the information it conveys about health, mate quality, and immune functioning. Those who possess greater symmetry have been demonstrated to have greater parasite resistance (Grammer et al., 2003, Livshits & Kobyliansky, 1991), as well as greater genetic quality (Palmer & Strobeck, 1986; Parsons, 1990; Thornhill & Møller, 1997; Watson & Thornhill, 1994). Chromosomal abnormalities (e.g., Down's syndrome and Trisomy 14) present high levels

of facial asymmetry (Thornhill & Møller, 1997). Interestingly, in studies of prehistoric Native American Indians, older individuals had more symmetric bone structures than those who died young (Ruff & Jones, 1981). However, there is also research that did not find a relationship between facial symmetry and actual health in both children (Pound, Lawson, Toma, Richmond, Zhurov, & Penton-Voak, 2014) and adults (Rhodes, Zebrowitz, Clark, Kalick, Hightower, & McKay, 2001). Rhodes et al. (2001) did, however, find decreases in perceptions of health as perceptions of facial asymmetry increased (r = -.31). Pound et al. (2014) did not examine perceptual differences.

Causes of asymmetry include developmental stress, such as exposure to environmental causes of birth defects (e.g., the medication Thalidomide) or genetically induced defects (e.g., Down's syndrome and other genetic disorders; Thornhill & Møller, 1997). These developmental effects covary negatively with performance (e.g., survival, growth, development rate, mating, success in fights for resources, parasite attacks; Møller, 1996, 1997; Møller & Pomiankowski, 1993; Møller & Swaddle, 1997; Møller & Thornhill, 1997; Parsons, 1990; Polak, 1997; Watson & Thornhill, 1994) in many species, including humans (Thornhill & Møller, 1997). Developmental instability has been associated with outcomes from cancer to mental health to fertility issues (Thornhill & Møller, 1997). On the other hand, facial symmetry may signal an individual's ability to cope with the challenges of his or her environment (Fink et al., 2006). Although in many cases, facial asymmetries may be subtle, nevertheless, research has found significant effects for manipulations of facial symmetry in photos (e.g., Perrett et al., 1999; Rhodes et al., 1998). Furthermore, symmetric people of both sexes are stereotypically believed to have greater emotional and psychological health (Manning, 1995; Manning, Scutt,

Whitehouse, Leinster, & Walton, 1996). Some studies have also demonstrated actual differences in emotional and psychological health among those who are more and less asymmetrical (e.g., Shackelford & Larson, 1997).

Masculinity/Femininity. A second biologically based determining factor of attractiveness is the degree to which faces are masculine or feminine. Research seems to suggest that the specific attributes generally considered attractive for men differ from those generally considered attractive for women, with more masculine features being preferred for men and more feminine features being preferred for women (see Grammer et al., 2003 for a review).

Masculine traits associated with male facial attractiveness include a longer, broader jaw (Grammer et al., 2003) and generally bigger lower faces (Grammer & Thornhill, 1994; Mueller & Mazur, 1997; Thornhill & Gangestad, 1999), a pronounced brow ridge, and a wide nose and chin (Baudouin & Tiberghien, 2004). In males, a broad chin is perceived as more dominant (Keating, Mazur, & Segall, 1981; Mazur, Mazur, & Keating, 1984). However, adding a feminine touch to a male face can make it more attractive to some females (Perrett, Lee, Penton-Voak, Rowland, Yoshikawa, Burt, Henzi, Castles, & Akamatsu, 1998), as broad jaws signal increased testosterone and resulting aggression. In addition, it is more masculine for males to have decreased contrast between skin and lip color (Stephen & McKeegan, 2010).

The traits that result in male attractiveness are those that signal competitive ability, specifically, traits that strengthen or signal men's ability to acquire resources (Grammer et al., 2003). In terms of mate selection, females place more emphasis on males' resources than on physical features (Buss, 1994), since evolutionarily, females

relied on males for protection and the acquisition of resources. The parental investment required for women is much higher than for men (e.g., women invest a minimum of nine months of reproductive potential into a single offspring), and thus it is important for them to try to find a mate that can provide resources and protection for their investment (Clutton-Brock & Vincent, 1991). Therefore, it follows that masculine traits associated with the ability to acquire resources in the ancestral environment, such as the broad facial features linked with strength and masculinity, provide an advantage in mate selection and thus are considered more appealing.

Conversely, females are considered to be facially attractive when they have a smaller lower face (Cunningham, 1986; Grammer et al., 2003; Grammer & Atzwanger, 1994; Grammer & Thornhill, 1994; Johnston & Franklin, 1993; Jones, 1996; Rensch, 1963), wide eyes (Baudouin & Tiberghien, 2004), a thick mouth and upper lip (Baudouin & Tiberghien, 2004; Jones, 1996), and high, prominent cheekbones (Baudouin & Tiberghien, 2004; Grammer & Atzwanger, 1994). Additionally, possessing skin with a slightly reddish tint (Fink et al., 2001), as well as increased contrast between skin and lip color (Stephen & McKeegan, 2010) are considered to be feminine and thus more attractive on women.

For females, a combination of traits signaling youth (e.g., big eyes and lips) and maturity (e.g., high cheekbones versus puffy cheeks) plays a role in determining attractiveness (Grammer et al., 2003). Additionally, whereas females rank male resources as more important than attractiveness, men rank looks as more important than resources for females because looks signal better health and reproductive potential (Grammer et al., 2003). This is likely because men have a higher potential rate of reproduction than

females and can invest more in mating efforts than in parental effort (Clutton-Brock & Vincent, 1991).

Indicators of pathogen presence. Along with the facial features that are considered attractive, there are also features that are considered less attractive, specifically because they may indicate the presence of pathogens. According to Schaller and Park (2011), humans have an innate, automatic, "behavioral immune system (BIS)" that triggers avoidance of individuals who show physiological markers of pathogen presence. This response developed many years ago, when humans lacked the intellect we have today and had to rely solely on external cues to determine who was a good mate. This explains why features that signal health, fertility, and symmetry are seen as attractive (Fink & Penton-Voak, 2002; Fink et al., 2006; Jones, 1996).

The BIS detects potentially threatening cues in the environment, such as bad odors or skin blemishes, which signal potential pathogen presence. This is then followed by an avoidance response (Schaller & Park, 2011). This response is even stronger when the perceiver believes they are especially vulnerable to pathogen infection, and it occurs whether or not there is any actual threat (Schaller & Park, 2011). Thus, it follows that those with skin blemishes or other facial imperfections (e.g., scars, warts, etc.) trigger an avoidance response. This likely explains why homogeneous, smooth skin is considered attractive in both men and women (e.g., Fink et al., 2001). The BIS response also likely explains why there are so many artificial attractiveness enhancements on the market for people to conceal facial imperfections, correct asymmetries, and appear more masculine/feminine.

Artificial attractiveness enhancements. While attractiveness can be digitally manipulated by altering masculinity/femininity and symmetry, there are a plethora of artificial techniques that can enhance attractiveness. While symmetry and masculinity/femininity are components of facial structure, artificial attractiveness enhancements, such as makeup, can be used to create the illusion of different facial features and structure and thus enhance attractiveness indirectly. In fact, makeup attempts to correct asymmetries or emphasize feminine characteristics in females. For example, women can apply blush to increase skin saturation and make themselves appear healthier (Fink et al., 2001). Lipstick can also be applied to increase the luminance contrast between skin and lip color (Stephen & McKeegan, 2010). The increased saturation and contrast created by the application of blush and lipstick also signal a greater number of blood vessels that carry oxygen to the skin – traits that are correlated with physical fitness and youth (Smith, 2009). Women can also apply concealer to camouflage bluish tones or skin blemishes that detract from attractiveness (Fink et al., 2001; Fink & Penton-Voak, 2002). Finally, women can use makeup to emphasize sexually dimorphic traits that are associated with reproductive potential, as these features have been rated as more attractive in numerous studies (e.g., Johnston & Franklin, 1993; Penton-Voak, Jacobson, & Trivers, 2004; Perrett, May, & Yoshikawa, 1994; Perrett et al., 1998; Rhodes, Hickford, & Jeffery, 2000; Russell, 2003). For instance, women can apply eyeliner and mascara to create the appearance of larger eyes (Shapouri, 2010), lip liner and lipstick to create the appearance of fuller lips (Gustashaw, 2011) and bronzer to create the appearance of higher cheekbones (Guglielmetti, 2010).

Along with applying makeup to enhance appearance, women can also vary their hair length and style to alter their attractiveness. Women that have longer hair are generally considered more feminine, and therefore more attractive (Grammer, Fink, Juette, Ronzal, & Thornhill, 2001; Grammer et al., 2003). Furthermore, previous research has found that long and medium hair worn down significantly improves appearance regardless of how attractive the woman was rated with her hair pulled back (Mesko, & Bereczkei, 2004).

Although men typically do not wear makeup, they also have a few options for using artificial attractiveness enhancements to increase their appearance. First, men with light facial stubble are perceived as more attractive than men without facial hair (Neave & Shields, 2008). Having hair (facial hair and head hair) is seen as a symbol of masculinity and strength, whereas baldness signifies deterioration and senility (Cooper, 1981; Guthrie, 1977). Similarly, balding men are generally rated less favorably on dimensions such as physical attractiveness, self-assertiveness, social attractiveness, personal likability, and life success (Cash, 1990; Hankins, McKinnie & Bailey, 1979; Keating & Bai, 1986; Keating, Mazur & Segall, 1981; Roll & Verinis, 1971).

In addition to the use of makeup and facial hair as artificial attractiveness enhancements, there are also situation-specific aspects of artificial attractiveness enhancement. These enhancements are particularly likely to be present in business profile photos, such as those on LinkedIn. One LinkedIn business article advises users to “wear what you’d wear to work” in their profile photos (Abbot, 2014). Research by PhotoFeeler, a website that allows users to rate profile photos from social media websites such as LinkedIn and Twitter, suggests that “dressing to impress” raises ratings of

perceived competence and influence more than any other factor tested (examples of other factors included eye contact, smiling, and avoiding photos that are too dark). Empirical research has also found that men and women can enhance their appearance by dressing more formally (Harris, James, Chavez, Fuller, Kent, Massanari, Moore, & Walsh, 1983; Hill, Nocks, & Gardner, 1987). Additionally, Harrison Monarth, an executive coach and leadership development consultant, states that a "moderate amount of Photoshop is allowed" (2015, p. 27) in LinkedIn pictures. He says that the software can be used to enhance tone and lighting, as well as to remove blemishes to increase the appearance of health and vitality (2015). Monarth also proposes that users should spend as much attention to the composition of their LinkedIn photo as to the details of a resume because "that small square…in an instant, seems to tell people so very much about you." (p. 28).

Associations with other variables. In research on attractiveness, it can be difficult to isolate the effects of attractiveness from the effects of other variables. For instance, past research has demonstrated that manipulating masculine/feminine appearance not only affects perceived attractiveness, it also activates gender-based stereotypes that can affect ratings of job suitability (Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985; Johnson, Podratz, Dipboye, & Gibbons, 2010). Indeed, previous research has found significant correlations between perceived attractiveness and femininity in females ($r = .272$, $p < .01$; Wexler, 2015). Additionally attractiveness is negatively correlated with perceived age ($\rho = -.91$, $p < .01$;Korthase & Trenholme, 1982) and positively correlated with perceived health ($r = .36$, $p < .01$; Wexler, 2015). While these correlations lend evidence for the notions of attractiveness as representative of reproductive fitness, they make it difficult to isolate the effects of attractiveness biases

alone. In other words, stereotypes associated with perceptions of health and masculinity/femininity may also be contributing to biased recruitment decisions.

As a result, perceptions of attractiveness may be confounded with other constructs such as gender stereotypes, perceived age, and perceived health. This study will attempt to isolate facial attractiveness to the greatest extent possible while increasing the external validity of the study. Specifically, since facial attractiveness will be examined through online professional networking sites, it follows that the candidates will be dressed nicely and well groomed, and that women will wear professional makeup. Status generalization theory outlines the mechanisms through which information visible in an online profile, such as appearance-based characteristics and qualification information, may affect a recruiter's likelihood of inviting someone for a job interview.

When recruiters look at profiles on SNSs such as LinkedIn, they see multiple pieces of information such as appearance-based characteristics from the user's profile photo, as well as individual-specific information contained in the user's profile. All of this information is integrated into an impression that recruiters use to determine who should receive an interview invite. Status generalization theory provides a framework for hypothesizing how these various pieces of information may be integrated into a performance expectation, as well as the degree to which attractiveness may play a role.

Status Generalization Theory

Status generalization theory describes how a distribution of power and prestige initially forms among a set of individuals, given information about the individuals' "status characteristics" (Wagner & Berger, 2002). This theory, also known as status

characteristics theory, is a subtheory of expectation states theory[1] that seeks to explain how people form task performance expectations for others they are encountering for the first time (Berger, Fisek, Norman, & Zelditch, 1977; Webster & Foschi, 1988).

Status is defined as estimations of competence, honor, or esteem (Weber, 1968) that significantly affect opportunities for success (e.g., Collins, 2004; DiMaggio & Mohr, 1985). Status hierarchies exist on several different social identities (e.g., race, gender, age, etc.) in the broad culture. The general notion is that in new situations, actors identify the status characteristics that distinguish among members of the group. Then, the status hierarchy found in broader culture is applied to the new context, unless there is clear evidence to indicate that the available status characteristics are irrelevant in the new context. For example, in U.S. culture, White individuals typically occupy a high-status position. Thus, in new groups, White individuals are likely to benefit from higher performance expectations due to the generalization of that status structure into the group (unless clear evidence suggests that race is not relevant to performance in the given context).

The status generalization process is used heuristically to quickly form an idea of a status structure among people who are generally unfamiliar with each other and operates most strongly when individuals have no prior interaction history and no information about one another except for "status characteristics" (Webster & Driskell, 1978). Thus, it is likely to be particularly relevant to online recruiting contexts, where recruiters have access to some information on candidates' online profiles. Typically, the information

[1]Expectation states theory seeks to explain the emergence of status hierarchies in situations where actors are oriented toward the accomplishment of a collective goal or task (Correl & Ridgeway, 2006).

contained within online profiles tends to be relatively minimal, and it is unlikely that recruiters have interacted with each candidate previously.

Although status generalization theory has traditionally been examined in the context of social interactions, it is believed that the processes of status generalization may also explain why recruiters have a tendency to focus their efforts on some potential candidates over others. Specifically, when recruiters are presented with different status characteristic information about potential candidates, such as attractiveness, gender, and qualification level, they will interpret this information in light of the particular job for which they are recruiting and will select which candidates to pursue based on the candidate's perceived ability for the specific position.

Two types of status characteristics describe the attributes of actors in a situation. *Diffuse* status characteristics involve two or more states that are differentially *valued* (Berger, Fisek, & Norman, 1998) in that they are used to assign importance to certain states over others. Diffuse status characteristics are prestigious or invidious, carry connotations of possessing several different additional characteristics (analogous to stereotypes), and carry connotations for being good at "most tasks" (Webster & Driskell, 1983). Characteristics such as race, sex, age, and attractiveness represent diffuse status characteristics (Webster & Driskell, 1983). For instance, men are believed to be better than women at many tasks including those requiring strength, mechanical skill, assertiveness, rationality, and intellect (Conway, Pizzamiglio, & Mount, 1996; Wagner & Berger, 1997; Webster & Driskell, 1983; Williams & Best, 1990).

The second type of status characteristic is *specific* status characteristics. Specific status characteristics involve two or more states that are differentially *evaluated*

depending on the context (Berger et al., 1998). They are used to determine the degree to which someone possesses a certain skill related to the task domain. Specific status characteristics are prestigious or invidious and carry connotations of either some specific skill or its lack (Webster & Driskell, 1983). For example, one stereotypically expects an engineer to have high status for intelligence but lower status for social skills (Webster & Driskell, 1983).

The formation and application of status characteristics. The particular characteristics that become status characteristics depend on societal definitions (Webster & Hysom, 1998). These definitions lead to the formation of shared status schemas about the relative worth of certain groups that are derived from a combination of broader societal stereotypes (Rivera, 2010). Even when stereotypes differ dramatically in content (e.g., stereotypes of gender, race/ethnicity, occupations, etc.), the status element (high or low status classification) associated with the stereotype is fairly similar (Conway et al., 1996; Jost & Banaji, 1994). In other words, each of these stereotype sets has in common a status element that associates greater worthiness and competence with one category of the characteristic (e.g., attractive people) than another (e.g., less attractive people). As a result of this similar status element, status generalization theory argues that otherwise very different social distinctions can have comparable effects on the organization of interactional status hierarchies (Correll & Ridgeway, 2006).

After status distinctions are formed, the perceived validity of a new status belief (e.g., perceived competence) is further strengthened by future encounters that support it and undermined by those that contradict it (Ridgeway, 1991; 2006). Multiple consistent and clearly valid local experiences are likely necessary to induce new status beliefs that

are strong enough to affect actors' treatment of others (Ridgeway et al., 2009). Eventually, even those disadvantaged by the status distinctions are forced to concede that "most people" would rate the high status members of a particular group as more competent than low status members (Ridgeway & Erickson, 2000). This is what differentiates status beliefs from in-group bias (Ridgeway & Erickson, 2000). Thus, this theory dictates that even less attractive people associate attractiveness with higher status. Eventually, these differential performance expectations come to be associated with the characteristic itself and not with the individuals who happen to possess it (Webster & Hysom, 1998). See Figure 2 for a theoretical model of the status generalization process.

People will attend to any diffuse or specific status characteristic that differentiates individuals in a given situation (Webster & Driskell, 1983). For instance, if a group includes both men and women (as opposed to same-sex groups), the diffuse characteristic of gender will become salient. Whenever a status characteristic becomes salient, people will treat it as if it gives useful clues to the ability to perform tasks (Webster & Driskell, 1983). Whether or not there is any "logical" reason to believe that the status characteristic is relevant to successful task completion, by default, people will treat it as if it were relevant (Webster & Driskell, 1983). That is, the burden of proof is placed upon demonstrating that status is not relevant to ability, instead of the other way around. Thus, status characteristics such as race, gender, or attractiveness become the basis for expectations for a person's task-relevant ability.

Status generalization theory proposes that these processes occur relatively unconsciously (Zelditch, 1985). That is, the theory does not assume that status generalization is consciously reasoned or even that the subject is aware that such a

process is happening (Zelditch, 1985). For instance, actors are typically not aware of it and cannot talk about it in post-session interviews (Zelditch, 1985). Specifically, the theory suggests that status distinctions implicitly bias the everyday processes through which people are evaluated, given access to rewards, and directed toward or away from positions of power and prestige in society (Berger et al., 1977; Berger & Webster, 2006).

The intersection of multiple status characteristics. When people are presented with multiple pieces of status information, there is evidence that they combine information from all salient status characteristics in forming expectation states about a given actor, even in situations where status characteristics present inconsistent information (Berger & Fisek, 1974). When there are multiple status characteristics, perceivers implicitly aggregate the value of each characteristic, weighted by implicit stereotypes about task relevance. An actor's expectation advantage (or disadvantage) relative to another actor is equal to the difference between the aggregated expectations for the two (Wagner & Berger, 2002). The larger the weighted expectation advantage, the greater the differentiation there is in power and prestige behaviors between the two actors (Wagner & Berger, 2002).

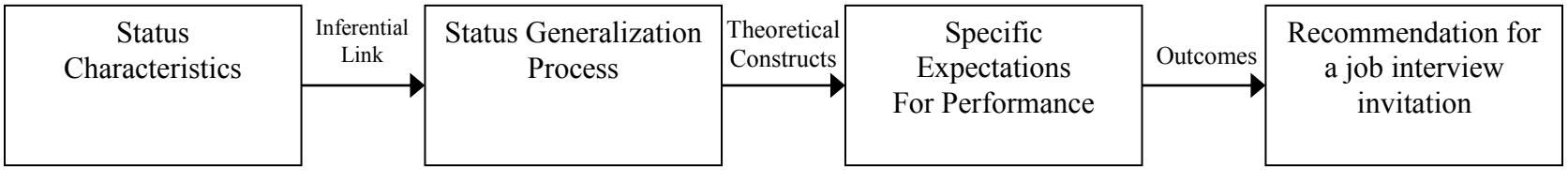


*Figure 2.*Theoretical Model of the Status Generalization Process (adapted from Webster & Driskell, 1983 and Webster & Hysom, 1998).

Note: The recommendation for a job interview invitation was imported into the model where Webster & Driskell (1983) and Webster and Hysom (1998) specified a general "behavioral outcome" variable.

Back

Attractiveness as a status characteristic. Research has shown that physical attractiveness is a status characteristic in our culture, given that its states (less attractive and more attractive) are accorded different social value and are associated with a wide range of expected performance capacities (e.g., Webster & Driskell, 1983; Jackson, Hunter, & Hodge, 1995). It has also been shown that there is a high correlation between being physically attractive and being perceived as high status (Webster & Driskell, 1983).

Webster and Driskell (1983) examined the application of status generalization theory to performance expectations of actors when participants were presented with information concerning the actors' attractiveness, educational background, and occupational background. Specifically, participants were shown a photo of either an attractive or less attractive person (or no photo) who graduated from either a low-prestige school or high-prestige school and who was employed in either a low-status occupation or a high-status occupation. The performance expectations attributed to the attractive, low prestige actor were higher than the expectations attributed to the low prestige actor without a photo (Webster & Driskell, 1983). Conversely, the expectations attributed to the less attractive, high prestige actor were lower than the expectations attributed to the high prestige actor without a photo (Webster & Driskell, 1983). This study thus demonstrated that perceivers tend to use attractiveness information as a status characteristic that generally either increases or decreases performance expectations in line with the broader status hierarchy (e.g., more attractive people being seen as higher status than less attractive people).

More recently, Jackson et al. (1995) conducted a meta-analysis of studies that have examined attractiveness, gender, competence, and individuating information as

predictors of probable success. Attractiveness and gender were conceptualized as diffuse status characteristics, whereas individuating information about the person's intellectual competence (e.g., teacher ratings of students; occupational competence) was conceptualized as a specific status characteristic. When examining the effects of diffuse characteristics, they found that attractive males were perceived as most competent, consistent with the notion that males (Lockheed, 1985; Meeker & Weitzel-O'Neill, 1985) and attractive people (Webster & Driskell, 1983) are typically considered high status. When specific characteristics (individuating information) were included in the analysis, they found that the specific and diffuse characteristics jointly influenced expected intellectual competence. However, the individuating information was weighted more heavily than the diffuse status characteristics. Specifically, the effects of attractiveness by itself were significantly reduced when participants were told that the target person graduated from a low prestige college and had a low prestige job. Additionally, the low attractiveness person from a high prestige college with high prestige job was rated higher than the high attractiveness person from a low prestige college with low prestige job (Webster & Driskell, 1983). These results are consistent with research on the effects of individuating information and stereotypic information on person perception (discussed in greater detail later; e.g., Deaux & Lewis, 1984; Eagly & Steffen, 1984; Fiske & Neuberg, 1990; Jackson, Sullivan, & Hodge, 1993).

Consistent with this work, I conceptualized attractiveness and gender as diffuse status characteristics, whereas qualification information was conceptualized as a specific status characteristic. Attractiveness meets the requirements of a diffuse status characteristic (as outlined by Wagner & Berger, 2002) in that it has two or more states

(less attractive and more attractive) that are differentially evaluated in terms of social worth and competence expectations (attractive people with higher status and competence and less attractive people with lower status and lower competence). Another feature of status characteristics is that they carry connotations of additional characteristics – in other words, they have associated stereotypes. These stereotypes can be used in the implicit "weighting" of diffuse status characteristics that occurs when one forms expectations for task performance. Thus, I next discuss the content of stereotypes associated with attractive individuals.

Attractiveness and Expectations

Consistent with Status Generalization Theory, attractiveness is typically associated with a constellation of positive stereotypes, collectively characterized as the "beautiful is good" stereotype (Feingold, 1992; Langlois et al., 2000). This stereotype leads perceivers to believe that those who are more attractive are more sociable, friendly, warm, and competent than less attractive individuals. Additionally, attractive candidates are perceived to be more likable and are deemed to "have all it takes to be successful in life" (Desrumaux et al., 2009, p. 7). There is also weaker, but significant, evidence that more attractive people are perceived as more intelligent and mentally adjusted than less attractive others (Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1992; Langlois et al., 2000). According to the Stereotype Content Model (Fiske, Cuddy, Glick, & Xu, 2002), "sexy women" are rated as moderate in competence and moderate in warmth (the cluster received scores of 3.14 for competence and 3.14 for warmth on a 1-5 scale). While attractiveness does not always pose advantages (e.g., consider the "dumb

cheerleader" stereotype (Ninemire, 2016) the majority of studies have noted the rewards of attractiveness.

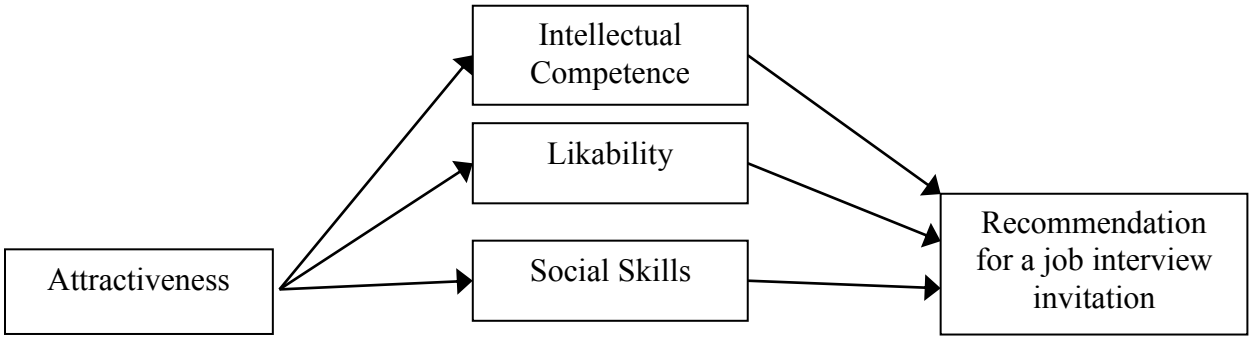
The benefits of attractiveness have been demonstrated in many areas of the occupational domain. As dictated by attractiveness stereotype research, attractive individuals are rated higher than less attractive individuals on metrics such as perceived job qualifications (Dipboye, Fromkin, & Wiback, 1975; Quereshi & Kay, 1986; Wexler, 2015), professional potential (Cash, Gillen, & Burns, 1977; Heilman & Stopeck, 1985; Marlowe, Schneider, & Nelson, 1996) and predicted job success (Morrow, McElroy, Stamper, & Wilson, 1990). Consistent with the beautiful is good stereotype, these stereotyped advantages experienced by attractive individuals result in attractive individuals receiving higher outcome ratings, such as more positive hiring recommendations (Cann, Siegfried, & Pearce, 1981; Gilmore, Beehr, & Love, 1986; Wexler, 2015), increased compensation and salary raises (Frieze et al., 1991; Heilman & Stopeck, 1985; Roszell, Kennedy, & Grabb, 1989), and more positive evaluations of their efficiency and work quality (Drogosz & Levy, 1996; Landy & Sigall, 1974). Finally, past research has demonstrated that perceptions of intellectual competence, likability, and social skills mediate the relationship between attractiveness and hiring recommendations (Wexler, 2015).

Many studies have also demonstrated the benefits of physical attractiveness on selection outcomes (e.g., Behrend, Toaddy, Thompson, & Sharek, 2012; Carlson, 1967; Dipboye et al., 1977; Henderson, Grappendorf, & Burton, 2009; Jawahar & Mattsson, 2005; Johnson & Roach-Higgins, 1987). Status generalization theory suggests that attractiveness, as a diffuse status characteristic, will be associated with positive

stereotypical characteristics (i.e., increased expectations for performance). These positive associations and expectations were hypothesized to then predict a greater recommendation for a job interview invitation.

Hypothesis 1a-c: Attractive candidates will receive higher ratings of perceptions of a) intellectual competence, b) likability, and c) social skills than less attractive candidates.

Hypothesis 2a-c: The relationship between attractiveness and recommendation for a job interview invitation will be mediated by perceived a) intellectual competence, b) likability, and c) social skills.



Candidate Gender

The Lack of Fit Model (Heilman, 1983) suggests that "occupational sex bias is a result of an incongruity between one's perceived skills and attributes, which are associated with gender, and the perceived nature of the job's requirements" (Heilman & Saruwatari, 1979, p. 203). That is, bias results when a candidate's perceived characteristics (masculine/feminine) do not match the perceived job requirements (masculine/feminine). The larger the perceived discrepancy, the greater the failure that is anticipated (Heilman, 1983) and the more biased evaluations are likely to result.

Additionally, status generalization theory suggests that males' higher status in our culture should generalize to all situations in which gender discriminates among individuals, regardless of its relevance, and with or without awareness of its effects (Jackson et al., 1995). In other words, evaluators should have higher expectation states for males than for females (Lockheed, 1985; Meeker & Weitzel-O'Neill, 1985). The theory also posits that gender-based expectations will be invoked for topics that are gender stereotypic and for contexts where men and women interact, even if the topic is gender neutral (Dovidio, Brown, Heltman, Ellyson, & Keating 1988). Again, the theory also proposes that even those disadvantaged by the status belief concede to the status belief whether or not they personally endorse it (Ridgeway & Erickson, 2000), so it is not expected that differences in evaluations will arise based on participant gender.

When examining the effects of appearance and gender in simulated candidate screening contexts, past research has found main effects of gender, such that male candidates are preferred over female candidates (Dipboye et al., 1975; Dipboye et al., 1977; Cann et al., 1981). Additionally, past research has found that men's physical attractiveness increases their probability of being hired for all types of jobs (Heilman & Saruwatari, 1979) with the exception of typically feminine jobs (e.g., Cash et al., 1977), while women's attractiveness only increases their likelihood of being hired for a female-type job or a nonmanagerial position (Cash et al., 1977; Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985). Studies that have examined the effects of gender and attractiveness in managerial positions (e.g., Dipboye et al., 1975; Dipboye et al., 1977), have found that women are at a disadvantage compared to men. Additional research has

demonstrated that female and male candidates receive lower ratings when being considered for an opposite-sex-type job (Davison & Burke, 2000).

When examining gender in conjunction with attractiveness, it is important to note that appearance-based judgments may have particularly detrimental effects for women, as there is a much greater emphasis on female attractiveness in mate selection, more so than for men (see Feingold's (1990) meta-analysis). Also, women in the United States tend to be held to higher standards of beauty and subjected to greater appearance-based expectations than men (Rudd & Lennon, 2000). This likely explains why 92% of all cosmetic procedures are performed on women, while only 8% are performed on men (American Society of Plastic Surgeons, 2014). Because women are expected to conform to higher standards of beauty than are men and thus are already expected to be more attractive, status generalization theory would suggest that lower attractiveness would decrease a woman's status more so than a man's. Further, in the employment literature, one study found that less attractive women are the least-preferred candidates after attractive men, attractive women, and less attractive men (e.g., Marlowe et al., 1996). Additionally, previous research has found interaction effects between attractiveness and gender in simulated candidate selection contexts, such that attractive males are rated higher than attractive females, and less attractive males are rated higher than less attractive females (Dipboye et al., 1975; Dipboye et al., 1977).

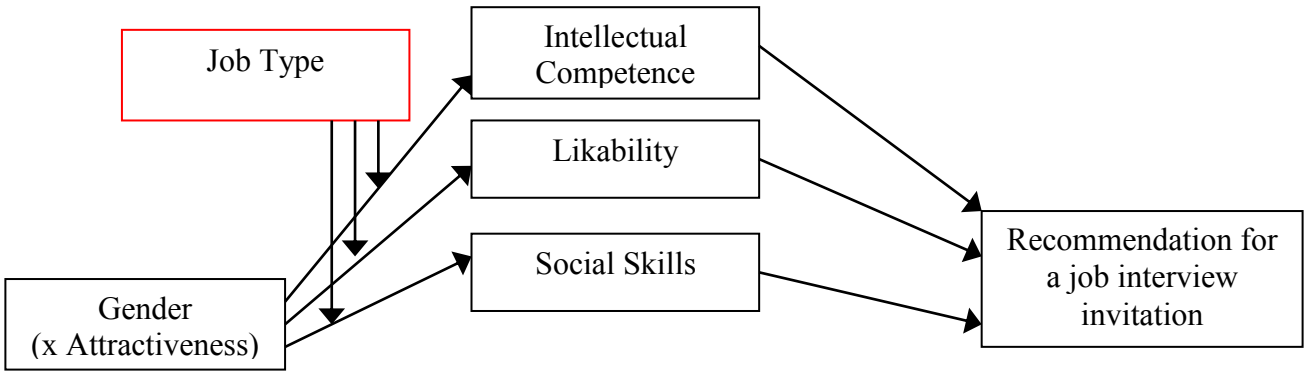
Cash et al. (1977) argued that the "beautiful is good" stereotype holds only when the gender of the candidate matches the job type under consideration (masculine or feminine). Using personnel consultants as raters, Cash et al. (1977) found support for this argument, finding that for masculine jobs, males were perceived as more qualified

than females and attractive males as more qualified than less attractive males. The same held for females in feminine jobs. These results suggest that the pro-male preference is not a generalized phenomenon, but rather is restricted to masculine-stereotyped occupations.

Additionally, gender has been shown to moderate the effects of attractiveness on evaluations, such that the relationship of attractiveness to evaluations is stronger for males (d = .93) than females (d = .70; p< .01; Jackson et al., 1995). Because diffuse status characteristics (attractiveness and gender) combine to influence expectation states regarding intellectual competence, this results in the highest expectation state for attractive males, who combine the high status of attractiveness (Webster & Driskell, 1983) with the high status of being male (Lockheed, 1985; Meeker & Weitzel-O'Neill, 1985). However, this effect is expected to be contextually variable, such that attractive males were expected to receive higher intellectual competence and warmth ratings than females for male-typed jobs, and vice-versa for attractive females in feminine jobs. Thus, it was hypothesized that:

Hypothesis 3a-c: The relationship between candidate gender and recommendation for a job interview invitation will be mediated by perceived a) intellectual competence, b) likability, and c) social skills.

Hypothesis 4a-c: A three way interaction will be found between candidate attractiveness, candidate gender, and job type to predict perceived a) intellectual competence, b) likability, and c) social skills. This interaction will demonstrate that attractive males are rated highest in male-typed jobs and attractive females are rated highest in female-typed jobs.



Implicit and Explicit Attitudes

Status generalization theory proposes that the formation of expectation states is an unconscious process (Zelditch, 1985). Additionally, according to dual process theories, behavior can operate implicitly (without conscious intent) as well as explicitly (with conscious intent, Chaiken & Trope, 1999). As a result, it is important to examine implicit attitudes in conjunction with explicit attitudes to increase the understanding of the bias process by identifying both implicit and explicit pathways through which this process occurs. An attitude represents an evaluation (positive or negative) of the entity in question (attractiveness; Ajzen & Fishbein, 1977).

Implicit attitudes are defined as evaluations that a) have an unknown origin, b) are activated automatically, and c) influence implicit responses, specifically, uncontrollable responses and ones that people do not view as an expression of their attitude and thus do not attempt to control (Greenwald & Banaji, 1995). Automatically activated attitudes can have a particularly strong influence on a wide range of social judgments and behaviors (Bargh, Chen, & Burrows, 1996), and there is evidence that faces are categorized as attractive or less attractive in less than thirteen milliseconds (Olsen & Marshuetz, 2005).

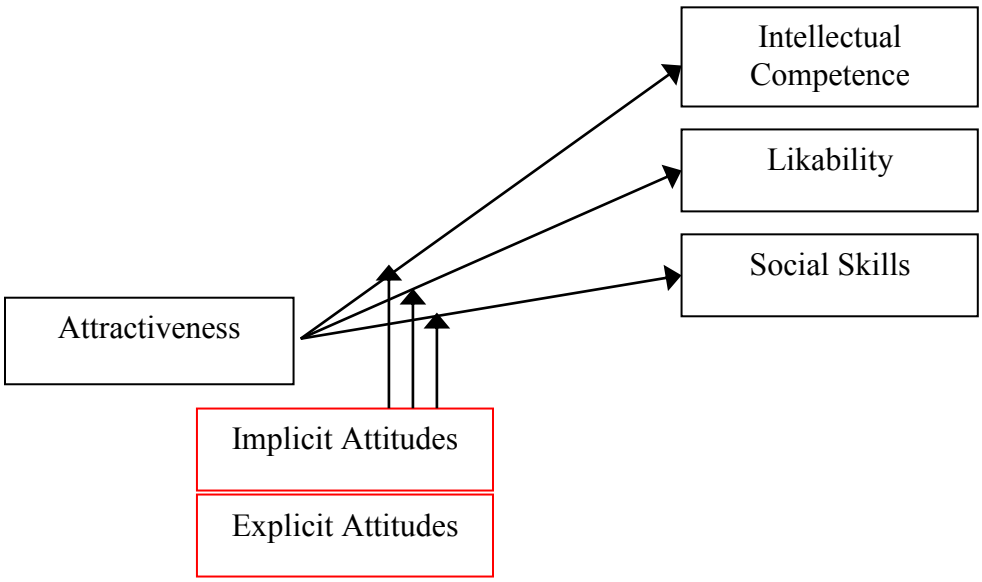
Thus, people are able to perceive the attractiveness of others and begin forming automatic judgments extremely quickly.

Previous research has supported the ability of implicit attitudes to predict biased hiring ratings in simulated or actual selection contexts for race (e.g., Ziegert & Hanges, 2005), gender (e.g., Rudman & Glick, 2001), ethnicity (e.g., Rooth, 2010), and obesity (e.g., Agerström & Rooth, 2011). In accordance with this research, attractiveness attitudes are expected to exist at both implicit and explicit levels and are hypothesized to interact with candidate attractiveness to predict perceptions of social skills, intellectual competence, and likability. Status generalization theory describes the process of the formation of expectation states for performance for individual candidates, while implicit and explicit attitudes represent positive or negative evaluations of attractiveness generally. As a result, it follows that those with more biased attractiveness attitudes in general will exhibit a stronger relationship between attractiveness and the status beliefs of perceived intellectual competence, likability, and social skills than those with less biased attractiveness attitudes. In other words, those who more positively evaluate attractive people in general will rate more attractive candidates higher on the outcomes. If respondents did not indicate strong attractiveness biases in general, it was expected that the relationship between candidate attractiveness and perceptions would be weaker for the specific candidates being evaluated.

Hypothesis 5a-c: The relationship between candidate attractiveness and perceived a) intellectual competence, b) likability, and c) social skills will be moderated by explicit attitudes, such that the relationships will be stronger when

explicit attitudes in favor of attractiveness are stronger (i.e., more biased against unattractive people).

Hypothesis 6a-c: The relationship between candidate attractiveness and perceived a) intellectual competence, b) likability, and c) social skills will be moderated by implicit attitudes, such that the relationships will be stronger when implicit attitudes in favor of attractiveness are stronger (i.e., more biased against unattractive people).



In the employment context, the effects of attractiveness biases likely interact with other factors in predicting outcomes. When attractiveness is seen as more relevant (such as for jobs with a high degree of customer visibility), it is likely weighted more heavily than when it is seen as less relevant (such as for jobs with a low degree of customer

visibility). Additionally, the effects of attractiveness biases may be moderated by other status characteristics, such as candidate qualification level.

Customer Visibility

One contextual factor that may influence the degree to which recruiters' ratings are influenced by attractiveness biases is the amount of customer visibility required by the position. Customer visibility is operationalized as the degree to which employees are required to interact with customers face-to-face as opposed to over the phone. Because physically attractive individuals are seen as more sociable, friendly, and warm than less attractive individuals (Langlois et al., 2000), it follows that the beautiful is good stereotype may operate especially strongly for candidates for jobs that are more "visible" in nature (i.e., jobs that require more face-to-face interpersonal interactions with customers). Specifically, positions that require extensive face-to-face customer interaction typically require heightened social skills for employees to effectively interact with customers than positions that require phone-based customer interactions.

According the Heilman's (1983) Lack of Fit Model, perceptions of fit are a function of a candidate's perceived attributes in relation to the perceived job requirements. When the candidate's perceived attributes are in line with the perceived job requirements, this results in perceptions of good fit and expectations of success. Conversely, when the candidate's perceived attributes are in conflict with the perceived job requirements, poor fit perceptions and expectations of failure result (Heilman, 1983). Because the "beautiful is good" stereotype suggests that those who are more attractive are more competent than less attractive individuals (Feingold, 1992; Langlois et al., 2000), it follows that they would be rated more favorably for jobs that are perceived to require

such face-to-face skills as a result of perceptions of good fit and expectations of success on the job. On the other hand, there would be a perceived misfit between less attractive candidates and the job requirements of a highly visible position, thus resulting in expectations of failure and therefore less favorable evaluations.

Furthermore, status generalization theory predicts that the weighting of status characteristics is contextually variable (Ridgeway, 1997; Wagner & Berger, 1997). For instance, status generalization theory predicts that assertive speakers (categorized as college-educated) will be more influential than tentative speakers when educational attainment is salient and that perceived intellectual competence will mediate this effect (Reid, Palomares, Anderson, & Bondad-Brown, 2009). Additionally, established status distinctions can also fade if changing conditions undermine their validity so that people become less likely to act on them (Ridgeway et al., 2009). That is, certain characteristics may have stronger status valence and may constitute more powerful signals of worth in some contexts than in others (Rivera, 2010). Furthermore, Rivera (2010) found that door staff at an elite nightclub judged actors on the basis of perceived "fit" between club-goers' status characteristics and the club's mission, image, and clientele (the reward of admission being the status prize). These results demonstrate that perceivers use appearance-related status information to infer fit with the goals of a nightclub, just as organizations may use appearance-related status information to infer fit with a particular position. As a result, this study hypothesizes that the effect of customer visibility will affect competence ratings given that attractiveness will have a stronger status valence for high customer contact positions than low customer contact positions. Thus, customer

visibility is not hypothesized to be a status characteristic, but rather a contextual variable that will moderate the relationship between attractiveness and competence.

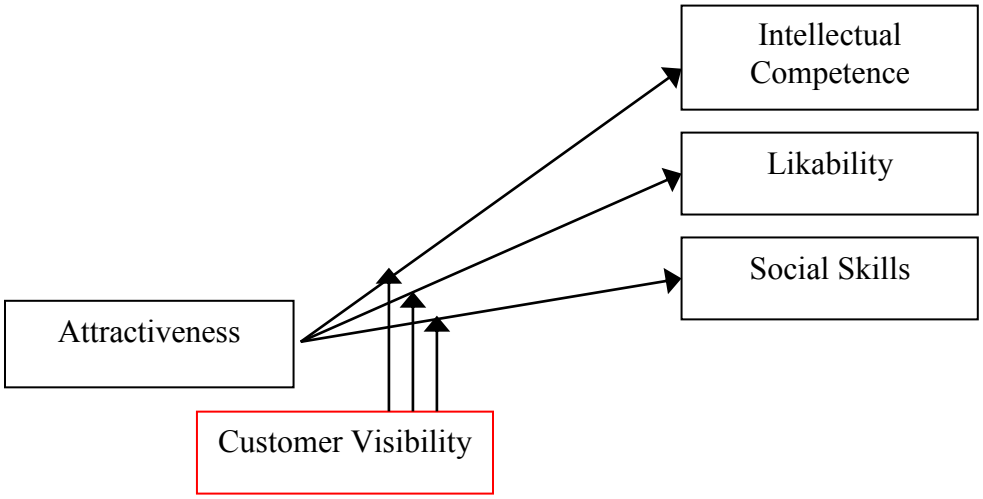
Various studies have examined job type as a moderator of the attractiveness discrimination relationship. However, these studies have traditionally manipulated job type in terms of masculinity-femininity (Cash et al., 1977; Drogosz & Levy, 1996; Jackson, 1983; Johnson, Podratz, Dipboye, & Gibbons, 2010) or managerial-nonmanagerial roles (Cash & Kilcullen, 1985; Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985). These studies found that attractive males were preferred for masculine-typed jobs and managerial positions (which are also stereotyped as masculine). However, the nature of the job type manipulation in these studies is strongly associated with gender stereotypes (e.g., communal and agentic norms). Dipboye et al. (1977) concluded that there is a need for research on candidate attractiveness in conjunction with jobs that are "visible and require social interaction", in particular, social interaction with external clients such as customers (p. 294). Gilmore, Beehr, and Love (1986) also elaborated that "care must be taken, however, to avoid confounding the jobs with other variables (sex stereotypes, etc.)" (p. 108).

Only one study was located that has examined customer visibility as a moderator of the attractiveness bias relationship. In this study, actual hiring managers throughout the U.S. and Canada who worked for a hotel chain were asked to evaluate candidate profiles for one of three different positions: front office associate, housekeeper, and maintenance associate. Front office associate represented a high customer contact position, whereas housekeeper and maintenance associate represented low customer contact positions. Using a policy-capturing approach to estimate the weight of each variable on candidate

evaluations, the beta weight for attractiveness was found to be greater in the evaluation of the front desk associate (high customer contact) position than the housekeeper or maintenance (low customer contact) positions (Tews et al., 2009). However, the conditions in the Tews et al. (2009) study may carry different connotations of prestige, which the present study seeks to hold constant between the two customer visibility positions.

Based on Heilman's (1983) Lack of Fit Model, as well as the contextual effects of status generalization theory (Ridgeway, 1997; Wagner & Berger, 1997), it was hypothesized that when the job is described as requiring a high degree of customer visibility, attractive candidates would be perceived as more competent for the position than when the job was described as requiring a low degree of customer visibility. In other words, attractiveness would be particularly advantageous for high customer visibility positions.

Hypothesis 7a-c: Customer visibility will moderate the relationship between perceived attractiveness and perceived fit with the a) intellectual competence, b) likability, and c) social skills required for the position, such that the relationship will be stronger for jobs with high customer visibility than for jobs with low customer visibility.



Candidate Qualification

Research has supported the notion that providing individuating information can decrease the perceived importance of diffuse status characteristics, and more specifically stereotypes based on gender, sexual orientation, race, and physical attractiveness (Eagly & Karau, 1991; Singletary & Hebl, 2009; Eagly et al., 1991; Cann et al., 1981). When evaluators are presented with individuating information, lower-status candidates receive less discrimination (e.g., Dovidio & Gaertner, 2000; Sigletary & Hebl, 2009).

These findings are also consistent with status generalization theory, where there are stronger effects of physical attractiveness when explicit information about someone is absent than when it is present (Jackson et al., 1995). Similarly, status generalization research has found that diffuse status characteristics have stronger effects on induced expectation states when specific, task-relevant status characteristics are absent (Zelditch, 1985). Here, qualification information (individuating information) represents a specific status characteristic because it contains information that is linked to particular abilities (Webster & Driskell, 1983). Status generalization theory proposes that specific, task-relevant information (e.g., qualification information) will be more strongly weighted than diffuse characteristics in forming expectations states. As a result, it is expected that information concerning qualification level will be a more salient status characteristic than the diffuse status characteristics of attractiveness and gender and thus will more strongly predict performance expectations.

The continuum model of impression formation (Neuberg & Fiske, 1987) provides theory to explain how this effect may occur. After initial categorizing someone based on their salient features (e.g., attractiveness), the perceiver will devote additional resources

to interpreting and categorizing the person if they have enough motivation to do so (Neuberg & Fiske, 1987). At this point, the perceiver's initial categorization will either be confirmed or disconfirmed, and the perceiver will recategorize the stimulus person into a new category that encompasses the additional information they have identified. For instance, if the perceiver is evaluating an attractive person for a job, they will initially assume that the person is competent. However, if the perceiver is motivated to uncover additional individuating information about the candidate, they may also find that the candidate is highly qualified (or not) for the position for which they are recruiting. This information would either confirm (in the case that the attractive person is qualified for the position) or disconfirm (in the case that the attractive person is not qualified for the position) the perceiver's initial categorization.

Finally, the perceiver incorporates all information gathered through this iterative categorization and recategorization process until they have either formed an assessment of a stimulus person, or until he or she has run out of motivation to continue learning more information about the stimulus person. Perceivers initially categorize others because, in general, individuating others requires too much mental effort (Ashmore & Del Boca, 1981; Hamilton & Trolier, 1986; Miller, 1982). As a result, the key determinant in whether or not the perceiver moves to each successive stage in the continuum model is their level of motivation for uncovering new information about and recategorizing the stimulus person, or, in other words, the level of cognitive effort they are willing to expend to gather information about someone.

Consistent with the continuum model, one strategy that may be particularly effective in reducing implicit biases involves providing individuating information about

candidates, such as information related to the candidates' qualifications. After initial categorization, perceivers incorporate individuating information into their assessment of a stimulus person as long as they are willing to expend the mental energy to do so. However, providing additional information to perceivers (so that they do not have to seek it out themselves) takes much of the cognitive burden off of the perceiver to attend to and discover the information on their own. For instance, once perceivers have additional information about targets, they are much less likely to use gender as the deciding factor when choosing a leader (Eagly & Karau, 1991). The presence of individuating information can also lead to less interpersonal discrimination for gay and lesbian candidates (Singletary & Hebl, 2009). The effects of individuating information have also been found to reduce physical attractiveness biases (Eagly et al., 1991; Cann, Siegfried, & Pearce, 1981).

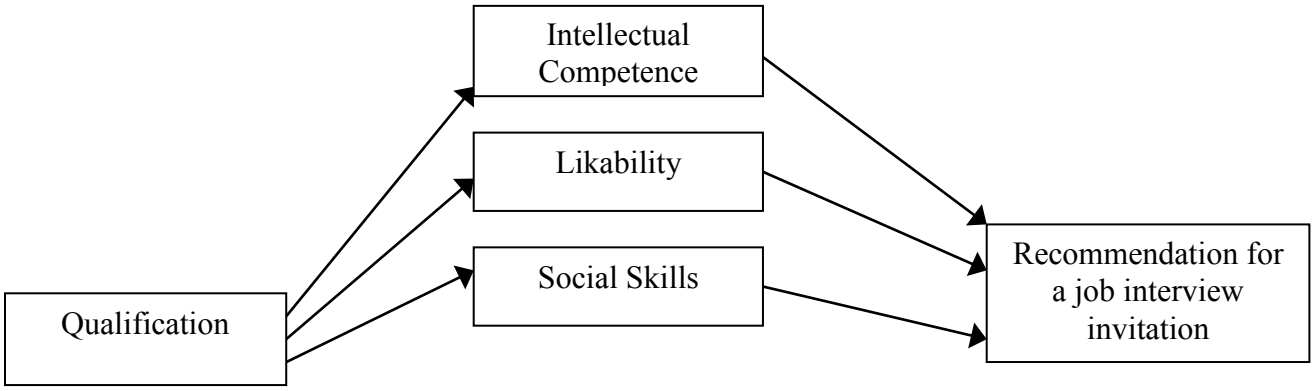
Studies that have examined differential qualification levels in conjunction with attractiveness in the selection context have consistently found main effects of qualification (e.g., Cash et al., 1977; Dipboye et al., 1975; Dipboye et al., 1977; Landy & Sigall, 1974; Tews, Stafford, & Zhu, 2009; Watkins & Johnston, 2000), such that those who are more qualified for a position receive higher outcome ratings. In a study examining attractiveness and essay quality, Landy and Sigall (1974) found that essay quality and attractiveness interact, such that attractiveness more strongly influenced essay evaluations in the poor quality condition but not the high quality condition.

Similar results have been found in studies involving resume evaluations. When resume quality, defined by grade point average and past work experience, was low, attractiveness had a more pronounced effect than when resume quality was high

(Dipboye et al., 1977). In other words, attractiveness might compensate for poor application quality, but did not appear to have a significant effect when candidates are clearly qualified for the position. Thus, it was hypothesized:

Hypothesis 8a-c: More highly qualified candidates will receive more favorable ratings of a) intellectual competence, b) likability, and c) social skills than less qualified candidates.

Hypothesis 9a-c: The relationship between candidate qualification and recommendation for a job interview invitation will be mediated by perceived a) intellectual competence, b) likability, and c) social skills.



Summary

This study examined the effects of physical attractiveness on the recommendation for a job interview invitation through the performance expectations of perceived intellectual competence, likability, and social skills after participants examined a series of online profiles. In this study, attractiveness and gender represented diffuse status characteristics, while individuating qualification information represented a specific status characteristic. These characteristics were examined within two different levels of customer visibility, which represented a contextual effect hypothesized to moderate the

relationship between attractiveness and perceptions of competence. The characteristics of attractiveness, gender, and individuating information have been shown to affect perceptions of competence in previous status generalization studies. The present study sought to examine two additional status mediators – likability and social skills – based on the application of the beautiful is good stereotype (Feingold, 1992; Langlois et al., 2000) to status generalization theory. The effects of gender were examined within male-typed and female-typed jobs to determine the effects of job type on ratings of competence and warmth for male and female candidates. Finally, it was hypothesized that the constructs of implicit and explicit attractiveness attitudes would moderate the status generalization process, such that those who display stronger explicit and implicit attractiveness bias would ascribe higher expectations to those who are more attractive than those who are less attractive. See Figure 1 for the full model that was tested in this study.

Method

Design and Participants

This study used a multilevel policy-capturing design to estimate the weight participants placed on different candidate attributes in determining the recommendation for a job interview invitation. Policy-capturing has been widely used in organizational research to examine how different factors influence decision-making in a variety of contexts, such as job choice (Bretz & Judge, 1994; Judge & Bretz, 1992; Rynes & Lawler, 1983), job search (Cable & Judge, 1994; Rynes & Lawler, 1983; Rynes, Schwab, & Heneman, 1983), job analysis (Sanchez & Levine, 1989), sexual harassment (York, 1989), employment interviews (Dougherty, Ebert, & Callender, 1986), contract arbitration (Olson, Dell'Omo, & Jarley, 1992), motivation (Zedeck, 1977), performance

ratings (Lievens, Conway, & De Corte, 2008; Rotundo & Sackett, 2002), promotion decisions (Stumpf & London, 1981), disciplinary decisions (Klaas & Dell'Omo, 1991; Klaas & Wheeler, 1990); compensation decisions (Viswesvaran & Barrick, 1992; Zhou & Martocchio, 2001), and selection (Graves & Karren, 1992; Mazen, 1990). Policy-capturing methodology involves three primary stages: 1) Presenting raters with a series of scenarios where the independent variables of interest are manipulated at different levels; 2) obtaining evaluations for each scenario; and 3) regressing the evaluations on the independent variables (Karren & Barringer, 2002).

There are many advantages to using a policy-capturing methodology. First, it allows the researcher to experimentally manipulate cue values. By minimizing variable intercorrelations, the multicollinearity that is often found in field data can be avoided (Karren & Barringer, 2002). This enhances the capacity to assess the independent effects of cues (e.g., Feldman & Arnold, 1978). Similarly, experimental manipulation of cues increases control over confounds and thus the ability to rule out competing explanations of results (Caroll & Johnson, 1990; McGrath, 1982). Typically, the results from policy-capturing studies are found to be generalizable (Carroll & Johnson, 1990; McGrath, 1982). Additionally, because policy-capturing results in the generation of a separate regression model for each participant, this allows for a more in-depth assessment of individual differences (Karren & Barringer, 2002). Furthermore, policy-capturing can weaken the effects of social desirability by indirectly assessing the importance of explanatory variables as opposed to relying on self-report methodologies (Arnold & Feldman, 1981; Judge & Bretz, 1992; Rynes et al., 1983). This was especially important given that this study measured perceptions of attractiveness and possible gender bias.

Whereas people may not readily admit that they place a greater emphasis on attractiveness than other attributes (e.g., qualification), a policy-capturing design will be able to examine the weight individuals place on each attribute in the analysis phase of the study.

Since the judgments made in this study were subjective and individual, it is likely that a between-subjects design would not have accurately represented the judgment process of an individual. It was important to have the same participant rate each scenario in order to understand how an individual's judgment process changes with different situations. As a result, the independent variables of attractiveness, qualification, and gender were within-subjects (Level 1) variables in this study. The variables of customer visibility, job type, explicit attitudes, and implicit attitudes were contextual variables, or between-subjects (Level 2) independent variables in this study. Customer visibility and job type were manipulated, whereas explicit and implicit attractiveness attitudes were measured.

This study used a fully crossed design, meaning that each possible combination of the three Level-1 variables was presented to participants. Because there were five manipulations, each with two levels, this resulted in $2^5 = 32$ possible combinations (including within- and between-person variables) and $2^3 = 8$ possible combinations within each participant. Each combination is presented in Table 1 below.

Table 1

Study Conditions.

Condition	Attractiveness	Qualification	Gender	Customer Visibility	Job Type
1	High	High	Male	High	Masculine
2	High	High	Male	Low	Masculine
3	High	Moderate	Male	High	Masculine
4	High	Moderate	Male	Low	Masculine
5	High	High	Female	High	Masculine
6	High	High	Female	Low	Masculine
7	High	Moderate	Female	High	Masculine
8	High	Moderate	Female	Low	Masculine
9	Low	High	Male	High	Masculine
10	Low	High	Male	Low	Masculine
11	Low	Moderate	Male	High	Masculine
12	Low	Moderate	Male	Low	Masculine
13	Low	High	Female	High	Masculine
14	Low	High	Female	Low	Masculine
15	Low	Moderate	Female	High	Masculine
16	Low	Moderate	Female	Low	Masculine
17	High	High	Male	High	Feminine
18	High	High	Male	Low	Feminine
19	High	Moderate	Male	High	Feminine
20	High	Moderate	Male	Low	Feminine
21	High	High	Female	High	Feminine
22	High	High	Female	Low	Feminine
23	High	Moderate	Female	High	Feminine
24	High	Moderate	Female	Low	Feminine
25	Low	High	Male	High	Feminine
26	Low	High	Male	Low	Feminine
27	Low	Moderate	Male	High	Feminine
28	Low	Moderate	Male	Low	Feminine
29	Low	High	Female	High	Feminine
30	Low	High	Female	Low	Feminine
31	Low	Moderate	Female	High	Feminine
32	Low	Moderate	Female	Low	Feminine

The number of participants required for policy-capturing designs specifically, and within-subjects designs generally, is lower than for between subjects designs because of increases in power associated with repeated measures. As a result, small sample sizes (i.e., samples smaller than 35 participants; York, 1989) are typical of policy-capturing

experiments (e.g., Stevenson, 1986). Because this study contained both within- and between-subjects hypotheses, this study included 250 participants. This is consistent with Kristoff-Brown and Colbert's (2002) policy-capturing research within an HLM framework.

The 250 participants were recruited from Amazon's Mechanical Turk (MTurk) pool. MTurk is an online application that enables individuals to post HITs (Human Intelligence Tasks) for people to complete for a small monetary reward. Participants were paid the equivalent of $6 per hour through MTurk for completing the survey, and an additional $2 for completing the IAT. This payment rate was substantially higher than the majority of surveys on MTurk, which helped ensure that participants were motivated to respond with adequate effort. Additionally, the psychometric quality of MTurk data has been demonstrated and replicated (e.g., Buhrmester, Kwang, & Gosling, 2011).

The 250 participants in this sample included 83 (34%) males and 157 (65%) females. The sample was comprised of 57% (*n*=138) Caucasian/White, 22% (*n* =52) African American/Black, 9% (*n* =22) Asian/Pacific Islander, 4% (*n* =10) multiracial, 3% (*n* =7) Hispanic/Latino, 3% (*n* =7) Native Indian/Middle Eastern, .4% (*n* =1) Native American/Alaskan Native, and 2% (*n* =4) other. The mean age was 26.8 (median = 24, range = 18-51). The majority of participants (74%; *n* =184) indicated that they have never worked in a recruiting/HR role, 4% (*n* =9) indicated that they have a degree related to recruiting/HR, 17% (*n* =42) indicated that they have previously worked in a recruiting/HR role, and 6% (*n* =15) indicated that they currently work in a recruiting/HR role. Finally, the majority of participants were employed in some capacity (81%; *n* =202), 11% (*n* =27) indicated that they were unemployed, looking for work, were homemakers,

or were students, 7% (*n* =18) indicated that they were self-employed, business owners, independent contractors, or freelancers, and 1% (*n* =3) indicated that they were MTurk workers.

Out of the 250 total participants, 217 participants also completed the IAT portion. Additionally, participants who completed Part 1 only did not differ significantly on any of the Part 1 measures than participants who completed the whole study.

The participants were given a general overview of the study and informed that their participation was completely voluntary. However, participants were also informed that they may not receive full compensation if they did not complete the survey, or if their responses were not of acceptable quality (this is a built-in feature of MTurk that is used to discourage people from producing poor quality responses). The inclusion criteria in the Mechanical Turk software was set such that only United States residents can participate to minimize the likelihood that any cultural differences that exist in preferences for attractiveness would contaminate the results. Participants also had to have completed a minimum of fifty HITs on MTurk with at least a 95% approval percentage to participate in this study. Finally, participants were required to acknowledge that they were over the age of 18 prior to viewing and completing the survey.

Procedure

Participants were told that they were going to be acting in the role of a recruiter and rating potential job candidates after viewing their online profiles. Participants were informed that the hypothetical organization, SafetyCo, is able to pay their employees well and that employees typically stay with the company long-term after being hired. This was done so that participants would infer that each candidate would be likely to accept a job

offer and would be likely to remain with the organization after accepting the position. Participants were then be provided with one of four job descriptions that were either male-typed or female-typed and that were described as having either a high or low degree of customer visibility. Participants were then given a brief overview of the online recruiting process and were instructed about the importance of providing honest and accurate ratings of the potential candidates. Participants were also told that an initial, automated search was conducted to ensure that the potential candidates met the minimum education requirements for the position, so that they knew that each candidate was at least minimally qualified for the position. This was done to help ensure that participants took each profile into consideration for the position instead of quickly rejecting any particular candidate. The participants were also told that they may see a few of profiles more than once and that this was not a computer error. After rating all the profiles, participants viewed all of the photos (without the other profile information) on the same page and were asked to rank order their top five candidates. See Appendix A for complete participant instructions.

After performing the recruiting task, participants completed the explicit attitude measures and then provided demographic information. Participants were then asked if they would like to continue to the IAT to earn an additional $2 bonus. If they indicated yes, participants were automatically routed to Inquisit, where they completed the attractiveness IAT. Following completion of the entire survey, or once participants indicated they did not want to take the IAT, participants were given a random ID number to enter into MTurk to receive payment for the study.

Manipulations

Level 1

Cues. In policy capturing terminology, the Level-1 variables of attractiveness, gender, and qualifications are "cues" to which participants react. Including only three cues helped to ensure that participants are not cognitively overburdened, as can happen if more than five cues are present (Aiman-Smith et al., 2002). Each cue included two levels (high and low attractiveness, high and moderate qualification, and male and female job candidate), as Aiman-Smith et al. (2002) state that two values per cue is sufficient for most full factorial designs. Additionally, all cues should have an equal number of levels to avoid an induced effect occurring from participants focusing more on the cues with wider ranges than those with narrower ranges (Highhouse, Luong, & Sarkar-Barney, 1999). This is accomplished in this study since all cues will have two levels.

Scenarios. Each social media profile that participants viewed represents a "scenario" in policy capturing terms. Although actual online profiles may contain a substantial amount of information, the profiles created for this study were relatively minimal. This was done to reduce the risk of both confounds and respondent fatigue (Aiman-Smith et al., 2002). The profiles included the candidate's photo, college degree, GPA, and college award information. See Appendix B for a sample profile.

Because there were $2^3 = 8$ possible cue combinations for each participant (based on within-subject variable combinations), each participant was presented with 16 scenarios that were included in the analyses. Thus, each possible combination was presented to participants twice (although on two separate profiles including two separate photos). Additionally, four "distractor" profiles and four practice profiles were presented to participants. The four practice profiles were presented to participants first, but

participants were not told that the first four profiles were practice profiles. In other words, the first four profiles appeared to be part of the profile pool and provided participants with examples of the types of information that would be presented to them in the focal profiles. Thus, it served as a method of calibrating them to the qualifications and appearance-related information they saw during the study. In addition to the practice profiles, the four distractor profiles included photos of African American candidates to help enhance realism of the study and to potentially disguise the focus on attractiveness.

The presentation of scenarios was counterbalanced across participants to reduce effects of order or fatigue. Additionally, the first three scenarios after the practice trials were repeated at the end of the study to assess test-retest reliability (e.g., Cable & Judge, 1994). Thus, participants will view 27 profiles total (4 practice profiles + 16 focal profiles + 4 distractor profiles + 3 repeated profiles). Since participants were likely to recognize the repeated profiles, participants were told that they have seen the profiles previously and that the profiles are presented again to examine the consistency of their ratings. This was done to prevent participants from thinking an error has occurred with the survey. Neither the practice trials nor the duplicate scenarios were included in the counterbalancing or subsequent analyses.

Attractiveness. Photos for this study were real social media networking profile pictures. Specifically, LinkedIn users were asked if their profile photo could be used in a research study examining recruitment decisions based on information contained in mock-LinkedIn profiles. Candidate photos were identified that the researchers believed reflected high and low levels of facial attractiveness. Since facial attractiveness was examined in the context of online professional networking sites, it follows that the

candidates were dressed nicely and well groomed, and that women wore professional makeup. All candidate photos in this study represented Caucasian faces. This is because in American society, Western standards of beauty are derived from a predominantly Anglo-Saxon influence (Evans & McConnell, 2003). Therefore, participants of all races should have a shared schema for what is considered attractive when rating Caucasian faces. This also helped reduce the possibility of race interacting with attractiveness to influence ratings, since the goal of this study was to isolate the effects of facial attractiveness as much as possible. A pool of forty photos of white individuals were obtained for use in pilot testing (discussed below). Additionally, four photos were obtained to be used as "distractor" photos. These photos represented African American candidates to enhance realism and conceal the purpose of the study when raters are viewing a series of profiles.

Pilot testing candidate attractiveness. To pilot test candidate attractiveness, forty profile photos were collected from actual online photos with permission from each profile owner. There was a deliberate effort to collect photos representing a broad range of appearance. Additionally, four of the photos included people who identify as African American (two females and two males). Participants were presented with each of the forty photos and rated the photos on several characteristics including perceived age, weight, race, sex, attractiveness, masculinity, femininity, intellectual competence, likability, social skills, and the degree to which they are a hard worker. Attractiveness was rated on a 1-9 scale (*Extremely Unattractive* to *Extremely Attractive*). Perceived intellectual competence, likability, social skills, and motivation were rated on the same 1-5 scales (*Strongly Disagree* to *Strongly Agree*) used in the main study. Perceived

masculinity and femininity were also rated on 1-5 scales (*Strongly Disagree* to *Strongly Agree*). See Appendix C for a complete item list for the attractiveness manipulation pilot.

The pilot test included 203 MTurk participants from a separate participant sample than the main study. The sample consisted of 115 (57%) female and 87 (43%) male participants with an average age of 34.5 years. Seventy-seven percent (n = 156) of participants were Caucasian/White, 10% were African American/Black (n = 20), 6% (n = 13, Hispanic/Chicano(a)/Latino(a), 4% were Asian American (n = 8), less than 3% were multiracial, and less than 1% were Native American/American Indian. This large sample was obtained because it was very important to the study hypotheses that there was agreement about the perceived attractiveness of the photos (i.e., that the ratings clearly indicated which photos were more attractive and which were less attractive). Note that because of social desirability concerns, as well as concerns about exposing the manipulation, the participants in the actual study did not rate the attractiveness of each photo; thus, these ratings from the pilot study were a key component of the manipulation.

The attractiveness ratings for each photo were averaged and means were analyzed to determine which photos were rated most attractive and least attractive. Overall, sixteen photos were selected total (four photos for each attractiveness and gender condition). That is, four more attractive men were selected, along with four less attractive men, four more attractive women, and four less attractive women. In general, the photos with the most polarized attractiveness ratings, but least polarized age, weight, masculinity, and femininity ratings, were selected. However, the goal was to also choose photos with similar attractiveness ratings within each gender category to ensure that no significant differences existed within gender. Because females were rated as more attractive than

males on average, the four most attractive female photos were not selected for inclusion in the main study. Instead, the four photos receiving the second-highest attractiveness ratings were chosen for females. Additionally, the four photos receiving the second-lowest attractiveness ratings were chosen for males. This helped to equalize the more attractive and less attractive ratings between gender conditions. This was especially important given that potential gender bias was also examined in this study. Additionally, the goal was to obtain photos of candidates that appeared to be between 25-35 years of age and of normal/average body weight. In general, these goals were achieved. Furthermore, the inter-rater reliability was calculated for each category of ratings, and inter-rater agreement was calculated for each photo. The inter-class correlation (ICC) and r_{wg} values represent moderate to high inter-rater reliability and agreement[2] (James, Demaree, & Wolf, 1984; LeBreton & Senter, 2008). See Tables 2 and 3 for the means, ICCs, r_{wg}, and standard deviations for all measures. Additionally, the ratings of perceived race and sex were examined to ensure that these characteristics were perceived accurately. After the photos were selected, a series of *t*-tests were conducted to ensure that the more attractive and less attractive photos were rated significantly differently, as well as to ensure that the significance values and effect sizes between the within-conditions means were smaller. The results in Tables 4 and 5 demonstrate that the between-condition significance values and effect sizes are substantially stronger than those within-condition.

[2] Two of the distractor photos, 17 and 20, displayed low inter-rater agreement. However, these photos will not be included in the analyses of the study hypotheses.

Table 2
Attractiveness Pilot Results

	n	*Attractiveness M (SD)*	r_{WG}	*Age M (SD)*	*Weight M (SD)*	*Masculinity M (SD)*	*Femininity M (SD)*
Attractive Male			ICC = .960				
Photo 1	203	6.33 (1.35)	0.59	31.05 (3.84)	1.92 (.36)	4.60 (.63)	1.48 (.88)
Photo 2	203	6.16 (1.47)	0.55	28.26 (4.71)	2.01 (.32)	4.52 (.68)	1.41 (.72)
Photo 3	203	6.14 (1.39)	0.60	33.05 (4.78)	2.05 (.29)	4.70 (.54)	1.30 (.61)
Photo 4	203	5.51 (1.48)	0.51	29.98 (4.26)	1.93 (.42)	4.38 (.75)	1.58 (.87)
Less Attractive Male			ICC = .973				
Photo 5	203	4.30 (1.35)	0.60	30.86 (4.99)	3.06 (.42)	4.20 (.90)	1.72 (.98)
Photo 6	203	4.33 (1.58)	0.69	36.05 (5.91)	2.30 (.56)	4.13 (.89)	1.68 (.90)
Photo 7	203	4.97 (1.44)	0.71	33.94 (5.74)	1.71 (.46)	4.24 (.85)	1.71 (.99)
Photo 8	203	5.10 (1.34)	0.51	34.87 (5.47)	2.75 (.48)	4.44 (.75)	1.44 (.76)
Attractive Female			ICC = .969				
Photo 9	203	6.47 (1.21)	0.70	29.38 (4.45)	1.99 (.48)	1.27 (.60)	4.76 (.50)
Photo 10	203	5.97 (1.36)	0.63	25.34 (3.47)	1.79 (.47)	1.60 (.88)	4.50 (.69)
Photo 11	203	5.95 (1.20)	0.81	32.42 (4.43)	2.18 (.44)	1.47 (.79)	4.64 (.55)
Photo 12	203	5.50 (1.38)	0.69	29.27 (4.45)	1.40 (.51)	1.37 (.75)	4.66 (.62)
Less Attractive Female			ICC = .898				
Photo 13	203	4.36 (1.44)	0.50	34.43 (5.53)	2.74 (.50)	1.77 (1.00)	4.29 (.81)
Photo 14	203	4.59 (1.44)	0.53	29.72 (4.83)	3.08 (.43)	1.81 (1.00)	4.20 (.88)
Photo 15	203	4.74 (1.51)	0.54	33.41 (5.98)	2.40 (.55)	1.93 (16.13)	4.17 (.98)

Photo 16	203	4.90 (1.48)	0.64	27.39 (5.00)	2.37 (.58)	1.66 (.90)	4.35 (.80)
Distractor Photos			ICC = .993				
Photo 17 (M)	203	5.21 (1.63)	.15	30.62 (4.41)	1.84 (.40)	4.45 (.84)	1.59 (.95)
Photo 18 (M)	203	4.72 (1.45)	.84	32.96 (5.88)	3.23 (.48)	4.48 (.67)	1.49 (.82)
Photo 19 (F)	203	6.80 (1.17)	.58	25.85 (3.64)	1.75 (.47)	1.29 (.70)	4.77 (.57)
Photo 20 (F)	203	5.77 (1.38)	.41	31.19 (4.87)	1.62 (.50)	1.50 (.75)	4.61 (.60)

Table 3

Attractiveness Pilot Results

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*
Attractive Male					
Photo 1	203	77.48 (15.22)	77.44 (16.12)	78.84 (15.84)	77.95 (16.64)
Photo 2	203	72.24 (15.56)	75.80 (15.69)	78.24 (14.96)	72.08 (18.45)
Photo 3	203	78.93 (14.10)	79.67 (14.81)	81.00 (13.63)	81.38 (14.18)
Photo 4	203	65.61 (18.58)	72.10 (15.75)	72.81 (17.55)	67.52 (19.50)
Less Attractive Male					
Photo 5	203	73.95 (15.89)	71.75 (17.01)	68.26 (18.79)	72.16 (18.19)
Photo 6	203	76.50 (17.03)	70.31 (16.70)	64.25 (20.19)	75.83 (16.95)
Photo 7	203	73.83 (16.64)	68.08 (18.99)	69.02 (18.40)	72.44 (17.78)
Photo 8	203	73.13 (15.33)	73.67 (15.84)	73.45 (16.42)	74.96 (16.19)
Attractive Female					
Photo 9	203	74.01 (15.88)	80.08 (14.37)	81.07 (14.73)	76.00 (16.61)
Photo 10	203	71.58 (16.52)	74.37 (16.40)	73.09 (17.02)	72.69 (17.85)
Photo 11	203	77.02 (15.90)	79.60 (13.74)	79.98 (13.86)	78.66 (16.15)

Photo 12	203	75.29 (15.86)	77.22 (15.07)	75.91 (16.49)	76.67 (16.46)
Less Attractive Female					
Photo 13	203	65.48 (19.02)	68.94 (18.26)	69.18 (18.78)	69.45 (18.69)
Photo 14	203	70.33 (17.00)	71.02 (18.69)	72.43 (18.24)	70.04 (18.51)
Photo 15	203	71.57 (16.13)	70.87 (17.13)	71.05 (18.12)	72.57 (18.35)
Photo 16	203	62.81 (19.35)	70.52 (17.46)	69.86 (18.07)	68.93 (18.54)
Distractor Photos					
Photo 17 (M)	203	67.80 (19.41)	72.80 (19.78)	75.73 (19.09)	72.92 (20.57)
Photo 18 (M)	203	66.69 (18.54)	73.34 (17.60)	75.12 (18.40)	71.54 (19.39)
Photo 19 (F)	203	76.26 (15.54)	81.24 (13.97)	81.89 (13.73)	78.45 (16.23)
Photo 20 (F)	203	68.81 (18.28)	75.01 (16.73)	78.33 (15.44)	71.36 (19.55)

Table 4

Between-Condition Results

	n	*t*	*p*	*d*
Male	203	12.09	0.00001	1.2
1 and 5	203	15.18	0.00001	1.51
1 and 6	203	13.71	0.00001	1.36
1 and 7	203	9.78	0.00001	0.97
1 and 8	203	9.21	0.00001	0.92
2 and 5	203	13.35	0.00001	1.32
2 and 6	203	12.12	0.00001	1.2
2 and 7	203	8.25	0.00001	0.82
2 and 8	203	7.64	0.00001	0.78
3 and 5	203	13.55	0.00001	1.34
3 and 6	203	12.25	0.00001	1.21
3 and 7	203	8.3	0.00001	0.83
3 and 8	203	7.67	0.00001	0.76
4 and 5	203	8.67	0.00001	0.86
4 and 6	203	7.81	0.00001	0.77
4 and 7	203	3.74	0.0001	0.37
4 and 8	203	2.96	0.001	0.29
17 and 18	203	3.21	0.0007	0.32
Female	203	12.49	0.00001	1.25
9 and 13	203	15.94	0.00001	1.58
9 and 14	203	14.24	0.00001	1.41
9 and 15	203	12.74	0.00001	1.26
9 and 16	203	11.69	0.00001	1.16
10 and 13	203	11.53	0.00001	1.15
10 and 14	203	9.91	0.00001	0.98
10 and 15	203	8.6	0.00001	0.86
10 and 16	203	7.56	0.00001	0.75
11 and 13	203	12.07	0.00001	1.2
11 and 14	203	10.36	0.00001	1.03
11 and 15	203	8.96	0.00001	0.89
11 and 16	203	7.87	0.00001	0.78
12 and 13	203	8.11	0.00001	0.81
12 and 14	203	6.5	0.00001	0.64
12 and 15	203	5.28	0.00001	0.53

12 and 16	203	4.22	0.00001	0.42
19 and 20	203	8.14	0.00001	0.8

Table 5
Within-Condition Results

	n	*t*	*p*	*d*
Attractive Male	203			
1 and 2	203	1.16	0.123	0.12
1 and 3	203	1.38	0.084	0.14
1 and 4	203	5.79	0.00001	0.58
2 and 3	203	0.17	0.431	0.01
2 and 4	203	4.45	0.00001	0.44
3 and 4	203	4.39	0.00001	0.44
Less Attractive Male	203			
5 and 6	203	-0.2	0.42	0.02
5 and 7	203	-4.87	0.00001	0.48
5 and 8	203	-6.03	0.00001	0.59
6 and 7	203	-4.29	0.0001	0.42
6 and 8	203	-5.32	0.00001	0.52
7 and 8	203	-0.929	0.177	0.09
Attractive Female	203			
9 and 10	203	3.93	0.00005	0.39
9 and 11	203	4.31	0.00001	0.43
9 and 12	203	7.51	0.00001	0.74
10 and 11	203	0.116	0.453	0.01
10 and 12	203	3.43	0.00003	0.34
11 and 12	203	3.52	0.00002	0.34
Less Attractive Female	203			
13 and 14	203	-1.58	0.057	0.15
13 and 15	203	-2.59	0.005	0.25
13 and 16	203	-3.7	0.0001	0.36
14 and 15	203	-1.04	0.149	0.1
14 and 16	203	-2.14	0.017	0.21
15 and 15	203	-1.06	0.145	0.1

Qualification. There were two qualification levels in this study – high qualification and moderate qualification. Participants were told that the list of profiles

they are rating includes only those candidates who have been pre-screened and determined to have met the minimum educational and experience requirements for the position (thus, the lower level of qualification was "moderate"). Qualification was manipulated using experience in sales jobs (less than one year versus three years or more), degree type (Associate's versus Bachelor's), and GPA (slightly below 3.00 versus 3.75 and above). In the high qualification condition, the candidate was also listed as having received two, three, or four (unspecified) awards in college. Different specific combinations of profile information were chosen to increase the variety of information presented in profiles in an effort to enhance the realism of the rating task. There was a deliberate effort to choose combinations of information on the low end and high end of each component. For instance, if a high-qualification candidate was described as having received two (as opposed to three or four) unspecified awards in college, their associated GPA was closer to the higher end of the high-qualification GPA range (e.g., 3.90). Similarly, if a moderately-qualified candidate was described as having more sales experience (e.g., eight months), their associated GPA was on the lower end of the spectrum for moderately qualified candidates (e.g., 2.90). Therefore, no candidate was on the low or high end of all qualification components. The pool of information used to create these combinations is presented in Appendix D.

Pilot testing the qualification manipulation. The qualification manipulation was pilot-tested using a sample of 36 participants from summer courses at a mid-sized Midwestern university. The sample consisted of 28 (78%) female and 8 (22%) male participants with an average age of 24.8 years. Seventy-two percent (n = 26) of participants were Caucasian/White, 17% were African American/Black (n = 6), 6% were

Indian American (n = 2), less than 3% were Asian American, and less than 3% were multiracial. Extra credit was offered in exchange for participation at the instructors' discretion. Participants were told that they would be rating a series of online profiles after reading a job description. Participants were also told that the photos were removed to protect anonymity. Then, participants viewed either the male- or female-typed job description (the high customer visibility job description was used for both the male- and female-typed position). Participants then each viewed ten out of 27 possible combinations of written profile information (i.e., all information besides the profiles pictures) and rated the information on perceived qualification on a 1 (*Extremely Unqualified*) to 5 (*Extremely Qualified*) scale (See Appendix E for a complete item list for the qualification manipulation pilot test). The results indicated that the means for the high qualification (M = 4.94; SD = .16) and moderate qualification condition (M = 3.56; SD = .67) accurately reflected high and moderate qualification, and the means were significantly different $t(35) = 11.97$, $p < .01$, $d = 2.82$). Additionally, no significant differences existed depending on whether the participants viewed the male-typed or female-typed job description prior to rating the profiles. Finally, participants were asked to report the perceptions of each candidate's intellectual competence, likability, social skills, and motivation using the same scale that will be used in the main study. The means for these measures for each qualification condition are presented in Table 6.

Table 6
Qualification Pilot Test Results

	N	*High Qualification M*	*SD*	*Moderate Qualification M*	*SD*
Qualification	36	4.94**	0.16	3.56**	0.67
Competence	36	85.32**	11.45	62.99**	16.27

Likability	36	77.47**	15.87	65.58**	16.29
Social Skills	36	78.24**	16.06	66.44**	17.36
Motivation	36	83.09**	14.23	63.14**	18.39

Note: $*p < .05$; $**p < .01$

Level 2

Job type. Job type was manipulated by providing participants with either a male-typed or female-typed sales job description. The job was indicated in the title of the job description provided to participants prior to rating profiles. The male-typed job was a sales associate that markets hand tools, and the female-typed job was a sales associate that markets baby products. Examples of the products sold were listed in the job description to ensure that the prestige of products sold was approximately equal. Additionally, difficulty of the jobs was equated by telling participants in both conditions that sales associates are typically able to meet with/speak with several customers per day and close about five sales per day.

Choosing a sales associate position for both the male- and the female-typed job ensured that the positions were perceived to require equivalent education and experience. The goal was also to choose jobs that did not require extensive education, as attractiveness may not have strong effects for jobs that require very specific high-level education. For instance, in situations where individuating information on qualification is extremely important (e.g., a neurosurgeon or NASA scientist), recruiters and hiring managers are likely to be much more motivated to attend to qualification information than appearance-based information. Additionally, the sales associate positions involved interacting with customers and could be described as requiring primarily face-to-face contact or primarily phone contact as needed for the customer visibility manipulation.

Finally, since the jobs are both sales positions, the job descriptions were identical with the exception of the products being sold.

Pilot testing the job type manipulation. The job type manipulation was pilot-tested using the same sample of 36 participants from the job type manipulation pilot, and both pilot tests were included in the same survey. The participants completed the job type pilot test immediately after they viewed the profiles for the qualification pilot test. Participants were presented with each of the two job descriptions side-by-side (the high customer visibility job description was used for both the male- and female-typed position). Participants were then asked to indicate which position is more "stereotypically male" and which is more "stereotypically female." Participants were then asked to estimate the percentage of males and females who might work in the position and the percentage of customers they think would be male and female for each position. See Appendix E for a complete item list for the job type manipulation pilot. Thirty-five (97%) of participants chose the Sales Associate – Hand Tools position as "stereotypically male," whereas only one participant (3%) chose the position as "stereotypically female." Similarly, 35 (97%) of participants chose the Sales Associate – Baby Products position as "stereotypically female," whereas only one participant (3%) chose the position as "stereotypically male" (See Table 7). The mean percentages of male and female employees estimated to work in the Sales Associate – Hand Tools position were 25% females and 75% males, $t(35) = -8.21$, $p < .01$, $d = 1.94$, and the percentage of male and female customers was estimated to be 27% females and 73% males, $t(35) = -6.48$, $p < .01$, $d = 1.53$. The mean percentages of male and female employees estimated to work in the Sales Associate – Baby Products position were 66% females and 34% males, $t(35) =$

15.56, $p < .01$, $d = 3.67$, and the percentage of male and female customers was estimated to be 65% females and 35% males, $t(35) = 14.19$, $p < .01$, $d = 3.34$, (See Table 8). Based on these results, it is clear that the Sales Associate – Hand Tools position was perceived to be "stereotypically masculine," and the Sales Associate – Baby Products position was perceived to be "stereotypically feminine."

Table 7

Frequency of Stereotypically Masculine and Feminine Ratings

	Sales Associate – Hand Tools	*Sales Associate – Baby Products*
Stereotypically Male	35	1
Stereotypically Female	1	35

Table 8

Frequency of Stereotypically Masculine and Feminine Ratings

		Employees			*Customers*				
	n	*% Male*	*SD*	*% Female*	*% Male*		*SD*	*% Female*	*SD*
Hand Tools	36	75%**	13.39	25%**	13.39	73%**	13.47	27%**	13.47
Baby Products	36	34%**	16.53	66%**	16.53	35%**	19.71	65%**	19.71

Note: *$p < .05$; **$p < .01$

Participants were also asked to rank order who (attractive/unattractive men/women) they think will be the most successful in making sales to men and to women in each position. Overall, participants tended to choose attractive men as the most likely to be successful at making sales to both men and women in the Sales Associate – Hand Tools position. Participants

tended to choose attractive women as the most likely to be successful at making sales to both men and women in the Sales Associate – Baby Products position. The complete results are presented in Tables 9 and 10.

Table 9

Rankings of Most Successful to Make Sales to Men

	n Ranking #1	*n Ranking #2*	*n Ranking #3*	*n Ranking #4*
Hand Tools				
Attractive Men	**19 (57.6%)**	11 (33.3%)	2 (6.1%)	1 (3%)
Unattractive Men	2 (6.1%)	9 (27.3%)	**18 (54.5%)**	4 (12.1%)
Attractive Women	12 (36.4%)	**13 (39.4%)**	8 (24.2%)	0 (0%)
Unattractive Women	0 (0%)	0 (0%)	5 (15.2%)	**28 (84.8%)**
Baby Products				
Attractive Men	1 (2.8%)	15 (41.7%)	**16 (44.4%)**	4 (11.1%)
Unattractive Men	1 (2.8%)	0 (0%)	10 (27.8%)	**25 (69.4%)**
Attractive Women	**34 (94.4%)**	2 (5.6%)	0 (0%)	0 (0%)
Unattractive Women	0 (0%)	**19 (52.8%)**	10 (27.8%)	7 (19.4%)

Table 10

Rankings of Most Successful to Make Sales to Women

	n Ranking #1	*n Ranking #2*	*n Ranking #3*	*n Ranking #4*
Hand Tools				
Attractive Men	**21 (65.6%)**	7 (21.9%)	3 (9.4%)	1 (3.1%)
Unattractive Men	0 (0%)	4 (12.5%)	**18 (56.3%)**	10 (31.3%)

Attractive Women	9 (28.1%)	**15 (46.9%)**	2 (6.3%)	6 (18.8%)
Unattractive Women	2 (6.3%)	6 (18.8%)	9 (28.1%)	**15 (46.9%)**
Baby Products				
Attractive Men	14 (40%)	6 (17.1%)	**15 (42.9%)**	0 (0%)
Unattractive Men	0 (0%)	1 (2.9%)	11 (31.4%)	**23 (65.7%)**
Attractive Women	**19 (54.3%)**	10 (28.6%)	2 (5.7%)	4 (11.4%)
Unattractive Women	2 (5.7%)	**18 (51.4%)**	7 (20%)	8 (22.9%)

Finally, participants were asked an open-ended question asking them to indicate whether or not they believed the job descriptions were similar, and to note any specific differences between the two job descriptions. This was done to ensure that participants noted the products sold as the only difference between the two job descriptions. In total, 31 out of the 36 participants specifically mentioned the products sold as the only difference between the two job descriptions. Three participants did not respond, and the remaining two participants mentioned differences in stereotypes (i.e., that one job is masculine and one is feminine), without specifically mentioning the products sold. Thus, the responses to this question largely indicate that the job descriptions are similar with the exception of the products being sold.

Customer visibility. The job descriptions each included a "Job Summary" and "Key Responsibilities" section. These descriptors were held constant within each gender-typed job description. However, the job descriptions also included a "Customer Interaction Requirement" section, which served as the manipulation. The high customer visibility position was described as having a high degree of face-to-face customer interaction that involved meeting with customers face-to-face daily. The low customer visibility position was described as requiring a high degree of telephone-based customer interaction that involved speaking with customers over the phone daily. The wording for each visibility manipulation was kept as similar as possible between the two positions, with minor wording changes to fit the products sold in each position.

By manipulating customer visibility by describing the positions as requiring a high degree of face-to-face or phone-based customer interaction, the only aspect being

manipulated was the degree to which customers *see* the candidate. In other words, the degree of customer interaction was consistent between the positions. This is especially important since one of the performance expectation mediators in this study was perceived social skills. Both positions here were described as requiring social skills to perform the job; what changed was whether or not customers saw the candidate frequently versus spoke to them over the phone. Additionally, because the position in the present study was always a sales position, and because the financial value of the items sold was held constant, this helped to ensure that the prestige of the occupation was held constant between customer visibility conditions so as not to confound the results of the study.

The job descriptions were kept relatively short, for the purposes of reducing participant fatigue and boredom and to ensure that participants focused on the job aspects that we wished to be salient (e.g., degree of face-to-face versus telephone-based customer contact). Additionally, the visibility manipulation was contained within its own section ("Customer Interaction Requirement") to call attention to the manipulation within the job description. Finally, the words "face-to-face" and "phone-based" were underlined to ensure that participants attended to this information when reading the job description. Participants were required to pass a manipulation check determining that they correctly perceived the products marketed and customer interaction requirement before proceeding to the next part of the study where they rated the profiles (See Appendix F for complete job descriptions).

Measures

The shifting standards model suggests that when individual members of stereotyped groups are judged on stereotyped dimensions, the individuals are compared

to within-category judgment standards (Biernat & Fuegen, 2001). For instance, there is a stereotype that suggests that men are better leaders than women (Eagly & Johannesen-Schmidt, 2001; Eagly, Karau, & Makhijani, 1995). The shifting standards model suggests that judgments of leadership competence for women are be made relative to other women, whereas judgments of leadership competence for men are be made relative to other men. As a result, the judgments between men and women may not be directly comparable since they were made using different standards, which shift depending on the stereotypes associated with the judgments being made. The use of objective measures in this study, loosely adapted from those used in Biernat and Fuegen (2001), helped to mitigate shifting standards and enhanced the comparability of the profile ratings.

Perceived intellectual competence. Perceived intellectual competence was assessed using the item, "What percentage of customers would think this person is smart?" The item was rated on a 0-100 sliding scale.

Perceived likability. Likability was assessed using the item, "What percentage of customers would like this person?" The item was rated on a 0-100 sliding scale.

Perceived social skills. Perceived social skills was assessed using the item, "What percentage of customers would think this person has good social skills?" The item was rated on a 0-100 sliding scale.

Recommendation for a job interview invitation. The outcome variable, recommendation for an invitation to interview, was measured using the item, "Would you recommend that the company invite this person for a job interview? The item was rated on a 5-point Likert scale (*Definitely No* to *Definitely Yes*). Additionally, a dichotomous

(*Yes/No*) item asked whether or not the candidate should be invited for a job interview. See Appendix G for a complete item list.

Explicit attractiveness attitudes. Along with implicit measures of attractiveness attitudes, this study also included self-report measures of explicit attitudes about attractive individuals. These measures were adapted from Agerström and Rooth's (2011) measures on obesity and Rudman and Kilianski's (2000) measures on gender. The items assessed the extent to which more attractive people are more desirable than less attractive people in a work setting. Participants were asked questions about attractiveness attitudes along with similar distractor items that assessed age, marital status, and religion. Three items for each demographic were rated on a 1-5 Likert scale (*Strongly Disagree* to *Strongly Agree*). A sample item includes, "Attractive employees perform better than unattractive employees." (See Appendix H for a complete list of explicit measures).

The implicit association test (Greenwald, McGhee, & Schwartz, 1998). This study used an attractiveness attitudes IAT adapted from the Wexler (2015) study. Participants were automatically routed to the IAT in Inquisit after completing the Qualtrics portion of the survey after indicating that they wished to complete the IAT for bonus compensation. The target words for "attractive employees" included "beautiful, "handsome," and "attractive," and the target words for "unattractive employees" included "ugly," "homely," and "unattractive."

The attractiveness attitudes IAT measured participants' automatic associations of attractive with "good" and unattractive with "bad." Target words for the "good" portion included: joy, delight, peace, wonderful, pleasure, glorious, laughter, happy. Target words for the "bad" condition included: agony, terrible, horrible, misery, evil, awful,

failure, hurt. These targets words were chosen in accordance with Nosek, Banaji, and Greenwald's (2010) Project Implicit.

The IAT measures automatic associations based on participants' speed of categorizing the target words into the target categories both when the words and categories are congruent and when they are incongruent. In accordance with the beautiful is good stereotype, congruency would involve the categorization of "good" with attractiveness and "bad" with unattractiveness. On the other hand, incongruency would involve the categorization of negative words with attractiveness and positive words with unattractiveness. If participants are quicker to categorize target words when they are congruent with the target categories than when they are incongruent, this indicates an automatic attractiveness bias.

The IAT consisted of seven blocks as follows:

Table 11
IAT Blocks

Block	Content
1	20 practice trials, categorizing into target categories (attractive/unattractive)
2	20 practice trials, categorizing into target categories (high/low social skills)
3	24 practice trials, categorizing into incongruent categories
4	40 trials, incongruent categorization
5	40 practice trials, categorizing into target categories (attractive/unattractive) with targets on opposite sides of the screen as before
6	24 trials, congruent categorization
7	40 trials, congruent categorization

The IAT consisted of seven blocks of classification tasks, in which the stimuli were randomly presented one-by-one in the center of the computer screen. Target categories were listed in the top left and top right corners of the computer and

participants were instructed to press the "E" key to categorize a stimulus with the left category (attractive) and the "I" key to categorize a stimulus with the right category (unattractive). The IAT was set up in this fashion in accordance with Agerström and Rooth's (2011) study and as recommended by Nosek, Greenwald, and Banaji (2005) whose measures have been validated.

In each block, the word positions on the right and left sides of the screen were counterbalanced across participants, such that words that first appeared on the right and then left of the screen then appeared on the left and then on the right side of the screen. Additionally, the incongruency/congruency blocks were counterbalanced across participants, such that some participants were presented with the incongruent block followed by the congruent block, while some participants were presented first with the congruent block and then the incongruent block. These counterbalancing actions helped ensure that order effects were not accounting for any variance in the data, in accordance with the suggestions of Nosek, Greenwald, and Banaji (2005), who advocate counterbalancing when there is no compelling reason to favor one order over another.

IAT scoring. Scoring the IAT involved the computation of a *D* score, which represents the difference between congruent and incongruent mean reaction times divided by the pooled standard deviation of reaction times on congruent and incongruent blocks (Greenwald, Nosek, & Banaji, 2003). Individual trials with response times greater than 10,000ms or less than 400ms were deleted prior to analysis in accordance with Greenwald, Nosek, and Banaji's (2003) guidelines. *D* values were coded such that higher values reflect stronger attractiveness biases.

Manipulation check items. After being presented with the study instructions, participants completed two manipulation check items to ensure their awareness of the products marketed by the sales associate (to test awareness of the job type manipulation), as well as their awareness of the customer visibility manipulation. Participants were forced to respond correctly to both questions before proceeding with the study. See Appendix I for a list of the manipulation check items.

Demographic items. Demographic items included participant gender, race, sexual orientation, age, and dating status. See Appendix J for demographic items.

Additional items. Several additional items were assessed in the event that they were needed to examine potential alternative explanations for results. First, after participants viewed the job descriptions and before rating the profiles, participants were asked to rate the level of intellectual competence, likability, and social skills they believe is required for the position. This served as a baseline measure to compare to the profile rating measures. While rating each profile, participants were asked to indicate the degree to which they believe each candidate is a hard worker. After rating all of the profiles, participants were also asked to report their level of motivation to act as a recruiter would when rating candidates. Finally, participants answered questions regarding their experience with recruiting/HR, their current job title, their experience with social networking sites, and their self-rated attractiveness. The time spent evaluating each profile was also measured, as this was a built-in feature of the survey software. See Appendix K for additional items that were measured and included in the study.

Analyses and Results

Data Screening

Prior to hypothesis testing, the data were screened for univariate and multivariate outliers, and the study hypotheses were tested using both the full and reduced samples. Univariate outliers were examined by calculating *z*-scores for each of the focal profile ratings. In total, 150 data points (<1%) were removed because they exceeded a *z*-score cutoff value of +/-3. However, only 77 of these data points were unique in that they were not also removed as multivariate outliers. Multivariate outliers were examined by computing a Mahalanobis distance statistic using the profile ratings from the first two practice profiles, and a separate Mahalanobis distance statistic using the profile ratings from the last two repeated (for test-retest reliability) profiles. These profiles were chosen for the calculation because all participants viewed the practice profiles first and the repeated profiles last. All other profiles were presented in randomized order, meaning the calculation of Mahalanobis distance using these ratings may be confounded by order effects. Participants were removed entirely if their ratings were flagged for both profile sets. In total, fifteen participants (6%) were removed from the dataset because their data contained multivariate outliers. Because no meaningful differences existed between the samples in terms of the results found, I report the results using the full sample.

Next, test-retest reliability was examined by correlating ratings on the matched sets of scenarios. As a reminder, 3 of profiles were presented at both the beginning and end of the study so that reliability could be assessed. The results are presented in Table 12. In general, most ratings exhibited acceptable to good reliability.

Table 12
Test-Retest Reliability of Repeat Profiles

Repeat Profile #1	
Competence	.72**
Likability	.77**
Social Skills	.73**
Motivation	.70**
Invite	.58**
Invite_Binary	.49**
Repeat Profile #2	
Competence	.76**
Likability	.85**
Social Skills	.79**
Motivation	.78**
Invite	.62**
Invite_Binary	.53**
Repeat Profile #3	
Competence	.69**
Likability	.81**
Social Skills	.79**
Motivation	.77**
Invite	.71**
Invite_Binary	.58**

Next, the IAT data were examined for outliers. Following the suggested procedures by Greenwald, Nosek, and Banaji (2003), individual trials with response latencies greater than 10,000ms and less than 400ms were removed, and a participant's IAT data were removed entirely if more than 10% of their IAT trials had response latencies less than 300ms. Thirteen individual data points from the IAT were removed under these criteria, and no participants were fully removed. No additional corrections were made, since the IAT software imposes an error penalty by advancing in the IAT. Greenwald et al. (2003) argue that a larger sample size is more valuable than the small

incremental validity gained by further deleting participant data based on error rates, and thus no further data were removed. The IAT demonstrated adequate split-half reliability (α = .76, M = 1.07, SD = .35). The explicit attitudes scale also demonstrated adequate reliability α = .85, M = 2.58, SD = 1.02). The correlation between the implicit and explicit measures was .11 and was not significant.

Descriptive statistics for all profile rating variables are presented in Table 13. In general, candidates in the "highly qualified" condition were rated more favorably than those in the "moderately qualified" condition. Furthermore, more attractive candidates were rated slightly higher than less attractive candidates. Mean differences within conditions are significantly smaller than those between conditions. Additionally, the mean differences between males and females are small regardless of qualification condition. Additionally, descriptive statistics for all profile rating variables by each condition combination are presented in Tables 14-17. In the high visibility (face-to-face) and masculine (hand tools) position, highly qualified candidates were rated higher than moderately qualified candidates, more attractive candidates were rated higher than less attractive candidates, and males were rated higher than females. The results were similar in the high visibility (face-to-face) and feminine (baby products) position, but with females receiving higher ratings than males. These results were generally maintained in the low visibility (phone) conditions as well.

Although the "distractor" (i.e., non-Caucasian) photos were not the focus of the study and will therefore not be discussed in great detail, the descriptives statistics for these photos are presented in Appendix L. The profiles ratings for the distractor photos are very similar to those listed in the tables below. Therefore, there do not appear to be

any meaningful differences between the ratings of Caucasian candidates and non-Caucasian candidates.

Table 13

Descriptive Statistics for All Profiles (collapsing across condition)

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*	*Invite M (SD)*	*% Would Invite*
Attractive, Highly Qualified							
Male							
Photo 1	250	84.58 (10.97)	81.51 (13.15)	81.72 (12.67)	82.93 (13.58)	4.47 (0.70)	94.4%
Photo 2	250	85.12 (11.03)	83.19 (12.52)	83.97 (11.26)	84.12 (12.73)	4.53 (0.67)	96.0%
Female							
Photo 1	250	83.91 (12.58)	83.89 (12.88)	84.46 (12.53)	83.68 (13.26)	4.61 (0.61)	97.6%
Photo 2	250	86.50 (11.28)	84.56 (12.19)	85.44 (12.39)	85.85 (12.64)	4.57 (0.63)	96.0%
Less Attractive, Highly Qualified							
Male							
Photo 3	250	84.02 (12.16)	79.81 (13.76)	78.24 (15.01)	81.84 (13.79)	4.40 (0.73)	94.0%
Photo 4	250	83.70 (11.69)	77.65 (14.31)	78.14 (14.41)	80.79 (14.45)	4.24 (0.85)	88.4%
Female							
Photo 3	250	84.23 (14.06)	79.49 (15.57)	79.68 (15.46)	82.34 (14.68)	4.39 (0.88)	92.0%
Photo 4	250	86.03 (12.27)	80.67 (13.94)	80.22 (14.45)	84.35 (13.44)	4.42 (0.80)	94.4%
Attractive, Moderately Qualified							
Male							
Photo 5	250	58.33 (16.28)	64.16 (16.97)	65.44 (16.72)	58.60 (18.24)	2.70 (0.93)	35.6%
Photo 6	250	55.70 (18.01)	59.56 (18.51)	60.60 (18.42)	54.79 (19.64)	2.40 (0.93)	23.6%
Female							
Photo 5	250	60.11 (17.12)	66.03 (17.87)	65.80 (17.89)	60.06 (18.65)	2.72 (1.00)	32.8%
Photo 6	250	61.98 (17.56)	67.68 (17.43)	67.27 (17.54)	62.80 (19.07)	2.72 (1.04)	36.8%
Less Attractive, Moderately Qualified							
Male							
Photo 7	250	61.19 (17.68)	59.20 (19.01)	58.06 (19.16)	59.47 (19.46)	2.47 (1.03)	24.8%

Photo 8	250	60.4 (16.53)	63.76 (16.97)	63.71 (17.55)	61.38 (18.33)	2.62 (0.99)	30.8%
Female							
Photo 7	250	59.30 (18.16)	63.84 (18.69)	64.68 (18.12)	59.65 (19.47)	2.62 (1.05)	34.4%
Photo 8	250	56.43 (17.54)	61.92 (17.98)	61.82 (18.09)	56.68 (19.01)	2.45 (0.95)	22.4%

Table 14

Descriptive Statistics for High Visibility (face-to-face), Masculine (Hand Tools) Sales Position

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*	*Invite M (SD)*	*% Would Invite*
Attractive, Highly Qualified							
Male							
Photo 1	62	85.16 (10.41)	84.35 (10.54)	83.81 (10.99)	84.16 (13.03)	4.50 (0.65)	95.2%
Photo 2	62	86.37 (10.36)	85.48 (11.78)	85.77 (10.25)	85.44 (11.66)	4.56 (0.69)	95.2%
Female							
Photo 1	62	83.77 (13.22)	84.98 (12.21)	85.40 (13.00)	82.65 (14.76)	4.48 (0.74)	93.5%
Photo 2	62	86.98 (10.69)	86.44 (11.18)	87.02 (11.99)	85.24 (13.08)	4.48 (0.74)	91.9%
Less Attractive, Highly Qualified							
Male							
Photo 3	62	85.16 (11.01)	81.21 (13.64)	79.50 (15.20)	83.92 (12.85)	4.42 (0.82)	90.3%
Photo 4	62	85.18 (10.35)	80.37 (11.85)	80.56 (12.72)	82.34 (14.12)	4.26 (0.85)	88.7%
Female							
Photo 3	62	83.74 (14.18)	79.9 (14.70)	79.55 (16.90)	81.65 (17.46)	4.19 (1.14)	83.9%
Photo 4	62	86.45 (11.09)	81.79 (13.43)	80.82 (14.43)	85.92 (11.54)	4.29 (1.00)	90.3%
Attractive, Moderately Qualified							
Male							

Photo 5	62	57.53 (16.65)	66.44 (17.23)	66.89 (16.97)	56.11 (18.25)	2.73 (0.99)	38.7%
Photo 6	62	53.92 (16.71)	58.82 (18.04)	57.65 (19.51)	53.23 (19.91)	2.31 (0.93)	19.4%
Female							
Photo 5	62	59.65 (16.15)	67.03 (17.94)	65.63 (18.50)	58.71 (17.52)	2.68 (1.04)	38.7%
Photo 6	62	61.61 (18.27)	65.94 (18.55)	65.1 (20.49)	63.31 (19.45)	2.55 (1.07)	35.5%
Less Attractive, Moderately Qualified							
Male							
Photo 7	62	60.98 (17.55)	61.11 (18.55)	59.13 (18.84)	60.50 (19.03)	2.58 (1.08)	32.3%
Photo 8	62	60.44 (16.88)	63.87 (17.90)	62.24 (19.20)	60.13 (19.40)	2.61 (1.08)	38.7%
Female							
Photo 7	62	57.76 (18.31)	62.42 (20.33)	62.66 (21.27)	57.18 (22.27)	2.47 (1.17)	33.9%
Photo 8	62	55.66 (17.03)	60.97 (18.37)	58.92 (18.68)	55.02 (19.54)	2.35 (0.96)	21.0%

Table 15

Descriptive Statistics for High Visibility (face-to-face), Feminine (Baby Products) Sales Position

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*	*Invite M (SD)*	*% Would Invite*
Attractive, Highly Qualified							
Male							
Photo 1	63	84.22 (11.93)	79.33 (16.52)	80.49 (14.38)	81.84 (16.10)	4.32 (0.88)	90.5%
Photo 2	63	83.86 (13.86)	81.97 (15.09)	83.11 (13.19)	82.81 (15.73)	4.49 (0.76)	93.7%
Female							
Photo 1	63	82.87 (13.71)	83.84 (14.36)	84.32 (12.71)	82.95 (12.88)	4.63 (0.58)	98.4%
Photo 2	63	86.43 (13.38)	84.46 (13.54)	84.89 (14.53)	83.95 (13.96)	4.59 (0.59)	95.2%
Less Attractive, Highly Qualified							
Male							

Photo 3	63	82.54 (14.89)	78.89 (14.41)	77.49 (15.43)	80.90 (14.37)	4.35 (0.68)	92.1%
Photo 4	63	81.33 (15.30)	74.54 (17.86)	75.86 (16.48)	79.25 (16.21)	4.13 (0.85)	85.7%
Female							
Photo 3	63	79.98 (17.37)	78.67 (17.99)	78.51 (17.77)	80.27 (16.26)	4.33 (0.90)	88.9%
Photo 4	63	82.87 (14.02)	79.08 (14.46)	77.32 (15.89)	81.25 (14.81)	4.37 (0.77)	92.1%
Attractive, Moderately Qualified							
Male							
Photo 5	63	57.98 (16.63)	62.33 (17.54)	65.22 (15.89)	58.81 (18.43)	2.60 (0.87)	27.0%
Photo 6	63	55.98 (19.34)	58.19 (19.99)	61.14 (19.07)	55.94 (19.00)	2.38 (0.92)	27.0%
Female							
Photo 5	63	58.05 (18.21)	64.05 (19.59)	64.63 (19.66)	60.33 (19.21)	2.71 (0.97)	31.7%
Photo 6	63	61.95 (17.37)	67.87 (17.16)	68.79 (16.75)	64.05 (20.01)	2.81 (1.00)	38.1%
Less Attractive, Moderately Qualified							
Male							
Photo 7	63	63.43 (19.52)	59.30 (20.84)	58.06 (21.10)	60.41 (20.70)	2.51 (1.01)	28.6%
Photo 8	63	60.03 (18.16)	63.54 (19.11)	65.63 (18.05)	63.81 (18.70)	2.65 (0.97)	27.0%
Female							
Photo 7	63	57.81 (19.36)	65.35 (17.77)	66.56 (16.26)	60.41 (18.49)	2.81 (0.96)	42.9%
Photo 8	63	54.83 (17.71)	61.35 (17.91)	62.41 (18.11)	57.25 (18.68)	2.44 (0.91)	22.2%

Table 16

Descriptive Statistics for Low Visibility (phone), Masculine (Hand Tools) Sales Position

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*	*Invite M (SD)*	*% Would Invite*
Attractive, Highly Qualified							
Male							

Photo 1	65	85.02 (9.07)	82.14 (11.53)	81.51 (12.70)	82.75 (12.58)	4.60 (0.52)	96.9%
Photo 2	65	84.86 (8.98)	82.6 (11.76)	83.60 (10.84)	84.00 (11.13)	4.58 (0.56)	98.5%
Female							
Photo 1	65	83.49 (12.40)	81.92 (12.29)	82.97 (12.66)	83.15 (12.61)	4.65 (0.51)	100.0%
Photo 2	65	85.29 (10.43)	81.85 (12.76)	83.12 (12.06)	83.22 (11.87)	4.57 (0.59)	98.5%
Less Attractive, Highly Qualified							
Male							
Photo 3	65	83.57 (10.64)	80.35 (12.15)	78.75 (12.90)	82.09 (11.37)	4.51 (0.56)	98.5%
Photo 4	65	83.92 (8.54)	76.77 (12.48)	77.92 (12.88)	80.45 (12.72)	4.29 (0.74)	92.3%
Female							
Photo 3	65	85.80 (11.77)	79.86 (13.45)	80.38 (12.12)	82.11 (12.75)	4.57 (0.61)	98.5%
Photo 4	65	86.85 (11.42)	79.86 (14.17)	80.06 (14.75)	84.43 (13.55)	4.54 (0.73)	96.9%
Attractive, Moderately Qualified							
Male							
Photo 5	65	57.52 (16.52)	64.09 (16.70)	64.49 (16.85)	59.34 (19.31)	2.77 (0.95)	38.5%
Photo 6	65	57.58 (17.25)	62.22 (15.89)	63.06 (16.34)	56.38 (17.85)	2.57 (0.94)	24.6%
Female							
Photo 5	65	59.45 (16.95)	64.57 (16.85)	64.42 (16.79)	58.83 (17.69)	2.58 (0.93)	21.5%
Photo 6	65	61.08 (18.31)	66.75 (17.30)	66.20 (16.37)	60.65 (17.47)	2.71 (1.06)	30.8%
Less Attractive, Moderately Qualified							
Male							
Photo 7	65	60.18 (17.47)	59.68 (17.95)	58.40 (18.26)	59.08 (19.34)	2.48 (1.05)	21.5%
Photo 8	65	61.37 (15.12)	64.91 (14.78)	64.66 (15.60)	62.75 (16.81)	2.69 (0.95)	26.2%
Female							
Photo 7	65	59.29 (16.48)	62.51 (18.75)	64.08 (17.68)	60.15 (17.51)	2.55 (1.00)	26.2%
Photo 8	65	56.02 (17.88)	61.97 (18.47)	61.23 (17.64)	56.65 (18.94)	2.43 (0.95)	20.0%

Table 17

Descriptive Statistics for Low Visibility (phone), Feminine (Baby Products) Sales Position

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*	*Invite M (SD)*	*% Would Invite*
Attractive, Highly Qualified							
Male							
Photo 1	60	83.88 (12.49)	80.18 (12.98)	81.07 (12.41)	82.98 (12.48)	4.45 (0.70)	95.0%
Photo 2	60	85.83 (10.41)	82.73 (11.02)	83.42 (10.56)	84.22 (12.05)	4.48 (0.68)	96.7%
Female							
Photo 1	60	85.60 (10.91)	84.95 (12.62)	85.25 (11.82)	86.07 (12.74)	4.68 (0.57)	98.3%
Photo 2	60	87.37 (10.48)	85.67 (10.74)	86.93 (10.40)	87.15 (11.40)	4.63 (0.58)	98.3%
Less Attractive, Highly Qualified							
Male							
Photo 3	60	84.87 (11.77)	78.73 (14.96)	77.18 (16.68)	80.40 (16.35)	4.32 (0.85)	95.0%
Photo 4	60	84.40 (11.48)	79.05 (13.92)	78.45 (15.23)	81.18 (14.77)	4.27 (0.95)	86.7%
Female							
Photo 3	60	87.48 (11.25)	79.52 (16.20)	80.28 (14.80)	85.50 (11.36)	4.45 (0.75)	96.7%
Photo 4	60	88.02 (12.03)	82.05 (13.74)	82.80 (12.18)	85.90 (13.40)	4.50 (0.62)	98.3%
Attractive, Moderately Qualified							
Male							
Photo 5	60	60.40 (15.48)	63.78 (16.55)	65.18 (17.48)	60.13 (16.97)	2.72 (0.92)	38.3%
Photo 6	60	55.18 (18.90)	58.88 (20.13)	60.42 (18.74)	53.50 (22.00)	2.32 (0.95)	23.3%
Female							
Photo 5	60	63.48 (17.04)	68.68 (16.97)	68.68 (16.50)	62.50 (20.33)	2.90 (1.07)	40.0%
Photo 6	60	63.35 (16.50)	70.30 (16.74)	69.07 (16.33)	63.30 (19.59)	2.82 (1.05)	43.3%
Less Attractive, Moderately Qualified							
Male							

Photo 7	60	61.20 (16.31)	56.62 (18.80)	56.58 (18.70)	57.85 (19.06)	2.32 (0.98)	16.7%
Photo 8	60	59.70 (16.18)	62.62 (16.13)	62.18 (17.39)	58.63 (18.34)	2.52 (0.98)	31.7%
Female							
Photo 7	60	63.10 (18.28)	65.17 (18.04)	65.45 (17.07)	60.85 (19.67)	2.65 (1.05)	35.0%
Photo 8	60	59.38 (17.60)	63.45 (17.45)	64.83 (17.88)	57.83 (19.25)	2.57 (0.98)	26.7%

Table 18
Correlations of Profile Rating Variables

	Competence	Likability	Social Skills	Motivation	Invite	Invite_Binary
Competence M = 71.97 (10.19)	---	---	---	---	---	---
Likability M = 72.31 (11.09)	.91**	---	---	---	---	---
Social Skills M = 72.46 (10.70)	.90**	.98**	---	---	---	---
Motivation M = 71.15 (11.06)	.90**	.91**	.93**	---	---	---
Invite M = 3.52 (0.46)	.39**	.38**	.41**	.44**	---	---
Invite_Binary	.35**	.37**	.39**	.38**	.76**	---

Note. N = 250; *p < .05 **p < .01

Finally, Table 18 includes the means, standard deviations, and correlations of all profile rating variables used in this study. As is evident from the table, the correlations among the profile rating variables (competence, likability, social skills, and motivation) are very high (r = .90 or higher) and are all statistically significant. As a result, these four variables were combined into one variable ("ratings") for the purpose of hypothesis testing (M = 71.97, SD = 10.44). The results presented below include this combined rating variable. Please see Appendix M for an additional discussion of the results for each separate variable.

Additionally, the models below were tested using the continuous interview recommendation variable ("invite") given its high correlation with the dichotomous

yes/no invite variable (r = .76; p < .01). The correlations between the continuous and dichotomous invite variable were also examined within attractiveness and gender conditions. The correlations were similar among male (r = .74; p < .01) and female (r = .75; p < .01) candidates and among more attractive (r = .74; p < .01) and less attractive candidates (r = .74; p < .01). This offers evidence that shifting standards (as discussed by Biernat & Fuegen, 2001) may not have occurred, as it implies that participants were not providing high ratings on the continuous measure and then ultimately selecting "no" on the dichotomous measure (and vice-versa).

Hypothesis Testing

Prior to hypothesis testing, the independent variables (condition variables) were dummy coded, such that a value of "1" indicated higher attractiveness, qualification, and customer visibility, and that the candidate is male and the job type is masculine. Conversely, a value of "0" indicated lower attractiveness, qualification, and customer visibility, and that the candidate is female and the job type is feminine.

Due to the multilevel nature of the data in this study, the data were analyzed using hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992). The process used in this study followed that used in Hurt, Maver, and Hofmann (1999)'s policy-capturing HLM study. HLM allows for the examination of variables at more than one level of analysis; specifically, within-subjects (Level 1) and between-subjects (Level 2) variables. The within-subjects (Level 1) variables in this study included attractiveness, qualification, and gender. The between-subjects (Level 2) variables included job type, customer visibility, explicit attitudes, and implicit attitudes.

Each of the hypothesis tests using HLM involved a two-stage approach. First, a separate regression equation was estimated for each participant (Level 1 analysis). Attractiveness, qualification, and gender were used as the Level 1 independent variables predicting intellectual competence, likability, and social skills. Second, the regression parameters from the first stage were used as dependent variables and the between-subjects variables (job type, customer visibility, explicit attitudes, implicit attitudes) as predictors of these parameters (i.e., intercepts and slopes; e.g., Bryk & Raudenbush, 1992; cross-level analyses). While centering of Level 1 predictors is often recommended to make the intercept term more interpretable (Hoffman & Gavin, 1998), it was not be done in this study because the cue levels were experimentally controlled and the same across participants (i.e., it doesn't make sense to center dummy coded variables, and values of zero are already interpretable due to the coding scheme). Thus, centering would not have meaningfully changed the obtained values (Hoffman & Gavin, 1998). This is consistent with Kristof-Brown, Jansen, and Colbert's (2002) policy-capturing HLM study. However, the continuous Level 2 variables were grand-mean-centered, such that the intercept was equal to the expected value of Y_{ij} for an individual with an "average" level of X_{ij} (Hoffman & Gavin, 1998).

Step 1 of the models tested for main effects of the predictors (attractiveness, gender, and qualification) on ratings. Leaving out the Level 2 predictors at that time allows for the examination of whether there was significant variance between groups in the Level 1 intercepts and slopes to model with the Level 2 predictors. The interactions of attractiveness and customer visibility, attractiveness and explicit attitudes, and attractiveness and implicit attitudes (i.e., the cross-level interactions) were tested in Step

2. The Level 2 equations were run with both fixed and random error terms. If a χ^2 difference test indicated a significant difference between the models, the more complex model with random error terms was used, meaning that the coefficients were assumed to significantly vary across participants. If there was not a significant difference between the models, the more parsimonious fixed error terms were used, meaning that the coefficients did not vary significantly across participants. Table 19 displays the results of the chi-square difference tests for all models within each hypothesis.

Table 19

Fixed and Random Error Terms Statistics for All Models

	Model Used	$\Delta\chi^2$	df	*p*	$\Delta\chi^2$	df	*p*	$\Delta\chi^2$	df	*p*
H1										
Dichotomous	Fixed	.26	2	> .50						
Continuous	Fixed	3.97	2	.14						
H2										
Dichotomous										
Step 1	Fixed	1.27	2	> .50						
Step 2	Fixed	.26	2	> .50						
Step 3	Random	.007	2	> .50	570.64	5	< .001			
Continuous										
Step 1	Fixed	4.54	2	.10						
Step 2	Fixed	3.97	2	.14						
Step 3	Random	6.00	2	.05	558.26	5	< .001			
H3										
Step 1	Fixed	.17	2	> .50						
Step 2	Fixed	.08	2	> .50						
Step 3	Random	.17	2	> .50	576.83	5	< .001			
H4										
Dichotomous	Fixed	.27	2	> .50	.51	5	> .50	.43	9	> .50
Continuous	Fixed	3.88	2	.14	4.06	5	> .50	3.99	9	> .50
H5										
Dichotomous	Fixed	.18	2	> .50						
Continuous	Fixed	2.07	2	.36						
H6										
Dichotomous	Fixed	1.16	2	> .50						
Continuous	Fixed	5.16	2	.07						

H7										
Dichotomous	Fixed	.25	2	> .50						
Continuous	Fixed	3.93	2	.14						
H8										
	Random	1456.08	2	< .001						
H9										
Step 1	Random	1026.72	2	< .001						
Step 2	Random	1456.08	2	< .001						
Step 3	Random	1346.71	2	< .001	204.18	3	< .001			
S2*										
	Random	.94		> .50	1490.74	5	< .001	9.66	4	.04
S3										
	Random	1405.99	2	< .001						
S4										
Dichotomous	Random	.94	2	> .50	1490.74	5	< .001	9.66	4	.04
Continuous	Random	9.16	2	.01	1490.02	3	< .001	22.12	4	< .001

Note: S1 was not conducted in HLM and is therefore not included in this table.

Although all variables used in these Step 1 models are Level 1 variables, running the mediations in HLM was advantageous since HLM accounts for the shared variance in hierarchically structured data (Woltman, Feldstain, MacKay, & Rocchi, 2012). The mediation process closely followed Baron and Kenny's (1986) steps. In these models, the predictor was entered in at Step 1, the mediator at Step 2, and the mediator and predictor at Step 3. In other words, the first step tested the relationship from X to Y, the second step tested X to M, and the third step tested M to Y and X + M to Y.

I now describe the results of my Step 1 tests. First, the data were examined for HLM suitability by running a separate model with each outcome variable and no predictors (unconstrained null model). If the intercept value is significant, this indicates that there is between person variance in the outcome variable, and that there is statistical justification for running HLM analyses. The results are presented in Table 20. All intercepts are significant, meaning the data are suitable for HLM. To test the amount of

variance at the between person level versus the within person level, intraclass correlation coefficients (ICCs) were computed for each outcome variable and for the combined rating variable. The ICCs for each variable in the table below represent the percentage of variance at the group level.

Table 20
Suitability for HLM

	SD	Variance Component	df	$\chi 2$	*P*
Competence					
Intercept, u_0	9.21324	84.88379	249	1360.589	<0.001
level-1, *r*	17.44214	304.2284			
ICC	0.218				
Likability					
Intercept, u_0	10.41328	108.4363	249	2109.659	<0.001
level-1, *r*	15.2375	232.1814			
ICC	0.318				
Social Skills					
Intercept, u_0	9.96967	99.39427	249	1879.837	<0.001
level-1, *r*	15.58243	242.8121			
ICC	.290				
Interview Invite Intention (Continuou					
Intercept, u_0	0.33462	0.11197	249	539.5306	<0.001
level-1, *r*	1.23913	1.53545			
ICC	.068				
Interview Invite Intention (Dichotomo					
Intercept, u_0	0.14429	0.02082	249	635.4644	<0.001
level-1, *r*	0.46327	0.21462			
ICC	.088				
Combined Rating					
Intercept, u_0	9.70724	94.23041	249	1839.93919	<0.001
level-1, *r*	15.36132	235.97003			
ICC	.285				

Each model that includes attractiveness was run with both the dichotomous attractiveness condition variable, as well as the continuous attractiveness ratings for each photo that were obtained from the attractiveness pilot test. This was done because the continuous attractiveness variable from the photo pilot afforded more variance than the dichotomous condition variable, and a more normal distribution. In other words, the continuous variable better represented the range of attractiveness present among the photos than did the dichotomous variable, which collapsed the variance from the photos into a specific attractiveness category.

Hypothesis 1

Hypothesis 1 predicted that attractive candidates would receive higher outcome ratings than less attractive candidates. (See Equation 1).

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij} \quad (1)$$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with fixed error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). The regression of attractiveness in predicting ratings was significant ($\beta = 1.89$; $p < .001$), meaning that averaged over conditions, candidates in the higher-attractiveness condition received higher ratings than those in the lower-attractiveness condition ($M_{\text{high attractiveness}} = 72.92$ (18.11), $M_{\text{low attractiveness}} = 71.02$ (18.16)). Thus, Hypothesis 1 was supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The regression of attractiveness in predicting competence was significant ($\beta = 2.77$; $p < .01$), meaning that, across conditions, more attractive candidates received higher ratings than less attractive candidates (M_{high}

$_{\text{attractiveness}}$ = 72.92 (18.11), $M_{\text{low attractiveness}}$ = 71.02 (18.16)). Thus, Hypothesis 1 was supported with the continuous attractiveness variable.

Hypothesis 2

Hypothesis 2 predicted that the relationship between attractiveness and the continuous variable of recommendation for a job interview invitation would be mediated by the profile rating variables (See equations 2-4).

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij} \quad (2)$$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with fixed error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). The regression of attractiveness in predicting interview recommendation was significant ($\beta = .139$; $p < .01$), meaning that candidates in the higher-attractiveness condition received higher recommendations than those in the less-attractive condition ($M_{\text{high attractiveness}}$ = 3.59 (1.27), $M_{\text{low attractiveness}}$ = 3.45 (1.29)).

Continuous attractiveness variable. The regression of attractiveness in predicting interview recommendation was significant ($\beta = .23$; $p < .01$), meaning that more attractive candidates received more positive interview recommendations ($M_{\text{high attractiveness}}$ = 3.59 (1.27), $M_{\text{low attractiveness}}$ = 3.45 (1.29)).

Step 2

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij} \quad (3)$$

Dichotomous attractiveness condition variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting ratings was significant ($\beta = 1.89$; $p < .01$),

meaning that candidates in the higher-attractiveness condition received higher ratings than those in the lower-attractiveness condition (($M_{high\ attractiveness}$ = 72.92 (18.11), $M_{low\ attractiveness}$ = 71.02 (18.16)).

Continuous attractiveness variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting ratings was significant (β = 2.77; $p < .01$), meaning that more attractive candidates received higher ratings ($M_{high\ attractiveness}$ = 72.92 (18.11), $M_{low\ attractiveness}$ = 71.02 (18.16)).

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{1j}*(Ratings_{ij})\ r_{ij} \quad (4)$$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with random error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). In this model, ratings significantly predicted interview recommendations (β = .07; $p < .01$), such that candidates with higher ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced to non-significance from Step 1 (β = .01; $p = .94$). The Sobel test was also significant (Sobel = 3.52; $p = < .01$), supporting full mediation. Therefore, Hypothesis 2 was supported with the dichotomous attractiveness condition variable, such that ratings fully mediated the association of attractiveness condition with interview recommendation.

Continuous attractiveness variable. In this model, ratings significantly predicted interview recommendations (β = .07; $p < .01$), such that candidates with higher ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 (β = .03; $p = .03$), and the Sobel test of the

indirect effect was significant (Sobel = 8.30; $p < .01$). Therefore, there is evidence of partial mediation, supporting Hypothesis 2 with the continuous attractiveness variable.

Hypothesis 3

Hypothesis 3 predicted that the relationship between candidate gender and the continuous variable of recommendation for a job interview invitation would be mediated by the profile ratings (See Equations 5-7).

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij} \quad (5)$$

Chi-square difference tests indicated that a model with fixed error terms was appropriate (See Table 19). The regression of candidate gender in predicting interview recommendation was significant ($\beta = -.08$; $p = .03$), such that averaged across conditions, females received higher interview recommendations than males ($M_{male} = 3.48$ (1.28), $M_{female} = 3.56$ (1.29)).

Step 2

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij} \quad (6)$$

Chi-square difference tests indicated that a model with fixed error terms was appropriate (See Table 19). The regression of candidate gender in predicting ratings was significant ($\beta = -1.71$; $p < .01$), such that averaged across conditions, females received higher ratings than males ($M_{male} = 71.12$ (18.11), $M_{female} = 72.82$ (18.18)).

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + \beta_{1j}*(Ratings_{ij})\ r_{ij} \quad (7)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). In this model, ratings significantly predicted interview recommendations ($\beta = .07$; $p < .01$), such that candidates with higher ratings also

received more positive interview recommendations. Additionally, the effect of candidate gender was reduced in significance from Step 1 (β = .04; p = .04), and the Sobel test was significant (Sobel = 3.51, $p < .01$), indicating partial mediation. However, the sign of the gender to interview recommendations relationship reversed with the inclusion of the ratings mediator, meaning that males received higher recommendations than females. The change in sign is likely a statistical suppressor effect and will be discussed more in the discussion section. These results offer some support for Hypothesis 3.

Hypotheses 4-7 discuss the cross-level interactions among the level 1 variables of attractiveness and gender and the level 2 variables of job type, job visibility, and explicit and implicit attitudes.

Hypothesis 4

Hypothesis 4 predicted that the relationship between the candidate genderXattractiveness interaction term and ratings would be moderated by job type, such that attractive males would receive the highest ratings for male-typed jobs and attractive females would receive the highest ratings for female-typed jobs. First, an interaction term between gender and attractiveness was computed and entered into the model at Step 1 along with the Level 1 variables of attractiveness and gender. The three-way interaction was tested in Step 2 when job type was entered into the model as a Level 2 variable (See Equations 9-13).

Level-1 Model

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{2j}*(Gender_{ij}) + \beta_{1j}*(GenderXAttractiveness_{ij}) + r_{ij} \quad (8)$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(JobType_j) + u_{0j} \quad (9)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(JobType_j) \quad (10)$$

$\beta_{2j} = \gamma_{10} + \gamma_{11}*(JobType_j)$ (11)
$\beta_{3j} = \gamma_{10} + \gamma_{11}*(JobType_j)$ (12)

Mixed Model
$Ratings_{ij} = \gamma_{00} + \gamma_{01}*JobType_j + \gamma_{10}*Attractiveness_{ij} +$ (13)
$\gamma_{11}*JobType_j*XAttractiveness_{ij} + \gamma_{20}*Gender_{ij} + \gamma_{21}*JobType_j*XGender_{ij} +$
$\gamma_{30}*GenderXAttractiveness_{ij} + \gamma_{31}*JobType_j*XGenderXAttractiveness_{ij} + u_{0j} + r_{ij}$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with fixed error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). Job type (β = -.72; *p* = .65) and gender (β = -1.58; *p* = .11) did not significantly predict ratings. Attractiveness significantly predicted ratings (β = 3.33; *p* < .01), such that candidates in the attractive condition received higher ratings. The genderXattractiveness interaction term did not significantly predict ratings (β = -2.37; *p* =.09), and neither did the cross-level interaction between the genderXattractiveness interaction term and job type (β = .39; *p* = .84). Thus, Hypothesis 4 was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. Job type (β = -1.07; *p* = .45) and gender (β = -.99; *p* = .82) did not significantly predict ratings. Attractiveness significantly predicted ratings (β = 3.06; *p* < .01), such that more attractive candidates received higher ratings. The genderXattractiveness interaction term did not significantly predict ratings (β = -.36; *p* = .65), and neither did the cross-level interaction between the genderXattractiveness interaction term and job type (β = -.13; *p* = .89). Thus, Hypothesis 4 was not supported with the continuous attractiveness variable.

Hypothesis 5

Hypothesis 5 predicted that the relationship between candidate attractiveness and ratings would be moderated by explicit attitudes, such that the relationship would be

stronger when explicit attitudes were more positive (See Equations 14-17). When the interaction was significant, simple slopes were examined at one standard deviation above and one standard deviation below the mean, and the results were graphed to visualize the interaction.

Level-1 Model

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij} \quad (14)$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ExplicitAttitudes_j) + u_{0j} \quad (15)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ExplicitAttitudes_j) + u_{1j} \quad (16)$$

Mixed Model

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*ExplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*ExplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij} \quad (17)$$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with fixed error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). Explicit attitudes significantly predicted ratings ($\beta = -2.78$; $p < .01$), such that participants with more positive explicit attitudes provided lower ratings overall. Attractiveness significantly and positively predicted ratings ($\beta = 1.89$; $p < .01$), as did the cross-level interaction between attractiveness and explicit attitudes ($\beta = .91$; $p = .05$). Each of the simple slopes tests revealed a significant positive association between attractiveness and ratings, but attractiveness was more strongly related to ratings when explicit attitudes were more positive ($b = 5.16$; $t = 2.90$; $p = .04$) than when they were less positive ($b = 3.32$; $t = 3.73$; $p < .01$). Thus, Hypothesis 5 was supported with the dichotomous attractiveness condition variable. Figure 3 plots the interaction.

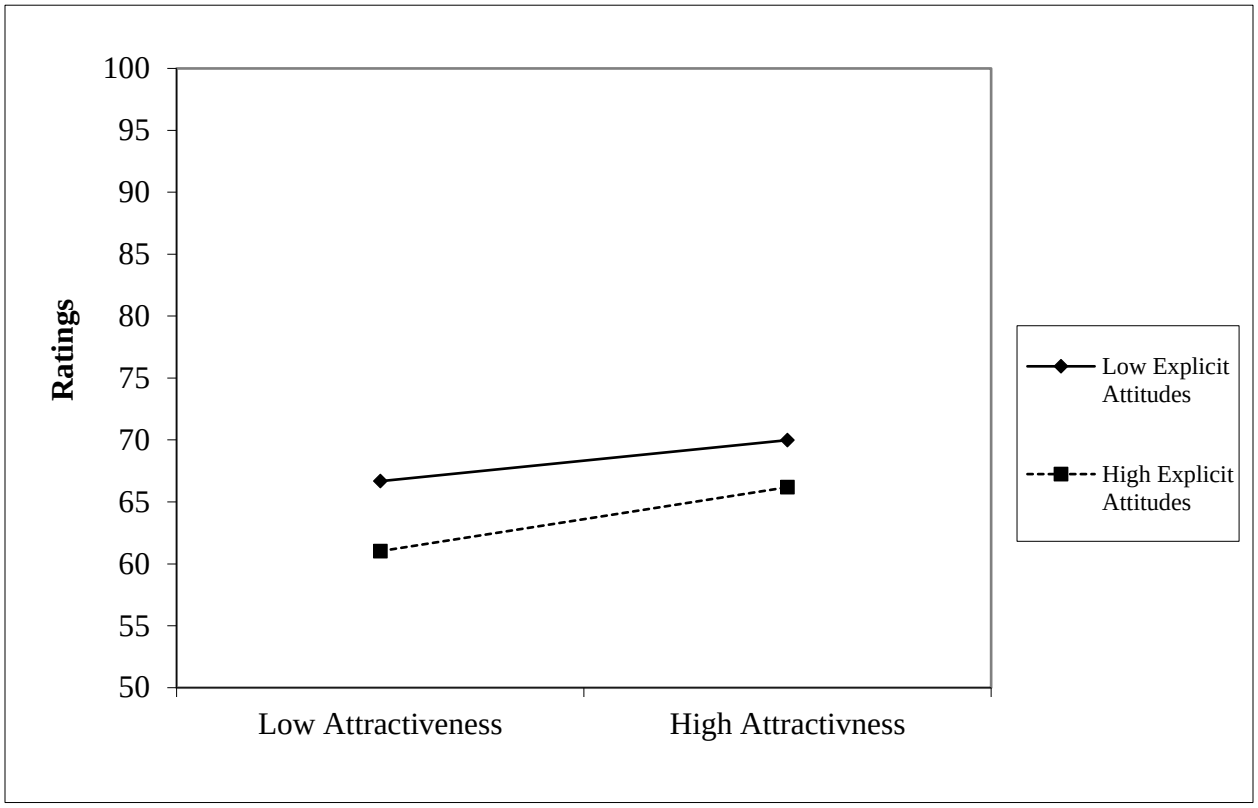


Figure 3. Interaction between dichotomous attractiveness and explicit attitudes predicting ratings.

Continuous attractiveness variable. Explicit attitudes significantly predicted ratings (β = -6.72; $p < .01$), such that participants with more positive explicit attitudes provided lower ratings. Attractiveness significantly and positively predicted ratings (β = 2.77; $p < .01$), as did the cross-level interaction between attractiveness and explicit attitudes (β = .83; $p < .01$). Each of the simple slopes tests revealed a significant positive association between attractiveness and ratings, but attractiveness was more strongly related to ratings when explicit attitudes were more positive (b = 5.70; t = 4.81; $p < .01$) than when they were less positive (b = 4.07; t = 6.83; $p < .01$). Thus, Hypothesis 5 was supported with the continuous attractiveness variable. Figure 4 plots the interaction.

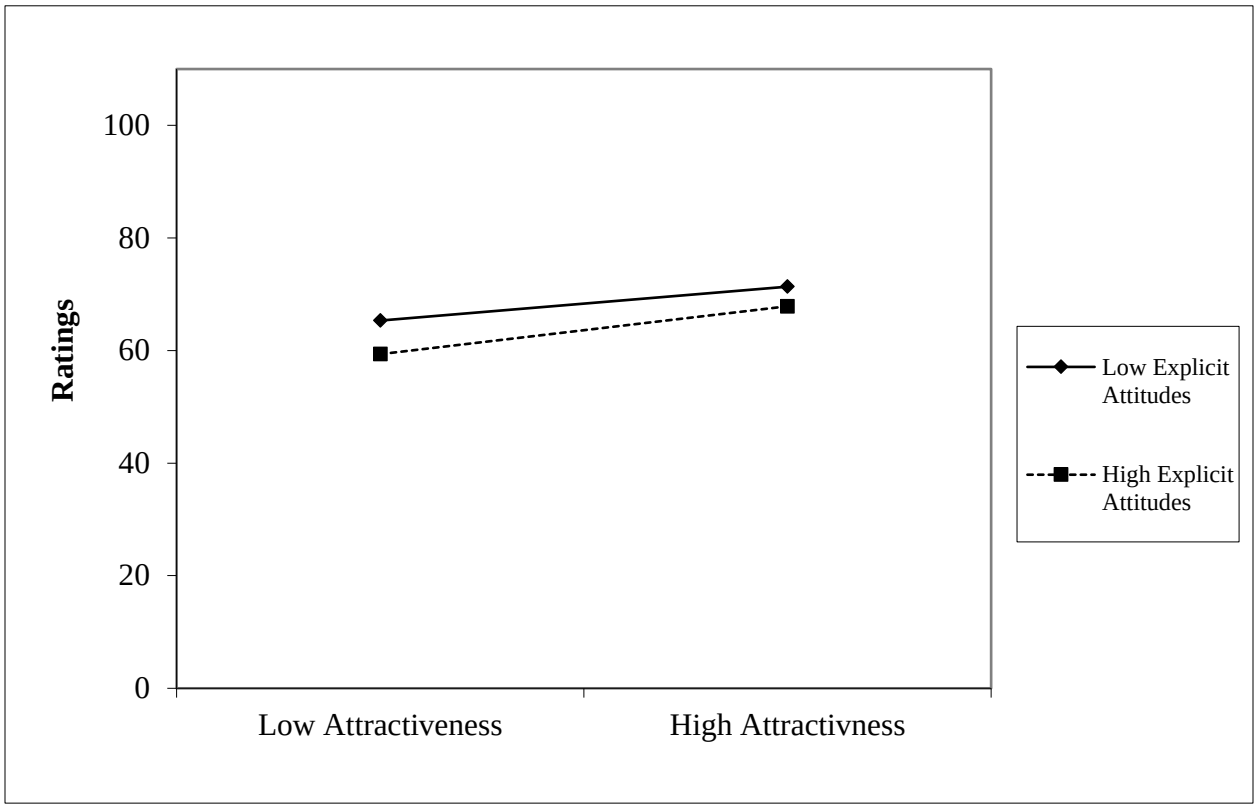


Figure 4. Interaction between continuous attractiveness and explicit attitudes predicting ratings.

Hypothesis 6

Hypothesis 6 predicted that the relationship between candidate attractiveness and ratings would be moderated by implicit attitudes, such that the relationships would be stronger when implicit attitudes were more positive (See Equations 18-21). This hypothesis was analyzed with all participants who completed the IAT portion ($N = 217$), a response rate of 87%. A sample size of 217 is still much larger than that used in other policy-capturing HLM studies (e.g., Hurt et al., 1999; Kristoff-Brown & Colbert, 2002). Therefore, we believed there was still sufficient power to detect effects using this subsample.

Level-1 Model

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij} \quad (18)$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ImplicitAttitudes_j) + u_{0j} \quad (19)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ImplicitAttitudes_j) + u_{1j} \quad (20)$$

Mixed Model

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*ImplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*ImplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij} \quad (21)$$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with fixed error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). Implicit attitudes did not significantly predict ratings ($\beta = 1.58$; $p = .46$). Attractiveness did significantly and positively predict ratings ($\beta = 1.87$; $p < .01$), but the cross-level interaction between attractiveness and implicit attitudes was not significant ($\beta = .21$; $p = .89$). Thus, Hypothesis 6 was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. Implicit attitudes did not significantly predict ratings ($\beta = -.33$; $p = .96$). Attractiveness did significantly and positively predict ratings ($\beta = 2.75$; $p < .01$), but the cross-level interaction between attractiveness and implicit attitudes was not significant ($\beta = .38$; $p = .71$). Thus, Hypothesis 6 was not supported with the continuous attractiveness variable.

Hypothesis 7

Hypothesis 7a-c predicted that the relationship between candidate attractiveness and ratings would be moderated by customer visibility, such that the relationships would be stronger for jobs with high customer visibility than for jobs with low customer visibility (See Equations 22-25).

Level-1 Model

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij} \quad (22)$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(CustomerVisibility_j) + u_{0j} \quad (23)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(CustomerVisibility_j) + u_{1j} \quad (24)$$

Mixed Model

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*CustomerVisibility_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*CustomerVisibility_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij} \quad (25)$$

Dichotomous attractiveness condition variable. Chi-square difference tests indicated that a model with fixed error terms was appropriate in testing both the dichotomous and continuous attractiveness variables (See Table 19). Customer visibility did not significantly predict ratings (β = -.67; p = .64). Attractiveness did significantly and positively predict ratings (β = 1.72; p = .01), but the cross-level interaction between attractiveness and customer visibility did not (β = .35; p = .72). Thus, Hypothesis 7 was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. Customer visibility did not significantly predict ratings (β = -1.95; p = .60). Attractiveness did significantly and positively predict ratings (β = 2.64; p < .01), but the cross-level interaction between attractiveness and customer visibility was not significant (β = .27; p = .67). Thus, Hypothesis 7 was not supported with the continuous attractiveness variable.

Hypotheses 8 and 9 test the main effects and mediation effects of the level 1 predictor variable of qualification.

Hypothesis 8

Hypothesis 8 predicts that candidates in the high qualification condition would receive more favorable ratings than those in the moderate qualification condition (See Equation 26).

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij} \quad (26)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). The regression of qualification in predicting ratings was significant ($\beta = 21.41$; $p < .01$), meaning that candidates in the high qualification condition received significantly higher ratings than candidates in the moderate qualification condition ($M_{high\ qualification} = 82.68\ (12.14)$, $M_{low\ qualification} = 61.26\ (16.82)$). Thus, Hypothesis 8 was supported.

Hypothesis 9

Hypothesis 9 predicted that the relationship between qualification and the continuous variable of recommendation for a job interview invitation would be mediated by the profile ratings (See Equations 27-29).

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij} \quad (27)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). The regression of candidate qualification in predicting interview recommendation was significant ($\beta = 1.87$; $p < .01$), such that more qualified candidates received higher interview recommendations ($M_{high\ qualification} = 4.45\ (.75)$, $M_{low\ qualification} = 2.59\ (.99)$).

Step 2

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij} \quad (28)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). The regression of candidate qualification in predicting ratings was significant ($\beta = 21.41$; $p < .01$), such that more qualified candidates received higher ratings ($M_{high\ qualification} = 82.68\ (12.14)$, $M_{low\ qualification} = 61.26\ (16.82)$).

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + \beta_{1j}*(Ratings_{ij})\ r_{ij} \quad (29)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). In this model, ratings significantly predicted interview recommendations (β = .04; $p < .01$), such that candidates with higher ratings also received more positive interview recommendations. Additionally, the effect of candidate qualification was reduced from Step 1 (β = .99; $p < .01$), and the Sobel test of the indirect effect was significant (Sobel = 17.66; $p < .01$). This indicates partial mediation and supports Hypothesis 9.

Supplemental Analyses

In addition to hypothesis testing, a few supplemental analyses were examined to further assess the relationships present in the data. The first supplemental analysis examined the hierarchical predictability of attractiveness in predicting ratings over qualification and gender. To test this analysis, a model was first run with qualification and gender predicting ratings. In a second model, attractiveness was included along with qualification and gender. The results are presented in Table 21. As is evident in the table, attractiveness significantly increased the R^2 for the combined rating variable, for likability, and for social skills. Attractiveness did not significantly increase the R^2 for competence or motivation. This pattern was consistent with both the dichotomous attractiveness condition variable and with the continuous attractiveness variable. Although these effects are small, they are likely still meaningful. This will be discussed in the discussion section.

Table 21

Hierarchical Regression Results

	Model R^2	F	df_{num}	df_{den}
Combined Rating				
Dichotomous				
Model 1	.350	1075.37	2	3997
Model 2	.353	725.33	1	3996
Change	.003	16.77*		
Continuous				
Model 1	.350	1075.37	2	3997
Model 2	.352	726.34	1	3996
Change	.003	18.74*		
Competence				
Dichotomous				
Model 1	.421	1453.66	2	3997
Model 2	.421	968.90	1	3996
Change	.000	0.06		
Continuous				
Model 1	.421	1453.66	2	3997
Model 2	.421	968.87	1	3996
Change	.000	.005		
Likability				
Dichotomous				
Model 1	.244	646.49	2	3997
Model 2	.251	446.79	1	3996
Change	.007	36.06*		
Continuous				
Model 1	.244	646.49	2	3997
Model 2	.251	448.56	1	3996
Change	.007	40.05*		
Social Skills				
Dichotomous				
Model 1	.243	642.03	2	3997
Model 2	.254	452.33	1	3996
Change	.010	55.44*		
Continuous				
Model 1	.243	642.03	2	3997
Model 2	.255	456.51	1	3996
Change	.012	64.92*		
Motivation				
Dichotomous				
Model 1	.343	1044.60	2	3997
Model 2	.344	697.03	1	3996

Change	.000	1.60		
Continuous				
Model 1	.343	1044.60	2	3997
Model 2	.344	697.34	1	3996
Change	.000	2.19		
Gender				

Note: *F change is significant at $p < .001$

After hierarchical regression analyses were conducted, relative weights analyses (RWA) were also conducted with attractiveness, qualification, and gender as predictors. The results are presented in Table 21. The RWA results generally complement the hierarchical regression results. Qualification was the most heavily weighted predictor in all models. The weights of attractiveness, gender, and qualification were significant in the models predicting the combined rating variable, likability, and social skills. However, in the models predicting competence and motivation, qualification was the only significant predictor (when the continuous attractiveness variable was used in these models, it was also a significant predictor). Taken together, these results suggest that attractiveness carries more weight in predicting likability and social skills than in predicting competence and motivation. Qualification accounts for the vast majority of the variance when predicting competence and motivation.

Table 22

RWA Results

	Model R^2	Weight
Combined Rating		
Dichotomous	.35	
Attractiveness		0.77*
Qualification		98.60*
Gender		0.63*
Continuous	.35	
Attractiveness		2.25*
Qualification		97.09*
Gender		0.66*

Competence		
Dichotomous	.42	
Attractiveness		0.002
Qualification		99.93*
Gender		0.07
Continuous	.42	
Attractiveness		0.50*
Qualification		99.43*
Gender		0.07
Likability		
Dichotomous	.25	
Attractiveness		2.69*
Qualification		95.61*
Gender		1.70*
Continuous	.25	
Attractiveness		5.06*
Qualification		93.17*
Gender		1.77*
Social Skills		
Dichotomous	.25	
Attractiveness		4.09*
Qualification		94.21*
Gender		1.70*
Continuous	.26	
Attractiveness		7.21*
Qualification		91.0*
Gender		1.79*
Motivation		
Dichotomous	.34	
Attractiveness		0.08
Qualification		99.62*
Gender		0.30
Continuous	.34	
Attractiveness		0.93*
Qualification		98.76*
Gender		0.31

Note: *Confidence intervals did not overlap zero, indicating that the weight is significant

Another supplemental analysis examined the interaction between candidate qualification and attractiveness. Previous literature suggests that attractiveness biases

operate most strongly when qualifications are mediocre as opposed to clearly high (e.g., Chung & Leung, 1988). To test this supplemental analysis, the level 1 qualification and attractiveness condition variables were entered into the equation, along with their interaction term (See Equation 30).

$$Ratings_{ij} = \gamma_{00} + \gamma_{10}*Attractiveness_j + \gamma_{20}*Qualification_{ij} + \Gamma_{30}*Attractiveness_j*Qualification_{ij} + u_{2j}*Qualification + u_{3j}*AttracitvenessXQualification_{ij} + r_{ij} \quad (30)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). Consistent with hypotheses 1 and 8, attractiveness (β = 1.09; $p < .01$) and qualification (β = 20.61; $p < .01$) both significantly predicted ratings. The interaction term also significantly predicted ratings (β = 1.61; $p < .01$). Each of the simple slopes tests revealed a significant positive association between attractiveness and ratings, but attractiveness was more strongly related to ratings when qualification was high (b = 2.70; $t = 7.37$; $p < .01$) than when qualification was moderate (b = 1.09; $t = 2.69$; $p < .01$). Figure 5 plots the interaction. This pattern is in contrast to some previous research which found that attractiveness had a larger effect when qualifications were ambiguous rather than high; however, the results are consistent with previous research in that highly qualified, more attractive candidates receive the highest ratings, whereas moderately qualified, less attractive candidates receive the lowest ratings. The pattern was replicated with the continuous attractiveness variable in that more weight was placed on attractiveness in the moderate qualification condition (b = 1.41; $t = 6.33$; $p < .001$) than the high qualification condition (b = 1.16; $t = 3.21$; $p < .01$). However, although attractiveness (β = 1.61; $p < .01$) and qualification (β = 19.91; $p < .01$) significantly predicted ratings, their interaction did not (β = .25; $p = .53$).

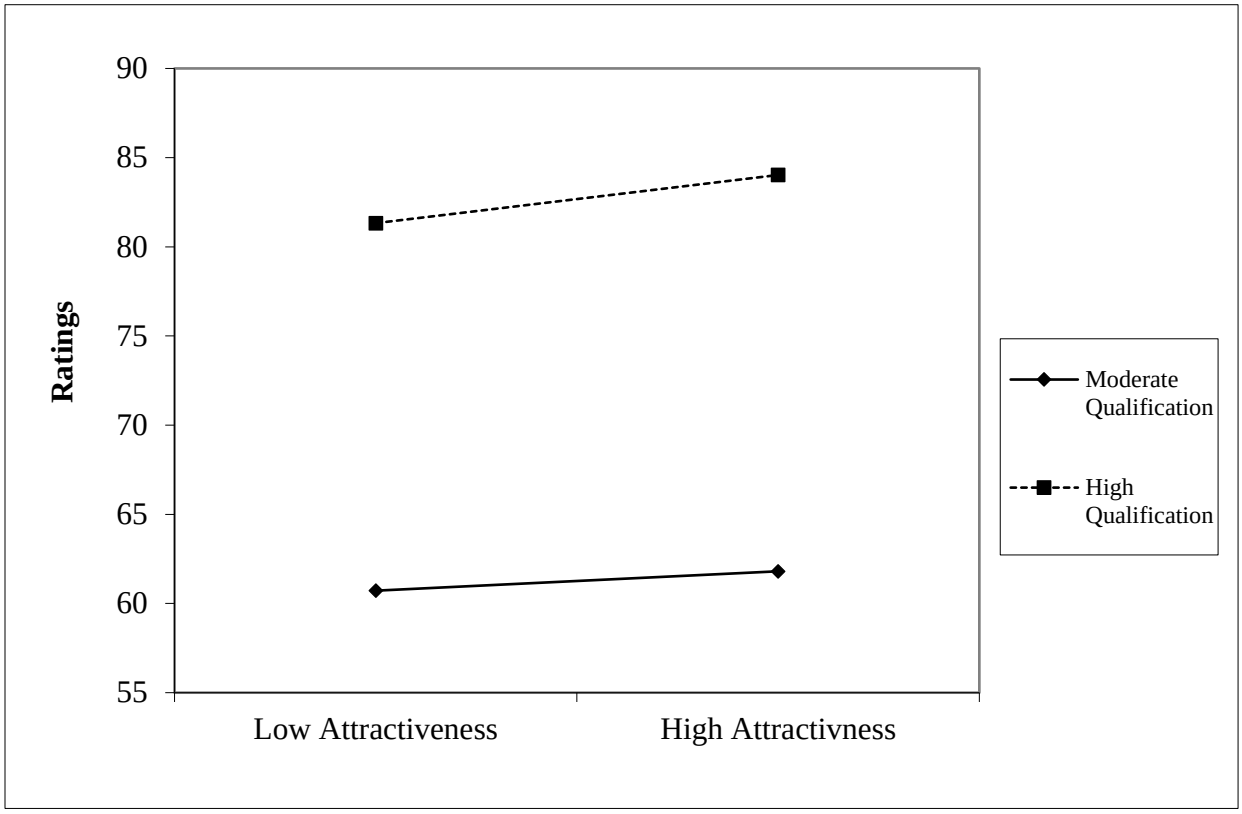


Figure 5. Interaction between candidate qualification and candidate attractiveness predicting ratings.

Next, participant's selections for their top five photos were analyzed. After participants viewed and rated each individual profile, they were shown a list of all photos they had seen previously, but this time without any profile information. Participants were instructed to rank order their top five photos. Across all participants, all of the photos that were selected most as part of the top five choices were photos that had highly qualified profiles earlier in the study. While the most commonly chosen top three photos represented more attractive candidates (one female and two males), the fourth and fifth most frequently chosen photos represented less attractive candidates. This suggests that

participants may have had some memory of the profile information from earlier in the study, since not all top five selections represented attractive candidates.

We also analyzed the percentage of participants, on average, that ranked more attractive photos, less attractive photos, male photos, and female photos in their top five. While participants chose 63% "more attractive" photos in their top five, participants chose only 37% "less attractive" photos. These percentages were significantly different from each other ($t = 19.47$; $p < .01$). When analyzed within only the low customer visibility (phone-based) condition, participants chose 64% "more attractive" photos on average and only 36% "less attractive" photos on average ($t = 14.89$; $p < .01$). In the high customer visibility (face-to-face) condition, participants chose 62% "more attractive" photos on average and only 38% "less attractive" photos. These percentages were significantly different from each other ($t = 12.65$; $p < .01$). In other words, participants ranked a greater number of more attractive candidates in the top five regardless of whether the job was described as requiring a high or low degree of customer visibility.

Looking at the differences by gender in the top five, participants chose 51% male photos and only 49% female photos, and these percentages were not significantly different from each other ($t = 1.25$; $p = .21$). In other words, there was no evidence of gender bias across job type conditions. When analyzed within only the Hand Tools position, participants chose 54% male photos and only 46% female photos, and these percentages were significantly different from each other ($t = 5.02$; $p < .01$). In the Baby Products position, participants chose 47% male photos and 53% female photos, and these percentages were also significantly different from each other ($t = -2.89$; $p < .01$). That is, participants ranked more males in the top five for the Hand Tools position and ranked

more females in the top five for the Baby Products position. This indicates some evidence of a preference for females in the "feminine" position and a preference for males in the "masculine" position. These results offer some evidence of the existence of attractiveness and gender biases when only a candidate's photo is visible, though the effects of attractiveness appear to be stronger than the effects of gender.

One additional analysis with the top five data explored the correlation between the number of top five more attractive candidates with implicit and explicit attitudes. The correlation between the number of top five more attractive photos and implicit attitudes was not significant ($r = .01$; $p = .94$). However, the correlation between the number of top five more attractive photos and explicit attitudes was significant ($r = .18$; $p < .01$). In other words, those with more biased explicit attitudes in favor of more attractive employees were more likely to choose a greater number of more attractive photos for their top five candidates. This is consistent with the previously discussed results of this study, which found that explicit, but not implicit, attitudes moderate the relationship between attractiveness and ratings.

Additionally, it was thought that participants who were more motivated to act as a recruiter would attend more to qualification information when rating the candidates than those who were less motivated to act as a recruiter. Recruiter motivation was self-reported on a 1 (*Not at All*) to 5 (*Very Much*) scale at the end of the survey. To test this supplemental analysis, a regression of qualification in predicting the profile ratings was conducted at Step 1. At Step 2, recruiter motivation was entered into the equation as Level 2 moderator to test the cross-level interaction between qualification and motivation in predicting ratings (See Equations 31-34). When the interaction was significant, simple

slopes were examined at one standard deviation above and one standard deviation below the mean, and the results were graphed to visualize the interaction.

Level-1 Model

$$Ratings_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij} \quad (31)$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(Motivation_j) + u_{0j} \quad (32)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(Motivation_j) + u_{1j} \quad (33)$$

Mixed Model

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*Motivation_j + \gamma_{10}*Qualification_{ij} + \gamma_{11}*Motivation_j*Qualification_{ij} + u_{0j} + u_{1j}*Qualification_{ij} + r_{ij} \quad (34)$$

Chi-square difference tests indicated that a model with random error terms was appropriate (See Table 19). Recruiter motivation did not significantly predict ratings (β = .37; $p = .86$). However, qualification significantly and positively predicted ratings (β = 21.46; $p < .01$), as did the cross-level interaction between qualification and recruiter motivation (β = 5.84; $p < .01$). Each of the simple slopes tests revealed a significant positive association between qualification and ratings, but qualification was more strongly related to ratings when recruiter motivation was high (b = 52.56; $t = 5.04$; $p < .01$) than when recruiter motivation was low (b = 47.29; $t = 5.45$; $p < .01$). Thus, this supplemental analysis was supported. Figure 6 plots the interaction. As is evident in the graph, the ratings were similar when the candidate was moderately qualified versus when the candidate was highly qualified. This suggests that moderately qualified candidates are rated lower regardless of recruiter motivation. Differences in ratings are seen when recruiter motivation is high, such that candidates received higher ratings when participants were more motivated to act as a recruiter.

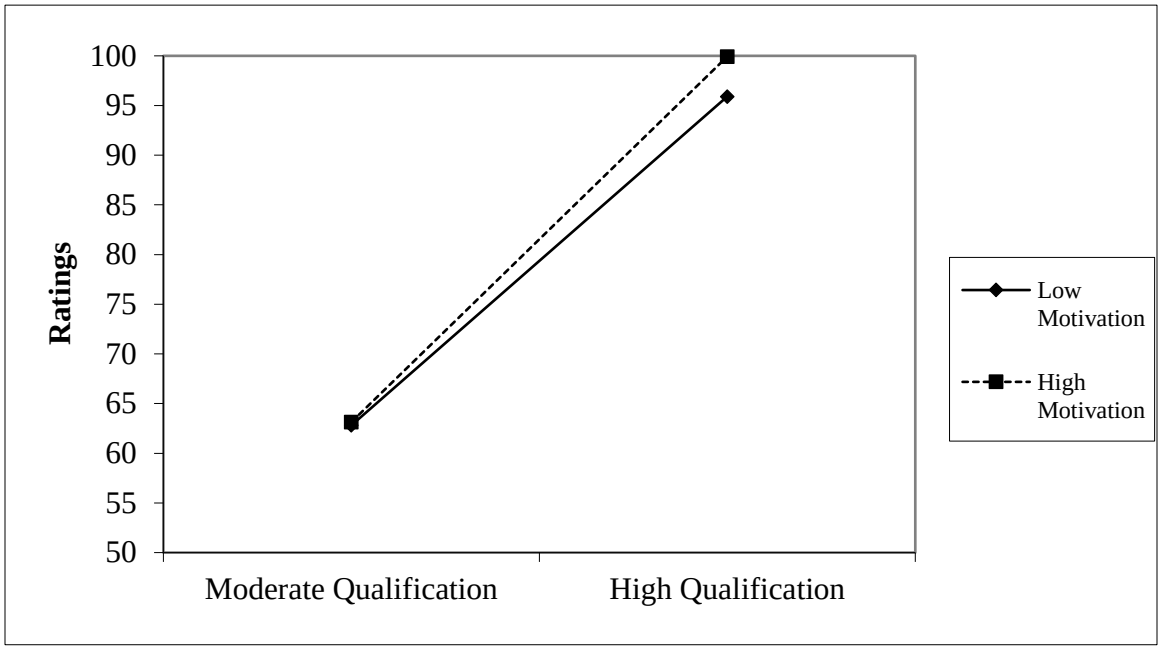


Figure 6. Interaction between candidate qualification and recruiter motivation predicting ratings.

Another supplemental analysis examined the hierarchical predictability of implicit attitudes over explicit attitudes in predicting profile ratings. Although biases may be overt, many are subtle. In other words, recruiters may hold unconscious biases towards more attractive candidates that more strongly influence their ratings than their conscious biases. To test this, the first model tested explicit attitudes as a Level 2 predictor of the ratings. Then, implicit attitudes was added to the model as a second Level 2 predictor (See Equations 35-36).

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*ExplicitAttitudes_j + u_{0j} + r_{ij} \quad (35)$$

Explicit attitudes significantly predicted ratings ($\beta = -2.41$; $p < .01$), such that participants with more negative explicit attitudes gave higher ratings.

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*ExplicitAttitudes_j + \gamma_{02}*ImplicitAttitudes_j + u_{0j} + r_{ij} \quad (36)$$

Explicit attitudes remained a significant predictor of competence when implicit attitudes was entered into the model ($\beta = -2.51$; $p < .01$). However, implicit attitudes did not significantly predict ratings ($\beta = 2.47$; $p = .21$), and the model fit did not improve with the addition of implicit attitudes ($\Delta\chi^2 = 6.61$; df = 0; $p > .50$). Thus, implicit attitudes did not predict ratings more strongly than explicit attitudes.

It was also thought that implicit attitudes would have a larger influence when participants were less motivated to act as a recruiter. When participants were more motivated to act as a recruiter, it follows that their conscious processing would be operating to a greater extent than when they are less motivated. By contrast, when participants are less motivated, their unconscious thought processes would be more likely to operate and to predict their ratings. To test whether or not this was the case, the regression of implicit attitudes in predicting ratings was analyzed using two subsamples of participants. The first subsample (N = 225) included only those participants who reported "very much" when asked to what extent they took their role as a recruiter seriously while reviewing the online profiles. The second subsample (N = 25) included on those participants who reported "some," "neutral," or "very little." (No participants reported "Not at All"). With each subsample, implicit attitudes was regressed onto ratings (See Equation 37).

$$Ratings_{ij} = \gamma_{00} + \gamma_{01}*ImplicitAttitudes_j + u_{0j} + r_{ij} \quad (37)$$

Implicit attitudes did not significantly predict ratings in the "very motivated" subsample ($\beta = 2.49$; $p = .21$). Implicit attitudes were also not a significant predictor of

ratings in the less motivated subsample (β = -16.93; p = .18). However, it is important to note that the beta weight of implicit attitudes is much stronger in the less motivated subsample, especially considering the small size (N = 25) of this subsample. These results provide some evidence that participants who were less motivated might have relied more on implicit processing than those who were more motivated. Furthermore, less motivated participants provide lower ratings when their implicit attitudes are stronger (i.e., more biased).

After this supplemental analysis was conducted, a similar exploratory analysis was conducted to determine whether participants spent more time rating incongruent (i.e., more attractive + moderate qualification or less attractive + high qualification) than congruent (i.e., more attractive + high qualification or less attractive + moderate qualification) profiles. A greater processing time could indicate a greater degree of conscious processing. Participants spent an average of 31.58 seconds (SD = 20.33) rating incongruent profiles, and they spent an average of 28.50 seconds (SD = 31.58) rating congruent profiles. Although the means were not significantly different at p = .05, they approached significance at t = -1.47, p = .07. In general, participants spent more time rating incongruent profiles versus congruent profiles. This provides some evidence that increased effort is required to process incongruent information as opposed to congruent information. In other words, ratings of congruent profiles may be made more unconsciously and implicitly, whereas ratings of incongruent profiles may require more conscious effort and may be made more explicitly.

Discussion

The results of this study demonstrate that information about a candidate's physical attractiveness from their online profile photo significantly predicts perceptions of that candidate's abilities ($\beta = 2.77$; $p < .001$) – particularly likability and social skills – and whether or not they are invited for a job interview ($\beta = .23$; $p < .001$). Importantly, this suggests that recruitment and selection systems are not functioning at a maximum level of validity and fairness. This is likely why recruitment and selection researchers have identified a need for research on physical attractiveness biases in online contexts (Zickar, 2016). Examining the status characteristics of appearance, gender, and qualification within the same study allowed us to determine the weights participants give to the three status characteristics when making recruitment decisions. Although most weight was placed on a candidate's qualification, attractiveness specifically predicted perceptions of candidates' likability and social skills. While the weight of attractiveness was small (~3%-7% in predicting likability and social skills), it may still produce meaningful real-world effects. Cortina and Landis (2009) suggest that effect sizes should be determined contextually, and that if an effect is still detectable in certain situations – such as in hiring in this case – it must have a "profound effect indeed" (p. 298). The authors cite Prentice and Miller (1992), who discussed the effects of physical attractiveness on courtroom judgments. Because physical attractiveness is not supposed to have *any* sort of effect on legal outcomes, the fact that it has an effect is substantial. Similarly, attractiveness *should* not affect perceptions in the context of job recruitment, such that some candidates receive higher ratings merely because they are more attractive. However, the fact that attractiveness did significantly influence recruitment perceptions in this study, when participants were aware that their responses would be closely

monitored, suggests that more training may be needed to ensure that recruiters are attending only to information reflected in the organization's competency model and not being affected by easily visible characteristics when making recruitment decisions. This is primarily important as it may impact the degree of fairness with which a recruitment or selection device operates. Additional theoretical and practical implications are discussed below.

Status Generalization Theory

The results of this study support the proposition of status generalization theory that diffuse and specific status cues combine to influence differential status perceptions. However, the results of this study build on current status generalization theory because they suggest that differential status perceptions (e.g., perceived competence, social skills, etc.) mediate the relationship between attractiveness and recommendation for a job interview invitation. The addition of the job interview recommendation builds upon past work on status characteristics, which have examined perceptions such as competence and warmth as the final outcomes. The process of status generalization theoretically occurs through the mediating mechanisms of differential perceptions of social and intellectual competence. However, many studies infer this link without actually measuring and analyzing effects on job-related outcomes.

Relatedly, the results of this research suggest that stereotypes associated with status characteristics inform the mediating pathways explaining the relationship between status characteristics and biased outcomes. This study draws from the "beautiful is good" stereotype (Feingold, 1992; Langlois et al., 2000) and the Lack of Fit Model (Heilman, 1983) to include intellectual competence, likability, and social skills as mediating

variables. Previous attractiveness research has only examined perceptions of intellectual competence, though it has been recognized that other characteristics (e.g., social competence) are likely evoked in the attractiveness context as well (e.g., Jackson et al., 1995). This study therefore calls for an integration of status generalization theory and stereotype research to inform the pathways through which status generalization occurs.

Furthermore, the effects of attractiveness appear to be stronger in predicting perceptions on the warmth-related variables (likability and social skills) than in predicting perceptions of intellectual competence. When analyzed individually, the mediators of likability and social skills appeared to have a suppressor effect on whether or not a candidate was invited for a job interview. When likability and social skills were not included in the model, more attractive candidates were more likely to be invited for a job interview. However, when likability and social skills were included in the mediation model, this relationship reversed, such that less attractive candidates were more likely to be invited for a job interview. This could suggest that when controlling for perceptions of likability and social skills, the advantage of being attractive is suppressed. This is corroborated by the results of the hierarchical regression and RWA, which suggest that attractiveness accounts for more variance and carries more weight in predicting likability and social skills than competence or motivation. Thus, it is not surprising that controlling for likability and social skills suppressed the effect of attractiveness, though this was not the case when controlling for competence. It is worth noting that this pattern may have also been merely the result of a statistical suppressor effect. The correlations of the likability ($r = .62$, $p < .01$) and social skills ($r = .63$, $p < .01$) to recommendation were stronger than the correlations between attractiveness and likability ($r = .08$, $p < .01$) and

attractiveness and social skills ($r = .10$, $p < .01$). Therefore, when controlling for the mediator, the mediators may have accounted for all of the variance shared with attractiveness and more, thus causing the sign to flip simply by swamping the available variance.

These results conflict with status generalization theory to some extent. Status generalization theory posits that broader societal stereotypes have a common status element that associates greater worthiness and competence with more attractive people than with less attractive people (Conway et al., 1996; Jackson et al., 1995). Status generalization theory, in combination with the "beautiful is good" stereotype (Feingold, 1992; Langlois et al., 2000) suggests that attractiveness elicits more positive perceptions of both intellectual and social competence. While the combined rating variable (including measures of both intellectual and social competence) did significantly mediate the relationship between attractiveness and recommendation for an interview invitation, RWA and mediation results showed that attractiveness was a stronger predictor of social competence. This may imply that positions requiring more social skills may see more attractiveness bias than positions requiring fewer or no social skills. In this study, participants likely viewed the sales position as requiring a high degree of social skills regardless of whether the customer interaction took place over the phone or in person. Attractiveness bias may not operate as strongly in other contexts that do not require customer interaction. This will be discussed more below.

It is worth noting that the correlations among the profile rating variables (competence, likability, social skills, and motivation) were very high ($r = .90$ or higher). There are at least two potential explanations for these high correlations. First, the

manipulation of qualification was unitary. In other words, qualification was manipulated by manipulating competence-related information (e.g., GPA) as opposed to manipulating warmth information (e.g., volunteer experience). Therefore, participants had to infer warmth from the competence- and attractiveness-related information. Therefore, it is not surprising that when a candidate was rated high on one measure, they were also rated higher on the others. The fact that the profile rating variables were so highly correlated may also suggest that more attractive and more highly qualified individuals evoke more positive perceptions in recruiters in general, particularly when only limited information is present. When rating online profiles containing limited information, recruiters may form a more general overall positive ("halo" effect) or negative ("horns" effect) impression of a candidate. This is likely the result of recruiters perusing through hundreds of profiles with limited amounts of information in a relatively short period of time. Either way, candidates should strive to include both competence (e.g., work experience) and warmth-related (e.g., volunteer experience) information on their online profiles, since both seem to have an effect on whether or not the candidate is recommended for a job interview invitation. Additionally, recruiters should be provided with an option of "not enough information" when rating competence, likability, and social skills to avoid making inferences about one dimension from the other dimensions when there may not be enough specific information to make an accurate rating. This may help avoid any "spillover effect" of intellectual competence information affecting ratings of social competence or vice-versa.

However, the results of this study suggest that competence, likability, and social skills may not fully explain the relationship of attractiveness to interview

recommendation or qualification to interview recommendation. When using the dichotomous attractiveness condition variable as a predictor, the ratings fully mediated the relationship of attractiveness to interview recommendation. However, when using the continuous attractiveness variable as a predictor, partial mediation was found, which suggests that variations in perceived attractiveness of candidates within the attractiveness condition seems to affect interview recommendations above and beyond their effects on ratings of competence, etc. We are limited to the variables included in the study with what we can test statistically, but there are speculative explanations for the partial mediation relationship. Specifically, having more attractive employees may be a status symbol for a company. It may be the thought that, "the more attractive employees a company has, the better they are" that is contributing to the relationship beyond mere perceptions of competence, likability, and social skills. Furthermore, it is possible that participants might have a "more is better" perspective on attractiveness such that even within the high-attractiveness condition, the most attractive photos tended to be rated highest.

A similar partial mediation relationship was found when qualification was a predictor. Again, we can only speculate as to what else may be contributing to the relationship. One likely explanation is that participants assumed that highly qualified candidates could be trained more quickly and easily than moderately qualified candidates. As a result, they provided higher interview recommendations in part because of their perceptions of competence, likability, and social skills, and also in part because of their perception of the candidate's trainability. A second potential explanation is that the addition of the "Number of Awards Received in College" section of the profile could

have lead participants to believe that highly qualified candidates stood out more amongst their peers in college since they were specifically recognized with an award. Therefore, they may have received higher interview recommendations also because of a perception that they were better options to invite for an interview over their more moderately qualified (and not award-winning) candidate peers.

Additionally, the combined rating variable likely had a statistical suppressor effect when included as a mediator between gender and interview recommendation. Without the mediator included in the model, females received higher interview recommendations than males. However, this relationship reversed when the mediator was included in the model, resulting in males receiving higher interview recommendations. This likely occurred because the correlation between ratings and interview recommendations ($r = .70$, $p < .01$) was much stronger than the correlation between gender and ratings ($r = -.05$, $p < .01$). Therefore, when the ratings were controlled in the third step, the mediator accounted for all of the variance shared with gender and more (thus causing the sign to flip to indicate that males had an advantage over females). As a result, there is only some evidence that competence, likability, and social skills mediate the relationship between the status characteristic of gender and the interview recommendation outcome.

Attractiveness Bias

This research also sought to extend Webster and Driskell's (1983) conceptualization of attractiveness as a status characteristic by examining moderators of the extent to which people put weight on attractiveness as a diffuse status characteristic. Specifically, this study included conditions of high and low customer visibility and

masculine and feminine job type. The extent to which the employee would be visible to customers did not significantly moderate the relationship of attractiveness to ratings. In other words, more attractive candidates were advantaged regardless of the degree of face-to-face customer contact. One reason for this finding may be that participants assumed that social skills were equally important over the phone as face-to-face. In other words, participants may have believed that attractive candidates would be better suited for positions that required any degree of customer interaction, regardless of whether that interaction occurred over the phone or in person. For instance, Tews et al. (2009) found that attractiveness was significantly more predictive of employment suitability for a hotel front desk associate (high customer contact) versus a housekeeper (low customer contact). It is possible that a similar pattern would surface if the sales positions in this study were compared to a position that required little or not customer contact, such as a restocker.

The results of this research also demonstrated that the strength of attractiveness biases seem to depend on the candidate's qualification. Supplemental analyses showed that the relationship between candidate attractiveness and ratings was stronger when the candidate was highly qualified versus moderately qualified. In other words, it seems that being attractive could be the deciding factor when a recruiter is choosing between multiple highly qualified candidates. Perhaps this is the case participants quickly ruled out all moderately qualified candidates when they were positioned next to more highly qualified candidates. Then, participants were left to differentiate only among the highly qualified candidates, where they may have relied on attractiveness information to a greater extent. While the interaction is, on the surface, inconsistent with previous

research that has found attractiveness to be particularly advantageous when qualifications are mediocre (e.g., Chung & Leung, 1988), the general pattern replicates previous studies. Specifically, the fact that highly qualified, more attractive candidates are the most preferred candidates, while moderately qualified, less attractive candidates are the least preferred candidates, has particular implications for the way candidates present themselves through online networking sites (discussed later).

When participants were presented only with candidate photos and then asked to rank their top five candidates based on their memories of the profiles, participants, on average, selected more attractive photos (63%) more than less attractive photos (37%), but selected males (51%) equally as often as females (49%). More males were chosen than females in the masculine position, and more females were chosen than males in the feminine position. Additionally, a greater number of more attractive candidates were chosen compared to less attractive candidates regardless of the degree of customer visibility required for the position. This provides some evidence that attractive candidates and candidates whose perceived gender matches that of the job may be advantaged when recruiters are quickly scrolling through hundreds of online profiles and making fast decisions about whether or not to invite a candidate for a job interview. This may also suggest that attractiveness and gender-job matches may be used as a cue to distinguish among a set of candidates who are perceived as essentially equally qualified. This may be true regardless of whether the position requires more phone-based or face-to-face customer contact. However, the fact that the top five photos selected by most participants were all highly qualified, but not all considered "more attractive," demonstrates that participants may have the ability to remember the details of qualification-related

information from online profiles when presented only with photos from the profiles. Therefore, it seems that qualification information is still weighted most heavily, though being more attractive and being "gender-matched" to the job may be advantageous as well.

Attractiveness Attitudes

According to dual process theory (Chaiken & Trope, 1999), behavior operates both explicitly and implicitly. The results of this study suggest that attractiveness bias specifically operates in a more controlled, explicit manner as opposed to an automatic, implicit manner in online recruitment. Explicit attitudes were found to moderate the relationship between attractiveness and ratings, such that the relationship was stronger for those with more biased explicit attitudes. However, this pattern was not found with the implicit attitudes measure. This suggests that conscious biases, but not unconscious biases, affected the strength of the relationship between candidate attractiveness and recruitment ratings. Supplemental analyses examining the hierarchical predictability of implicit over explicit attitudes in predicting profile ratings further supported these results by demonstrating that implicit attitudes did not predict ratings above and beyond explicit attitudes. Additionally, there was a significant correlation between the number of "more attractive" photos selected in the top five and explicit attitudes ($r = .18$; $p < .01$), though the same relationship was not significant with implicit attitudes ($r = .01$; $p = .94$). Taken together, these results suggest that recruiters are processing profile information in a controlled, as opposed to automatic, manner.

Recruiters may also rely even more on conscious processing when they are more motivated in their recruiting role than when they are less motivated. In this study, implicit

attitudes more strongly predicted ratings when participants reported less motivation to act as a recruiter (β = -16.93; p = .18) than when participants reported more motivation to act as a recruiter (β = 2.49; p = .21). Although neither relationship reached significance, this pattern of results provides some evidence that participants are more likely to rely on unconscious processing when they are less motivated to act as a recruiter than when they are more motivated to do so. Recruiters likely face a lot of pressure in actual recruiting situations to find the best candidate for a position. As a result, they are likely very motivated to take their recruiter role seriously. These results suggest that when doing so, the recruiters would be relying less on automatic processing, meaning that biases that affect their ratings would be deliberate and purposeful.

Interestingly, participants also spent more time rating incongruent profiles (i.e., less attractive and high qualification or more attractive and moderate qualification) over congruent profiles (i.e., more attractive and high qualification or less attractive and moderate qualification). While time spent rating profiles is not directly a measure of implicit and explicit processing, these findings do suggest that participants required more conscious processing to rate incongruent information than congruent information. In actual recruiting contexts, this translates to recruiters rating congruent profiles in a more automatic manner than incongruent profiles. When faced with an incongruent profile, recruiters may need more time to sift through the apparently contradictory information before providing a rating.

While implicit attitudes have been shown to predict selection outcomes in a variety of contexts, such as gender (e.g., Rudman & Glick, 2001) and ethnicity (e.g., Rooth, 2010), the overall results of this study suggest that attractiveness attitudes operate

more explicitly than implicitly. Perhaps this is because it is more "acceptable" to consciously prefer attractive people as opposed to consciously preferring one gender or ethnicity to another. Importantly, because there is only minimal legislation concerning attractiveness discrimination compared to discrimination based on characteristics such as gender and ethnicity, the harsh reality is that employers do not have to hide their biases towards more attractive individuals. Despite the apparent legality of attractiveness discrimination, employers should still work to mitigate such biases from a fairness perspective. Furthermore, because implicit and explicit attractiveness attitudes did not significantly correlate ($r = .11$, $p = .12$), this suggests that implicit measures of attractiveness may capture a separate construct than explicit measures of attractiveness. These findings have implications for training interventions to reduce explicit attractiveness biases that are discussed below.

Practical Implications

Organizations are using online social networking sites as part of their recruitment processes with an increasing degree of frequency (see Arndt, 2007; Barnes & Mattson, 2009; Brown & Vaughn, 2011; Cain, Scott, & Smith, 2010; Capiluppi, Serebrenik, & Singer, 2013; Go, Klaassen, & Chamberlain, 2012). The results of this study demonstrate that while qualification information had the largest effect on outcomes, information on attractiveness also affected candidates' likelihood of being recruited, and this has implications for both recruiters and potential job candidates. Recruiters need to be aware of how appearance-based biases may affect their perceptions of potential job candidates, particularly in situations where they are attempting to distinguish among multiple candidates with similar qualifications.

Specifically, recruiters should make every effort to attend only to relevant competency-related information when examining potential candidates' online profiles. One technique that may be useful is structured free recall intervention (SFRI; Rudolph, Baltes, Zhdanova, Black, & Bal, 2012), whereby evaluators list both positive and negative behaviors to justify ratings. Although SFRI has traditionally been examined in the performance appraisal context, it is expected to be useful in the selection context as well. For instance, recruiters can list out positive and negative qualifications while looking at a potential candidate's online profile to ensure that they are considering all relevant aspects, both positive and negative, of a candidate's qualifications prior to making a recommendation decision. This is particularly likely to be useful in the context of online recruiting because the results demonstrated that attractiveness biases are operating in a controlled manner. Because stereotype-consistent memory representations are stronger than stereotype inconsistent memory representations (Rudolph et al., 2012), raters may be more likely to provide more positive ratings for highly qualified, more attractive candidates (stereotype consistent) than for highly qualified, less attractive candidates (stereotype inconsistent). By comparing one list of positive and negative qualifications to another, as opposed to comparing one profile (plus photo) to another profile (plus photo), SFRI could help hold recruiters accountable for their ratings based solely off of profile information as opposed to appearance-based information. Based on the RWA and hierarchical regression analyses in this study, SFRI may be particularly effective at reducing attractiveness biases for ratings of likability and social skills and for jobs involving a high degree of customer contact.

Another viable option for organizations may be to contract out the task of rating online profiles in the initial phase of the recruitment process to a third party firm who is trained to attend to job-relevant information and ignore appearance-based biases (Zickar, 2016). Although attractiveness had an effect in this study, the results also suggest that raters seemed to be using primarily controlled processing. Thus, it is believed that with proper training, raters could potentially provide ratings based solely off of qualification-related profile information versus appearance-based information. The third party firm can then provide the ratings on job-related metrics to the hiring organization to use in their recruitment decisions without ever having seen the photos of the potential job candidates. Similarly, organizations can have a third party, who is not involved in the decisions process, remove photograph and name information from online profiles before the recruiter rates the profile. These alternatives may be especially advantageous given that online profile photos likely also include legally protected information, such as candidate race, age, and sex, that can also bias recruitment decisions. It is important to note, however, that while profile photos on sites such as LinkedIn may provide access to this protected information, the primary benefits of profile photos is that they allow users to recognize each other or put a face to a name (LinkedIn, 2016). Therefore, it is likely impractical to suggest that profile photos should be completely removed from online networking sites altogether.

In addition to SFRI, the results of this study may suggest that organizations should explore training interventions to reduce explicit attractiveness biases. One of the most effective forms of training in recruitment and selection is frame-of-reference training (FORT; e.g., Day & Sulsky, 1995). This type of training aims to create

behavioral schemas by which candidates are rated, which may reduce biases by reducing reliance on attractiveness stereotypes. For instance, in this context, recruiters could be shown short videos of both less attractive and more attractive males and females performing an essential job function. The videos would be pre-created and pilot tested to ensure that they reflect various qualification levels. The recruiters would rate each video, discuss their ratings, and repeat this process until they had an established "frame of reference" by which to rate potential job candidates. FORT is typically more effective than rater bias training, which may have reverse effects (e.g., Madera & Hebl, 2013). Additionally, because schemas likely contain an implicit component, establishing a common schema prior to interviewing an applicant may reduce the effects of any potential implicit biases in the interview. Furthermore, motivation to control prejudice may reduce attractiveness biases. Because explicit attitudes can override implicit attitudes if motivation to do so exists, the mere desire to avoid biases may result in less biased interview ratings.

The increased use of online SNSs by recruiters also has implications for potential candidates using these sites. First, the most important aspect of the SNS profile seems to be the extent to which it conveys qualification. However, the results also suggest that SNS users need to be aware of how they appear in their online profiles. Because physical attractiveness is associated with more favorable evaluations, this suggests that applicants should strive to "put their best face forward" in their online profiles, especially considering that attractiveness may have particularly strong effects when only photos are presented absent qualification information. For instance, women can use makeup and wear their hair down to enhance their appearance, whereas men can grow facial hair and

conceal balding with a hat or a wig (both facial hair and a full head of head hair are perceived to be more attractive; Cooper, 1981; Guthrie, 1977; Neave & Shields, 2008). However, it is worth noting that artificially enhancing appearance online, but not in person, may have adverse effects (see Whitty, 2008 for an example of participant frustration about misrepresentation in an online dating context).

Furthermore, as suggested by the theory outlined in the continuum model (Fiske & Neuberg, 1987), individuals should strive to include as much positive individuating information as possible in their online profiles. This is specifically true in regards to information based on qualifications, which is customary to include on professional networking sites such as LinkedIn. Participants can also make an effort to include warmth-related individuating information, such as volunteer experience and charitable interests. This may be particularly useful for candidates who may not have as many educational or applied experiences as others. Individuating information based on qualifications can help ensure that recruiters form individuating, as opposed to categorical, impressions of others based on the contents of their online profiles. This may be especially true for less attractive individuals, since qualification information has been shown to override attractiveness information in past research (e.g., Cash et al., 1977; Dipboye, Fromkin, & Wilback, 1975; Dipboye et al., 1977; Landy & Sigall, 1974; Tews, Stafford, & Zhu, 2009; Watkins & Johnston, 2000) and in the present study.

Limitations and Future Research Directions

Along with the many theoretical and practical implications of this study, this study also has some potential limitations. First, attractiveness was manipulated by choosing more attractive and less attractive profile photos from actual LinkedIn profiles.

Because actual photos were used, this did not allow for complete control of facial characteristics as other manipulations (e.g., computer-based manipulations) might have allowed. However, the manipulation of attractiveness in this study was chosen to enhance external validity. Actual recruiters look at online SNS profiles when choosing which candidates to invite for a job interview, not computer-manipulated photos of faces. Additionally, the photos were pilot tested by a large sample of 200 participants to ensure that there was substantial agreement on the attractiveness of each photo.

Similarly, this study only examined facial attractiveness as opposed to bodily attractiveness. This was done because it is customary to post a face-only photo on online sites such as LinkedIn. However, body proportions can affect perceptions of attractiveness (e.g., Gründl, Eisenmann-Klein, & Prantl, 2009), as can the manner of dress (e.g., Harris et al., 1983; Hill et al., 1987). These are components of attractiveness that may affect perceptions further in the selection process, such as during in-person interviews. Future research should continue to explore the effects of body attractiveness, and the combination of facial and body attractiveness, on evaluations in employee selection contexts.

Additionally, this study only examined the effects of attractiveness for relatively young, normal weight, Caucasian candidates. This was done to ensure that age, weight, and race of the individuals in the photos did not affect the results, and to avoid extending study length beyond one hour. However, these characteristics may affect perceptions of attractiveness as well, and future research should explore these effects. Future research should also explore whether "matched" age, weight, and race affect ratings. For instance,

perhaps the effects of attractiveness would be greater if the race of the recruiter matched the race of the candidate as a result of a "similar to me" effect.

In addition, this study only examined one type of job, a sales position. This was done because sales positions require a high degree of customer contact, as was necessary since this study examined perceptions of social skills as a mediating variable. Furthermore, a sales job could be described as requiring customer interaction in person or over the phone, which was essential for the customer visibility manipulation in this study. However, it is worth noting that we did not find substantially large effects in this study, even though the positions were chosen for the purpose of finding larger effects. Regardless, the relationships in this study should be examined across a variety of jobs to determine if there are changing relationships in different contexts. For instance, perhaps attractiveness would not play as large of a role in jobs requiring a very particular skill set and/or jobs stereotyped as being low on warmth (e.g., neurosurgeon). In these contexts, recruiters may be particularly likely to rely exclusively on job-relevant individuating information (qualification information) over appearance in making recruitment decisions. Future research may also explore three conditions of customer visibility: face-to-face, non-face-to-face, and no customer interaction. Perhaps effects would only be found between the face-to-face and no customer interaction condition and between the non-face-to-face and no customer interaction conditions, but not between the face-to-face and non-face-to-face conditions since they both involve some degree of customer interaction. It may be the degree of customer interaction, not the form, which leads to differences in ratings of candidates based on attractiveness.

The design of this study also carries some limitations. Policy-capturing studies have been criticized for a lack of realism because they cannot provide respondents with all of the information that actual decision makers would have at their disposal (Aiman-Smith et al., 2002). However, the online recruiting process likely does involve a repetitive process of analyzing multiple profiles with varying degrees of information, although the types of information present may vary. As a result, the policy-capturing design of this study may not be as unrealistic in an online recruitment context as in other contexts. Regardless, it is worth noting that actual recruiters may have access to more or less information than was presented in this study, and future research should continue to explore attractiveness in conjunction with other variables. Additionally, although policy-capturing studies are typically designed so that the cues are uncorrelated, the cues may be correlated in the real world (Aiman-Smith, 2002). Because this study used a fully crossed design, the cue values were not correlated. However, attractiveness, qualification, and gender may be correlated in the real world, meaning that the variance explained by each particular cue may not be unique to that cue (Aiman-Smith, 2002).

Finally, there is a possibility that attractive people actually perform better in certain jobs. For instance, attractive employees may be determined to exhibit higher performance than unattractive employees in jobs requiring a higher degree of face-to-face customer contact. This is especially likely to be a possibility since attractive people are generally perceived to be more social, friendly, warm, and competent than unattractive people (Feingold, 1992; Langlois et al., 2000). Customers may be nicer to attractive people, creating a "self-fulfilling prophecy" where the attractive employee actually performs better. As a result, they may be rated more positively (by customers or

supervisors) when it comes to performance evaluations. If this is the case, attractiveness may actually have validity for predicting performance in more visible jobs. Future research should continue to examine attractiveness in a variety of highly visible positions (e.g., waitresses, hotel receptionists) to determine if there is a link between attractiveness and performance.

Conclusion

Attractiveness discrimination in employee recruitment and selection contexts still persists and can impact whether or not someone is invited for an interview or hired for a job (e.g., Behrend, Toaddy, Thompson, & Sharek, 2012; Henderson, Grappendorf, & Burton, 2009). While qualification information is the strongest predictor of profile ratings, attractiveness biases still account for a portion of the variance in perceptions of competence, likability, and social skills. Moreover, the occurrence of attractiveness bias is specifically concerning since appearance-based discrimination is not directly covered under current employment law. This study demonstrated that candidate attractiveness, qualification, and gender information received from online social networking profiles predict candidate profile ratings in a simulated recruitment scenario. This study also demonstrated that these effects are contextual, depending specifically on the strength of raters' explicit attitudes, and that attractiveness carries more weight in predicting perceptions of likability and social skills than perceptions of intellectual competence. The findings of this research have implications for attractiveness discrimination theory and practice, and can inform organizational interventions designed to increase the fairness and validity of recruitment and selection procedures.

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Appendix A

Participant Instructions

Assume that you are a recruiter for SafetyCo, an organization that sells Baby Products/Hand Tools. You need to fill an open position at your company. Compared to similar positions, our company is able to pay quite well, so when we extend job offers to applicants, the offers are almost always accepted. Also, our history shows that people who come here like it and are unlikely to leave the company.

- First, you will be presented with a job description for the position so that you know what to look for.
- Then, you will view a series of online profiles. A preliminary search has discovered 27 potential candidates for this position who meet the minimum education requirements. As a recruiter, you will be asked to provide ratings of the candidate in each profile. There will be 27 profiles total. Please take your time and respond honestly to each profile. Please note, the candidates' names have been removed from the profiles to protect the privacy of the candidates.
- You may see a few of the profiles more than once. This is deliberate and is not a computer error.
- After you complete the ratings for all of the profiles, you will complete a few items asking about your attitudes and demographic characteristics. Then, you will be transferred to a new window to complete the final web task (approximately 5 minutes) for the study.

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Appendix B

Sample Profiles

**Please note: The PI's photo is included here for illustrative purposes. In the actual study, the photos will be different for each profile.*

High-Qualification Profile:

Education

Bachelor's Degree, Marketing

3.75 GPA

Experience

Time spent in sales jobs: 3 years

Honors & Awards

Number of awards received in college: 2

Moderate Qualification Profile:

Education

Associate's Degree, Marketing

2.94 GPA

Experience

Time spent in sales jobs: 8 months

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Appendix C

Attractiveness Manipulation Pilot Items

1. How attractive is this person?

1	2	3	4	5	6	7	8	9
Extremely Unattractive	Very Unattractive	Unattractive	Below Average	Average	Above Average	Attractive	Very Attractive	Extremely Attractive

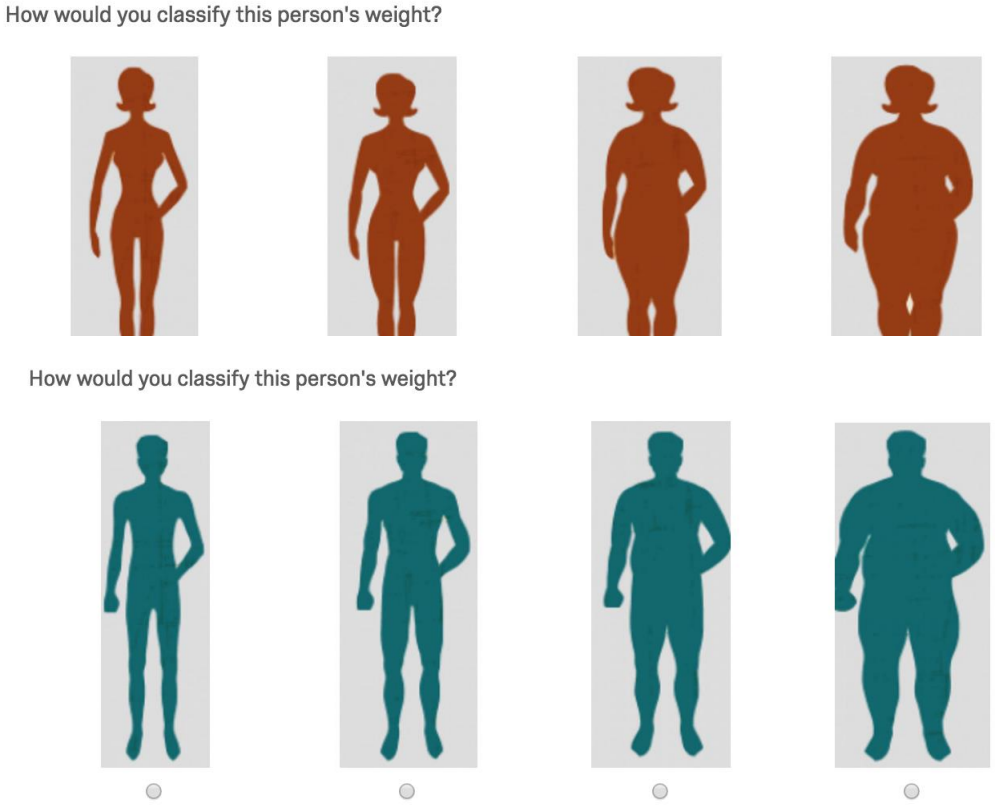
2. This person is feminine.

1	2	3	4	5
Strongly Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Strongly Agree

3. This person is masculine.

1	2	3	4	5
Strongly Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Strongly Agree

4. How old do you think this person is? (open-ended)
5. How would you classify this person's weight? (the appropriate male/female scale will be used to match the gender of the person in the photo)



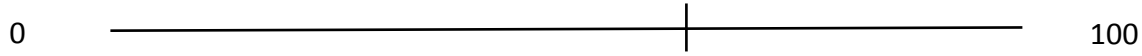
6. What is the sex of this person?

a. Male
b. Female
c. Not sure

7. What is the race of this person?

a. Caucasian/White
b. Hispanic/Latino
c. African American/Black
d. Indian/Middle Eastern
e. Asian/Pacific Islander
f. Not sure

The following set of items will be rated on a 0-100 sliding scale.



8. What percentage of customers would think this person is smart? (Intellectual Competence)

9. What percentage of customers would like this person? (Likability)

10. What percentage of customers would think this person has good social skills? (Social Skills)

11. What percentage of customers would think this person is a hard worker? (Motivation)

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Appendix D

Qualification Manipulation

High-Qualification

EDUCATION

Bachelor's Degree, Marketing, 3.75 GPA

Bachelor's Degree, Marketing, 3.80 GPA

Bachelor's Degree, Marketing, 3.78 GPA

Bachelor's Degree, Marketing, 3.81 GPA

Bachelor's Degree, Marketing, 3.85 GPA

Bachelor's Degree, Marketing, 3.92 GPA

Bachelor's Degree, Marketing, 3.95 GPA

Bachelor's Degree, Marketing, 3.98 GPA

SALES EXPERIENCE

Time spent in sales jobs: 3 years

Time spent in sales jobs: 3 years, 1 month

Time spent in sales jobs: 3 years, 2 months

Time spent in sales jobs: 3 years, 3 months

AWARDS

Number of awards received in college: 2

Number of awards received in college: 3

Number of awards received in college: 4

Low-Qualification

EDUCATION

Associate's Degree, Marketing, 2.98 GPA

Associate's Degree, Marketing, 2.97 GPA

Associate's Degree, Marketing, 2.90 GPA

Associate's Degree, Marketing, 2.92 GPA

Associate's Degree, Marketing, 2.96 GPA

Associate's Degree, Marketing, 2.95 GPA

Associate's Degree, Marketing, 2.93 GPA

Associate's Degree, Marketing, 2.94 GPA

WORK EXPERIENCE

Time spent in sales jobs: 7 months

Time spent in sales jobs: 8 months

Time spent in sales jobs: 9 months

Time spent in sales jobs: 10 months

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Appendix E

Job Type and Qualification Manipulation Pilot Items

These pilot tests will be conducted concurrently with the same participant sample

Job Type Pilot Items

1. Please estimate the percentage of males and females you think work in the Sales Associate – Baby Products position. (Must total to 100%)
    a. Males _____.
    b. Females _____.

2. Please estimate the percentage of males and females you think work in the Sales Associate – Hand Tools position. (Must total to 100%)
    a. Males _____.
    b. Females _____.

3. Please estimate the percentage of customers you think would be male and female for the Sales Associate – Baby Products position. (Must total to 100%)
    a. Males _____.
    b. Females _____.

4. Please estimate the percentage of customers you think would be male and female for the Sales Associate – Hand Tools position. (Must total to 100%)
    a. Males _____.
    b. Females _____.

5. Which position do you think is more "stereotypically female?"
    a. Sales Associate – Baby Products
    b. Sales Associate – Hand Tools
    c. Neither

6. Which position do you think is more "stereotypically male?"
    a. Sales Associate – Baby Products
    b. Sales Associate – Hand Tools
    c. Neither

7. Please rank order who you think would be best at making sales to men in the Hand Tools position.
    a. Attractive men
    b. Unattractive men
    c. Attractive women
    d. Unattractive women

8. Please rank order who you think would be best at making sales to women in the Hand Tools position.
    a. Attractive men
    b. Unattractive men
    c. Attractive women
    d. Unattractive women

9. Please rank order who you think would be best at making sales to men in the Baby Products position.
    a. Attractive men
    b. Unattractive men
    c. Attractive women
    d. Unattractive women

10. Please rank order who you think would be best at making sales to women in the Baby Products position.
    a. Attractive men
    b. Unattractive men
    c. Attractive women
    d. Unattractive women

11. Do you believe the job descriptions are similar? (open-ended)

12. Please note any specific differences between the two job descriptions. (open-ended)

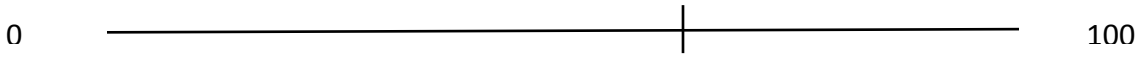
Qualification Pilot Items (No photo will be present)

1. How qualified is this candidate?

1	2	3	4	5
Extremely Unqualified	Slightly Unqualified	Neither Qualified Nor Unqualified	Slightly Qualified	Extremely Qualified

2. Please provide a rationale for this rating. (open-ended)

The following set of items will be rated on a 0-100 sliding scale.



3. What percentage of customers would think this person is smart? (Intellectual Competence)

4. What percentage of customers would like this person? (Likability)

5. What percentage of customers would think this person has good social skills? (Social Skills)

6. What percentage of customers would think this person is a hard worker? (Motivation)

Back to job type manipulation pilot

Back to qualification manipulation pilot

Appendix F

Job Descriptions

Adapted from O*Net (http://onetonline.org)

Sales Associate – Hand Tools (*face to face customer contact)*

Job Summary

- Sell merchandise, such as drills, hammers, and saws to consumers.
- Help customers determine which of our line of high-quality products meets their needs.
- Potential customers will schedule or walk in to review our luxury tools with the sales associate.

Our top-selling products include:

- Our SafetyCo miter saw ($300)
- Our SafetyCo claw hammer ($30)
- Our SafetyCo tool belt ($50)
- Hammer drill ($100)
- Our SafetyCo impact driver ($150)
- Safety goggles ($12)
- Compressor ($75)

Customer Interaction Requirement

- This position requires a high degree of face-to-face customer interaction. The employee will meet with customers in person at one of our retail locations to present our merchandise and complete sales transactions.
- Employees typically meet with several customers per day, and interactions usually last about 30 minutes each. Employees typically close about 5 sales per day.

Key Responsibilities

- Gather customer or product information to determine customer needs.
- Educate customers on products that fit their needs.
- Process sales or other transactions.
- Maintain records of sales or other business transactions.
- Prepare sales for delivery.

Sales Associate – Hand Tools *(phone-based customer contact)*

Job Summary

- Sell merchandise, such as drills, hammers, and saws to consumers.
- Help customers determine which of our line of high-quality products meets their needs.
- Potential customers will call in to review our luxury tools with the sales associate over the phone.

Our top-selling products include:

- Our SafetyCo miter saw ($300)
- Our SafetyCo claw hammer ($30)
- Our SafetyCo tool belt ($50)
- Hammer drill ($100)
- Our SafetyCo impact driver ($150)
- Safety goggles ($12)
- Compressor ($75)

Customer Interaction Requirement

- This position requires a high degree of phone-based customer interaction. The employee will speak to customers over the phone to complete sales transactions.
- Employees typically speak with several customers per day, and interactions usually last about 30 minutes each. Employees typically close about 5 sales per day.

Key Responsibilities

- Gather customer or product information to determine customer needs.
- Educate customers on products that fit their needs.
- Process sales or other transactions.
- Maintain records of sales or other business transactions.
- Prepare sales for delivery.

Sales Associate – Baby Products *(face-to-face customer contact)*

Job Summary

- Sell merchandise, such as toys, strollers, and cribs to consumers.
- Help customers determine which of our line of high-quality products meets their needs.
- Potential customers will schedule or walk in to review our luxury baby products with the sales associate.

Our top-selling products include:

- Our SafetyCo crib ($300)
- Our SafetyCo baby mobile ($30)
- Our SafetyCo baby bouncer ($50)
- Car seat ($100)
- Our SafetyCo stroller ($150)
- Pacifiers ($12)
- Baby monitor ($75)

Customer Interaction Requirement

- This position requires a high degree of face-to-face customer interaction. The employee will meet with customers in person at one of our retail locations to present our merchandise and complete sales transactions.
- Employees typically meet with several customers per day, and interactions usually last about 30 minutes each. Employees typically close about 5 sales per day.

Key Responsibilities

- Gather customer or product information to determine customer needs.
- Educate customers on products that fit their needs.
- Process sales or other transactions.
- Maintain records of sales or other business transactions.
- Prepare sales for delivery.

Sales Associate – Baby Products *(phone-based customer contact)*

Job Summary

- Sell merchandise, such as toys, strollers, and cribs to consumers.
- Help customers determine which of our line of high-quality products meets their needs.
- Potential customers will schedule or walk in to review our luxury baby products with the sales associate.

Our top-selling products include:

- Our SafetyCo crib ($300)
- Our SafetyCo baby mobile ($30)
- Our SafetyCo baby bouncer ($50)
- Car seat ($100)
- Our SafetyCo stroller ($150)
- Pacifiers ($12)
- Baby monitor ($75)

Customer Interaction Requirement

- This position requires a high degree of phone-based customer interaction. The employee will speak to customers over the phone daily to complete sales transactions.
- Employees typically speak with several customers per day, and interactions usually last about 30 minutes each. Employees typically close about 5 sales per day.

Key Responsibilities

- Gather customer or product information to determine customer needs.
- Educate customers on products that fit their needs.
- Process sales or other transactions.
- Maintain records of sales or other business transactions.
- Prepare sales for delivery.

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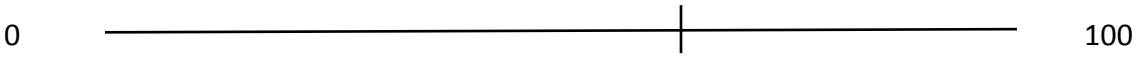
Appendix G

Profile Measures

Remember: Compared to similar positions, our company is able to pay quite well, so when we extend job offers to applicants, the offers are almost always accepted. Also, our history shows that people who come here like it and are unlikely to leave the company. Therefore, you do not need to consider these factors when rating the candidates. Please only focus on the questions provided.

The following set of items will be rated on a 0-100 sliding scale.



5. What percentage of customers would think this person is smart? (Intellectual Competence)
6. What percentage of customers would like this person? (Likability)
7. What percentage of customers would think this person has good social skills? (Social Skills)

1	2	3	4	5
Definitely no	Probably no	Unsure	Probably yes	Definitely yes

1. Would you recommend that the company invite this person for a job interview?
2. Should this person be invited for a job interview?
    a. Yes
    b. No

After rating all profiles, participants will be presented with all of the candidate photos and will be asked to rank-order their top five candidates based only on the photos.

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Appendix H

Explicit Measures

Please indicate the extent to which you agree with the following statements.

1	2	3	4	5
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

1. Young employees perform better than older employees.
2. I would prefer to work with a younger employee versus an older employee.
3. Younger people make better employees than older people.
4. More attractive employees perform better than less attractive employees.
5. I would prefer to work with a more attractive employee versus a less attractive employee.
6. More attractive people make better employees than less attractive people.
7. Married employees perform better than non-married employees.
8. I would prefer to work with a married employee versus a non-married employee.
9. Married people make better employees than non-married people.
10. Religious employees perform better than non-religious employees.
11. I would prefer to work with a religious employee versus a non-religious employee.
12. Religious people make better employees than non-religious people.

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Appendix I

Manipulation Check Items

1. Which products does the Sales Associate market?*

    a. Baby products
    b. Computers
    c. Pet products
    d. Hand tools
    e. Cars
    f. Not Sure

2. How will the sales associate primarily interact with customers?*

    a. Face-to-face
    b. Phone
    c. Online chat
    d. Not sure

*Participants will be forced to indicate the correct response to both items before proceeding with the profile rating portion of the study.

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Appendix J

Demographic Items

1. What is your gender?

    a. Male
    b. Female
    c. Transgender
    d. Other
    e. Prefer not to answer

2. What is your race?

    a. Caucasian/White
    b. Hispanic/Chicano(a)/Latino(a)
    c. African American/Black
    d. Native American/American Indian
    e. Indian American
    f. Asian American
    g. Hawaiian or other Pacific Islander
    h. Other (text entry option)

3. What is your sexual orientation?

    a. Heterosexual
    b. Gay
    c. Lesbian
    d. Bisexual
    e. Prefer not to answer
    f. Other: _____.

4. What is your age? (open-ended)

5. Are you currently looking to date?

    a. Yes
    b. Not actively looking, but open to it
    c. No
    d. Prefer not to answer

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Appendix K

Additional Items

Some additional items will be measured to allow alternative explanations of the results to be examined if necessary.

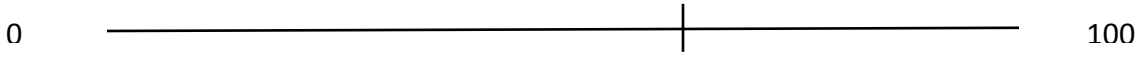
After reading the job description, participants will be asked to rate the level of intellectual competence, likability, and social skills necessary to be successful in the position.

1	2	3	4	5
None	Very Little	Neutral	Some	A Significant Amount

1. Please rate the level of each attribute necessary to be successful in this position.
    a. Competence
    b. Likability
    c. Social Skills
    d. Motivation

While rating profiles, participants will be asked the following item, along with the competence, likability, social skills, and recommendation items:

The following item will be rated on a 0-100 sliding scale.



1. What percentage of customers would think this person is a hard worker? (Motivation)

The following items will be asked at the end of the study:

Participant instructions: The last set of questions will not affect your payment in any way. They are for research purposes only. Please respond honestly.

1. To what extent did you take your role as a recruiter seriously while reviewing online profiles?

1	2	3	4	5
Not at All	Very Little	Neutral	Some	Very Much

2. Please rate your experience with recruiting/human resources:

    a. I currently work in a recruiting/HR role
    b. I have previously worked in a recruiting/HR role
    c. I have a degree related to recruiting/HR
    d. I have never worked in recruiting/HR

3. What is your current job title? (open-ended)

4. Please rate your experience with social networking sites:

    a. I have never heard of social networking sites
    b. I have heard of social networking sites, but I have never used one
    c. I have been on a social networking website, but I am not a social networking site user
    d. I have a social networking profile, but I never log on

e. I am an active social networking site user

5. I consider myself to be _____.

1	2	3	4	5	6	7	8	9
Extremely Unattractive	Very Unattractive	Unattractive	Below Average	Average	Above Average	Attractive	Very Attractive	Extremely Attractive

Time spent looking at each profile will also be measured. This is a built-in feature of the survey host site (Qualtrics) that can be added to each question individually.

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Appendix L

Descriptive Statistics for Distractor (non-Caucasian) Profiles

Table 23

Descriptive Statistics for Distractor Profiles

	n	*Competence M (SD)*	*Likability M (SD)*	*Social Skills M (SD)*	*Motivation M (SD)*	*Invite M (SD)*	*% Would Invite*
Overall (Collapsing Across Condition)							
More Attractive							
Male	250	81.32 (13.69)	81.18 (14.04)	82.87 (12.69)	81.12 (15.35)	4.52 (0.64)	96.0%
Female	250	84.00 (11.54)	84.42 (11.81)	84.82 (12.51)	83.48 (13.97)	4.62 (0.58)	97.6%
Less Attractive							
Male	250	79.78 (13.76)	79.52 (14.07)	80.43 (13.73)	79.22 (16.32)	4.40 (0.75)	92.8%
Female	250	80.88 (14.19)	81.54 (14.45)	83.10 (13.75)	80.37 (16.01)	4.48 (0.71)	94.8%
High Visibility, Masculine							
More Attractive							
Male	62	83.65 (12.31)	84.39 (11.04)	86.21 (9.94)	83.97 (13.21)	4.53 (0.65)	93.5%
Female	62	84.08 (11.11)	85.44 (10.94)	86.87 (9.43)	83.98 (15.29)	4.55 (0.69)	95.2%
Less Attractive							
Male	62	81.89 (12.25)	83.18 (12.31)	83.32 (11.23)	81.16 (13.78)	4.48 (0.67)	93.5%
Female	62	81.15 (15.33)	81.42 (15.99)	83.37 (14.92)	79.53 (18.38)	4.34 (0.85)	90.3%
High Visibility, Feminine							
More Attractive							

Male	63	77.65 (15.83)	77.73 (16.99)	80.98 (13.68)	76.83 (18.39)	4.46 (0.71)	95.2%
Female	63	82.75 (13.84)	83.97 (13.79)	83.84 (14.39)	82.59 (14.98)	4.65 (0.57)	96.8%
Less Attractive							
Male	63	77.71 (14.84)	79.30 (14.31)	80.33 (13.78)	77.87 (18.31)	4.33 (0.82)	90.5%
Female	63	77.30 (16.15)	79.92 (15.68)	81.05 (15.33)	78.17 (17.21)	4.46 (0.71)	95.2%
Low Visibility, Masculine							
More Attractive							
Male	65	81.66 (13.66)	79.98 (13.83)	81.06 (14.32)	80.91 (15.62)	4.54 (0.64)	96.9%
Female	65	84.23 (10.23)	83.29 (11.31)	83.51 (12.32)	82.98 (12.29)	4.57 (0.50)	100%
Less Attractive							
Male	65	79.49 (12.55)	77.63 (13.12)	79.55 (13.37)	79.88 (14.24)	4.43 (0.56)	96.9%
Female	65	81.78 (11.33)	81.49 (12.61)	82.97 (12.27)	80.75 (13.39)	4.48 (0.64)	95.4%
Low Visibility, Feminine							
More Attractive							
Male	60	82.42 (12.13)	82.78 (12.94)	83.35 (11.78)	82.93 (12.73)	4.57 (0.56)	98.3%
Female	60	85.00 (10.80)	85.08 (11.09)	85.17 (13.35)	84.42 (13.42)	4.73 (0.52)	98.3%
Less Attractive							
Male	60	80.08 (15.24)	78.02 (15.99)	78.48 (16.07)	77.92 (18.64)	4.33 (0.91)	90.0%
Female	60	83.40 (13.12)	83.42 (13.37)	85.13 (12.19)	83.12 (14.59)	4.65 (0.58)	98.3%

Note: All distractor profiles were "high qualification" profiles

Table 24

Time Spent Looking at Distractor Profiles

	n	*Mean (seconds)*	*SD (seconds)*
More Attractive			
Male	250	24.98	26.08
Female	250	26.13	30.79
Less Attractive			
Male	250	36.11	140.15
Female	250	35.94	127.32

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Appendix M

Results for Individual Profile Rating Items (Competence, Likability, and Social Skills)

Hypothesis 1a-c

Hypothesis 1a-c predicted that attractive candidates would receive higher ratings of perceptions of a) intellectual competence, b) likability, and c) social skills than less attractive candidates. This model was run separately for each outcome variable. Results for each outcome are presented separately below.

Intellectual Competence

$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .28$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting competence was not significant ($\beta = .12$; $p = .84$).

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 1.64$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting competence was significant ($\beta = 1.71$; $p < .01$), meaning that more attractive candidates received higher intellectual competence ratings than less attractive candidates. While this hypothesis was not supported with the dichotomous attractiveness condition variable, the increased variance and more normal distribution of

the continuous variable likely contained more information, allowing the finding of a significant regression. Thus, Hypothesis 1(a) was partially supported.

Likability

$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .85$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting likability was significant ($\beta = 3.03$; $p < .01$), meaning that candidates in the higher-attractiveness condition received higher likability ratings than those in the lower-attractiveness condition.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 5.00$; df = 2; $p = .80$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting likability was significant ($\beta = 3.33$; $p < .01$), meaning that more attractive candidates received higher likability ratings than less attractive candidates. Thus, Hypothesis 1(b) was supported.

Social Skills

$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 3.10$; df = 2; $p = 0.21$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting social skills was significant ($\beta = 3.76$; $p < .01$),

meaning that candidates in the higher-attractiveness condition received higher social skills ratings than those in the lower-attractiveness condition.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 10.00$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of attractiveness in predicting social skills was significant ($\beta = 3.92$; $p < .01$), meaning that more attractive candidates received higher social skills ratings than less attractive candidates. Thus, Hypothesis 1(c) was supported.

Hypothesis 2a-c

Hypothesis 2a-c predicted that the relationship between attractiveness and the continuous variable of recommendation for a job interview invitation would be mediated by perceived a) intellectual competence, b) likability, and c) social skills. This model was run twice for each mediator variable, once with the dichotomous attractiveness condition variable, and once with the continuous attractiveness rating.

Competence

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 1.27$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting interview recommendation was significant ($\beta =$

.14; $p < .01$), meaning that candidates in the higher-attractiveness condition received higher likability ratings than those in the lower-attractiveness condition.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 4.54$; df = 2; $p = .10$), so the more parsimonious model with fixed error terms was used. The regression of attractiveness in predicting interview recommendation was significant ($\beta = .23$; $p < .01$), meaning that more attractive candidates received more positive interview recommendations.

Step 2

$$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Dichotomous attractiveness condition variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting competence was not significant ($\beta = .14$; $p < .01$).

Continuous attractiveness variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting competence was significant ($\beta = 1.71$; $p < .01$), meaning that more attractive candidates received higher competence ratings.

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{1j}*(Competence_{ij})\ r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error

term was not significant ($\Delta\chi^2 = 5.7$; df = 2; $p = .06$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 465.89$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, competence significantly predicted interview recommendations ($\beta = .06$; $p < .01$), such that candidates with higher competence ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 ($\beta = .13$; $p < .01$). However, because the path from attractiveness to competence was not significant, and because the Sobel test of the indirect effect was not significant (Sobel = .21; $p = 0.84$), Hypothesis 2(a) was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was significant ($\Delta\chi^2 = 9.14$; df = 2; $p < .01$). When compared to the model with two random error terms, the difference test was again significant ($\Delta\chi^2 = 458.88$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, competence significantly predicted interview recommendations ($\beta = .13$; $p < .01$), such that candidates with higher competence ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 ($\beta = .06$; $p < .01$), and the Sobel test of the indirect effect was significant (Sobel = 4.56; $p < .01$). Therefore, there is evidence of partial mediation, supporting Hypothesis 2(a) with the continuous attractiveness variable.

Likability

Step 1

$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Both the dichotomous and continuous attractiveness variables significantly and positively predicted interview recommendations as outlined in Step 1 above.

Step 2

$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Dichotomous attractiveness condition variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting likability was significant ($\beta = 3.03$; $p < .01$), such that candidates in the higher-attractiveness condition received higher likability ratings than those in the lower-attractiveness condition.

Continuous attractiveness variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting likability was significant ($\beta = 3.33$; $p < .01$), such that more attractive candidates received higher likability ratings.

Step 3

$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{1j}*(Likability_{ij})\ r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2 = .01$; df = 2; $p > .50$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 327.75$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, likability significantly predicted interview recommendations ($\beta = .07$; $p <$

.01), such that candidates with higher likability ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 (β = -.06; p = .02) and the Sobel test of the indirect effect was significant (Sobel = 6.20; p < .01), indicating partial mediation. However, the sign of attractiveness in predicting interview recommendations changed to indicate that candidates in the higher-attractiveness condition received lower interview recommendations than those in the lower-attractiveness condition. This suggests that the addition of likability suppresses the effect of attractiveness on interview recommendations. This was elaborated on in the discussion portion. Hypothesis 2(b) was supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2$ = .92; df = 2; p > .50). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2$ = 318.97; df = 5; p < .01). Therefore, the more complex model with two random error terms was used. In this model, likability significantly predicted interview recommendations (β = .07; p < .01), such that candidates with higher likability ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 (β = .01; p = .49), and the Sobel test of the indirect effect was significant (Sobel = 9.84; p < .01). Since the effect of attractiveness was reduced to nonsignificance, there is evidence of full mediation, supporting Hypothesis 2(b) with the continuous attractiveness variable.

Social Skills

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Both the dichotomous and continuous attractiveness variables significantly and positively predicted interview recommendations as outlined in Step 1 above.

Step 2

$$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Dichotomous attractiveness condition variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting social skills was significant ($\beta = .14$; $p < .01$), such that candidates in the higher-attractiveness condition received higher social skills ratings than those in the lower-attractiveness condition.

Continuous attractiveness variable. As outlined in Hypothesis 1, the regression of attractiveness in predicting likability was significant ($\beta = .23$; $p < .01$), such that more attractive candidates received higher social skills ratings.

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{1j}*(SocialSkills_{ij})\ r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2 = .02$; df = 2; $p > .50$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 301.85$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, social skills significantly predicted interview recommendations ($\beta = .07$; $p < .01$), such that candidates with higher social skills ratings also received more positive

interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 ($\beta = -.10$; $p < .01$) and the Sobel test of the indirect effect was significant (Sobel = 7.47; $p < .01$), indicating partial mediation. However, the sign of attractiveness in predicting interview recommendations changed to indicate that candidates in the higher-attractiveness condition received lower interview recommendations than those in the lower-attractiveness condition. This suggests that the addition of social skills suppresses the effect of attractiveness on interview recommendations. This was elaborated on in the discussion portion. Hypothesis 2(c) was supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2 = .13$; df = 2; $p > .50$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 295.32$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, social skills significantly predicted interview recommendations ($\beta = .07$; $p < .01$), such that candidates with higher social skills ratings also received more positive interview recommendations. Additionally, the effect of attractiveness was reduced from Step 1 ($\beta = -.02$; $p < .01$) and the Sobel test of the indirect effect was significant (Sobel = 10.95; $p < .01$). Because the effect of attractiveness was reduced to nonsignificance, this indicates full mediation. However, the sign of attractiveness in predicting interview recommendations changed to indicate that more attractive candidates received lower interview recommendations. This suggests that the addition of social skills suppresses the

effect of attractiveness on interview recommendations. This was elaborated on in the discussion portion. Hypothesis 2(c) was supported with the dichotomous attractiveness condition variable.

Hypothesis 3a-c

Hypothesis 3a-c predicted that the relationship between candidate gender and the continuous variable of recommendation for a job interview invitation would be mediated by perceived a) intellectual competence, b) likability, and c) social skills. This model was run once for each mediator variable.

Competence

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .17$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of candidate gender in predicting interview recommendation was significant ($\beta = -.08$; $p = .03$), such that females received higher interview recommendations than males.

Step 2

$$Competence_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .72$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of candidate gender in predicting competence was not significant ($\beta = -.68$; $p = .22$).

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + \beta_{1j}*(Competence_{ij})\ r_{ij}$$

The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2 = .84$; df = 2; $p > .50$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 465.26$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, competence significantly predicted interview recommendations ($\beta = .06$; $p < .01$), such that candidates with higher competence ratings also received more positive interview recommendations. Additionally, the effect of candidate gender was reduced to nonsignifiance from Step 1 ($\beta = -.04$; $p = .13$). However, the Sobel test of the indirect effect was nonsignificant (Sobel = 1.23; $p = .22$), so Hypothesis 3(a) was not supported.

Likability

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij}$$

Candidate gender significantly predicted interview recommendations, such that females received higher ratings than males, as outlined above in Step 1.

Step 2

$$Likability_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .32$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of candidate gender in predicting

likability was significant (β = -2.40; $p < .01$), such that females received higher likability ratings than males.

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + \beta_{1j}*(Likability_{ij})\ r_{ij}$$

The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2 = .13$; df = 2; $p > .50$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 327.76$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, likability significantly predicted interview recommendations (β = .07; $p < .01$), such that candidates with higher likability ratings also received more positive interview recommendations. However, the effect of candidate gender from Step 1 became more significant (β =.08; $p < .01$), and indicated that males received higher recommendations than females. Therefore, Hypothesis 3(b) was not supported.

Social Skills

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij}$$

Candidate gender significantly predicted interview recommendations, such that females received higher ratings than males, as outlined above in Step 1.

Step 2

$$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .16$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. The regression of candidate gender in predicting likability was significant ($\beta = -2.43$; $p < .01$), such that males received lower social skills ratings than females.

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(CandidateGender_{ij}) + \beta_{1j}*(SocialSkills_{ij})\ r_{ij}$$

The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was not significant ($\Delta\chi^2 = .11$; df = 2; $p > .50$). However, when compared to the model with two random error terms, the difference test was significant ($\Delta\chi^2 = 296.75$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, social skills significantly predicted interview recommendations ($\beta = .07$; $p < .01$), such that candidates with higher social skills ratings also received more positive interview recommendations. However, the effect of candidate gender from Step 1 became more significant ($\beta = .07$; $p < .01$), and indicated that males received higher interview recommendations than females. Therefore, Hypothesis 3(c) was not supported.

Hypothesis 4a-c

Hypothesis 4a-c predicted that the relationship between the candidate genderXattractiveness interaction term and perceived a) intellectual competence, b) likability, and c) social skills would be moderated by job type, such that attractive males

would receive the highest ratings for male-typed jobs and attractive females would receive the highest ratings for female-typed jobs. This model was run six times, one for each outcome variable and with both the dichotomous and continuous attractiveness variable. First, an interaction term between gender and attractiveness was computed and entered into the model at Step 1 along with the Level 1 variables of attractiveness and gender. The three-way interaction was tested in Step 2 when job type is entered into the model as a Level 2 variable.

Competence

Level-1 Model

$$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{2j}*(Gender_{ij}) + \beta_{1j}*(GenderXAttractiveness_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(JobType_j) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$
$$\beta_{2j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$
$$\beta_{3j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$

Mixed Model

$$Competence_{ij} = \gamma_{00} + \gamma_{01}*JobType_j + \gamma_{10}*GenderXAttractiveness_{ij} + \gamma_{11}*JobType_j*GenderXAttractiveness_{ij} + u_{0j} + u_{1j}*GenderXAttractiveness_{ij} + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .28$; df = 2; $p > .50$), and remained non-significant when compared to the subsequent Level 2 models with random error terms. Therefore, the more parsimonious model with fixed error terms was used. Job type ($\beta = -.23$; $p = .89$), gender ($\beta = .43$; $p = .70$), and attractiveness ($\beta = 2.00$; $p = .07$) did not significantly predict competence. The genderXattractiveness interaction term did significantly predict competence ($\beta = -3.18$; $p = .04$), such that

attractiveness was more advantageous for females than males. The cross-level interaction between the genderXattractiveness interaction term and job type did not significantly predict competence (β = .32; p = .88). Thus, Hypothesis 4(a) was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2$ = 1.53; df = 2; p > .50), and remained non-significant when compared to the subsequent Level 2 models with random error terms. Therefore, the more parsimonious model with fixed error terms was used. Job type (β = -.61; p = .67) and gender (β = 3.95; p = .42) did not significantly predict competence. Attractiveness significantly predicted competence (β = 2.31; p < .01), such that more attractive candidates received higher ratings. The genderXattractiveness interaction term did not significantly predict competence (β = -.97; p = .28), and neither did the cross-level interaction between the genderXattractiveness interaction term and job type (β = .03; p = .98). Thus, Hypothesis 4(a) was not supported with the continuous attractiveness variable.

Likability

Level-1 Model

$$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{2j}*(Gender_{ij}) + \beta_{1j}*(GenderXAttractiveness_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(JobType_j) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$
$$\beta_{2j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$
$$\beta_{3j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$

Mixed Model

$$Likability_{ij} = \gamma_{00} + \gamma_{01}*JobType_j + \gamma_{10}*GenderXAttractiveness_{ij} + \gamma_{11}*JobType_j*GenderXAttractiveness_{ij} + u_{0j} + u_{1j}*GenderXAttractiveness_{ij} + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .92$; df = 2; $p > .50$), and remained non-significant when compared to the subsequent Level 2 models with random error terms. Therefore, the more parsimonious model with fixed error terms was used. Job type did not significantly predict likability ($\beta = -.65$; $p = .70$). Attractiveness significantly predicted likability ($\beta = 4.39$; $p < .01$), such that more attractive candidates received higher ratings. Gender also significantly predicted likability ($\beta = -2.65$; $p < .01$), such that females received higher ratings than males. The genderXattractiveness interaction term did not significantly predict likability ($\beta = -2.63$; $p = .05$), and neither did the cross-level interaction between the genderXattractiveness interaction term and job type ($\beta = 1.12$; $p = .56$). Thus, Hypothesis 4(b) was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 4.97$; df = 2; $p > .50$), and remained non-significant when compared to the subsequent Level 2 models with random error terms. Therefore, the more parsimonious model with fixed error terms was used. Job type ($\beta = -.97$; $p = .52$) and gender ($\beta = -.92$; $p = .82$) did not significantly predict likability. Attractiveness significantly predicted likability ($\beta = 3.61$; $p < .01$), such that more attractive candidates received higher ratings. The genderXattractiveness interaction term did not significantly predict likability ($\beta = -.60$; $p = 0.44$), and neither did

the cross-level interaction between the genderXattractiveness interaction term and job type (β = .27; p = .76). Thus, Hypothesis 4(b) was not supported with the continuous attractiveness variable.

Social Skills

Level-1 Model

$$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + \beta_{2j}*(Gender_{ij}) + \beta_{1j}*(GenderXAttractiveness_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(JobType_j) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$
$$\beta_{2j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$
$$\beta_{3j} = \gamma_{10} + \gamma_{11}*(JobType_j)$$

Mixed Model

$$SocialSkills_{ij} = \gamma_{00} + \gamma_{01}*JobType_j + \gamma_{10}*GenderXAttractiveness_{ij} + \gamma_{11}*JobType_j*GenderXAttractiveness_{ij} + u_{0j} + u_{1j}*GenderXAttractiveness_{ij} + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2$ = 3.14; df = 2; p > .50), and remained non-significant when compared to the subsequent Level 2 models with random error terms. Therefore, the more parsimonious model with fixed error terms was used. Job type did not significantly predict social skills (β = -1.27; p = .43). Attractiveness significantly predicted social skills (β = 4.30; p < .01), such that more attractive candidates received higher ratings. Gender also significantly predicted social skills (β = -3.30; p < .01), such that females received higher ratings than males. The genderXattractiveness interaction term did not significantly predict social skills (β = -.74; p = .60), and neither did the cross-level interaction between the genderXattractiveness

interaction term and job type (β = -.05; p = .98). Thus, Hypothesis 4(c) was not supported with the dichotomous attractiveness condition variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2$ = 10.00; df = 2; p > .50), and remained non-significant when compared to the subsequent Level 2 models with random error terms. Therefore, the more parsimonious model with fixed error terms was used. Job type (β = -1.42; p = .33) and gender (β = -6.55; p = .13) did not significantly predict social skills. Attractiveness significantly predicted social skills (β = 3.73; p < .01), such that more attractive candidates received higher ratings. The genderXattractiveness interaction term did not significantly predict social skills (β = .51; p = .52), and neither did the cross-level interaction between the genderXattractiveness interaction term and job type (β = -.17; p = .85). Thus, Hypothesis 4(c) was not supported with the continuous attractiveness variable.

condition.

Hypothesis 5a-c

Hypothesis 5a-c predicted that the relationship between candidate attractiveness and perceived a) intellectual competence, b) likability, and c) social skills would be moderated by explicit attitudes, such that the relationships would be stronger when explicit attitudes were more positive. This model was run six times, once for each outcome variable and with both the dichotomous and continuous attractiveness variables. When the interaction was significant, simple slopes were examined at one standard

deviation above and one standard deviation below the mean, and the results were graphed to visualize the interaction.

Competence

Level-1 Model
$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Level-2 Model
$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ExplicitAttitudes_j) + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ExplicitAttitudes_j) + u_{1j}$

Mixed Model
$Competence_{ij} = \gamma_{00} + \gamma_{01}*ExplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*ExplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .29$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Explicit attitudes significantly predicted competence ($\beta = -2.11$; $p < .01$), such that participants with more positive explicit attitudes provided lower competence ratings. Attractiveness did not significantly predict competence ($\beta = .12$; $p = 0.84$), and neither did the cross-level interaction between attractiveness and explicit attitudes ($\beta = .24$; $p = .66$). Thus, Hypothesis 5(a) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 1.31$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Explicit attitudes significantly predicted competence ($\beta = -1.99$; $p < .01$), such that participants with more positive explicit attitudes provided lower likability ratings. Attractiveness significantly

and positively predicted competence (β = 1.71; $p < .01$), but the cross-level interaction between attractiveness and explicit attitudes was not significant (β = .29; $p = .43$). Thus, Hypothesis 5(a) was not supported with the continuous attractiveness variable.

Likability

Level-1 Model
$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Level-2 Model
$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ExplicitAttitudes_j) + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ExplicitAttitudes_j) + u_{1j}$

Mixed Model
$Likability_{ij} = \gamma_{00} + \gamma_{01}*ExplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} +$
$\gamma_{11}*ExplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .04$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Explicit attitudes significantly predicted likability (β = -3.05; $p < .01$), such that participants with more positive explicit attitudes provided lower likability ratings. Attractiveness significantly and positively predicted likability (β = 3.03; $p < .01$), as did the cross-level interaction between attractiveness and explicit attitudes (β = 1.06; $p = .02$). Each of the simple slopes tests revealed a significant positive association between attractiveness and likability, but attractiveness was more strongly related to likability when explicit attitudes were more positive (b = 6.9; $t = 12.45$; $p < .01$) than when they were less positive (b = 4.7; $t = 17.03$; $p < .01$). Thus, Hypothesis 5(b) was supported with the dichotomous attractiveness variable. Figure 7 plots the interaction.

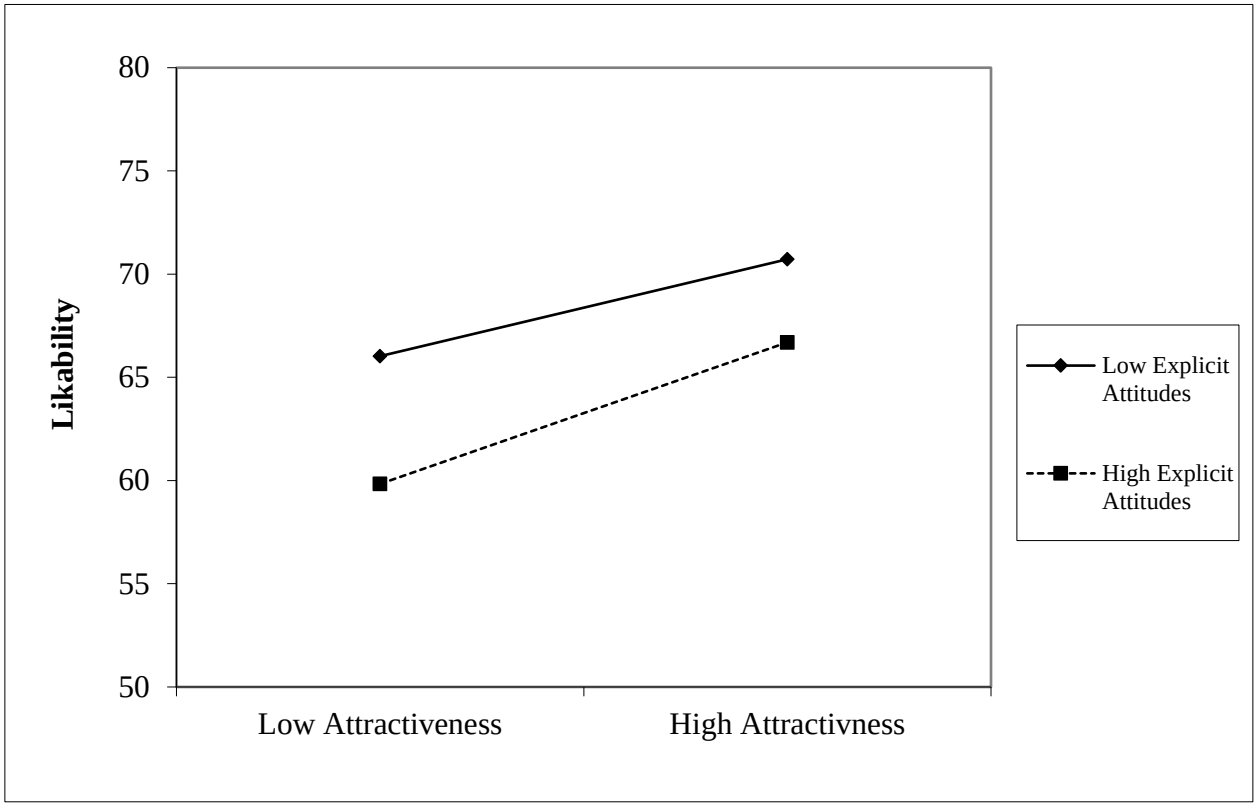

Figure 7. Interaction between dichotomous attractiveness and explicit attitudes predicting likability.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 2.39$; df = 2; $p = .30$), so the more parsimonious model with fixed error terms was used. Explicit attitudes significantly predicted likability ($\beta = -2.51$; $p < .01$), such that participants with more positive explicit attitudes provided lower likability ratings. Attractiveness significantly and positively predicted likability ($\beta = 3.33$; $p < .01$), as did the cross-level interaction between attractiveness and explicit attitudes ($\beta = .981$; $p < .01$). Each of the simple slopes tests revealed a significant positive association between attractiveness and likability, but attractiveness was more strongly related to likability when explicit attitudes were more positive (b = 6.8; $t = 18.43$; $p < .01$) than when they were less positive (b = 4.9; $t = 26.19$;

$p < .01$). Thus, Hypothesis 5(b) was supported with the continuous attractiveness variable. Figure 8 plots the interaction.

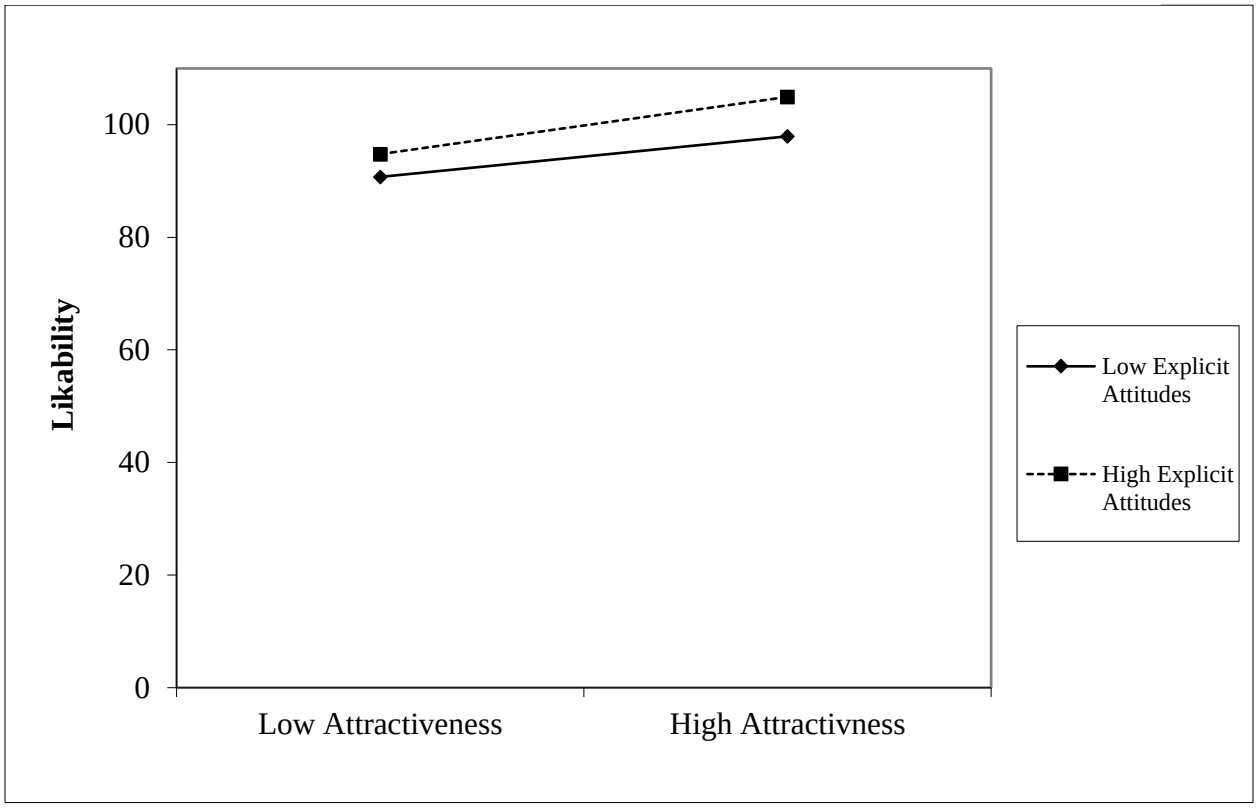

Figure 8. Interaction between continuous attractiveness and explicit attitudes predicting likability.

Social Skills

Level-1 Model

$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Level-2 Model

$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ExplicitAttitudes_j) + u_{0j}$

$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ExplicitAttitudes_j) + u_{1j}$

Mixed Model

$SocialSkills_{ij} = \gamma_{00} + \gamma_{01}*ExplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*ExplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 1.17$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Explicit attitudes significantly predicted social skills ($\beta = -3.14$; $p < .01$), such that participants with more positive explicit attitudes provided lower social skills ratings. Attractiveness significantly and positively predicted social skills ($\beta = 3.76$; $p < .01$), as did the cross-level interaction between attractiveness and explicit attitudes ($\beta = 1.41$; $p < .01$). Each of the simple slopes tests revealed a significant positive association between attractiveness and social skills, but attractiveness was more strongly related to social skills when explicit attitudes were more positive (b = 8.8; $t = 15.56$; $p < .01$) than when they were less positive (b = 6.0; $t = 21.06$; $p < .01$). Thus, Hypothesis 5(c) was supported with the dichotomous attractiveness variable. Figure 9 plots the interaction.

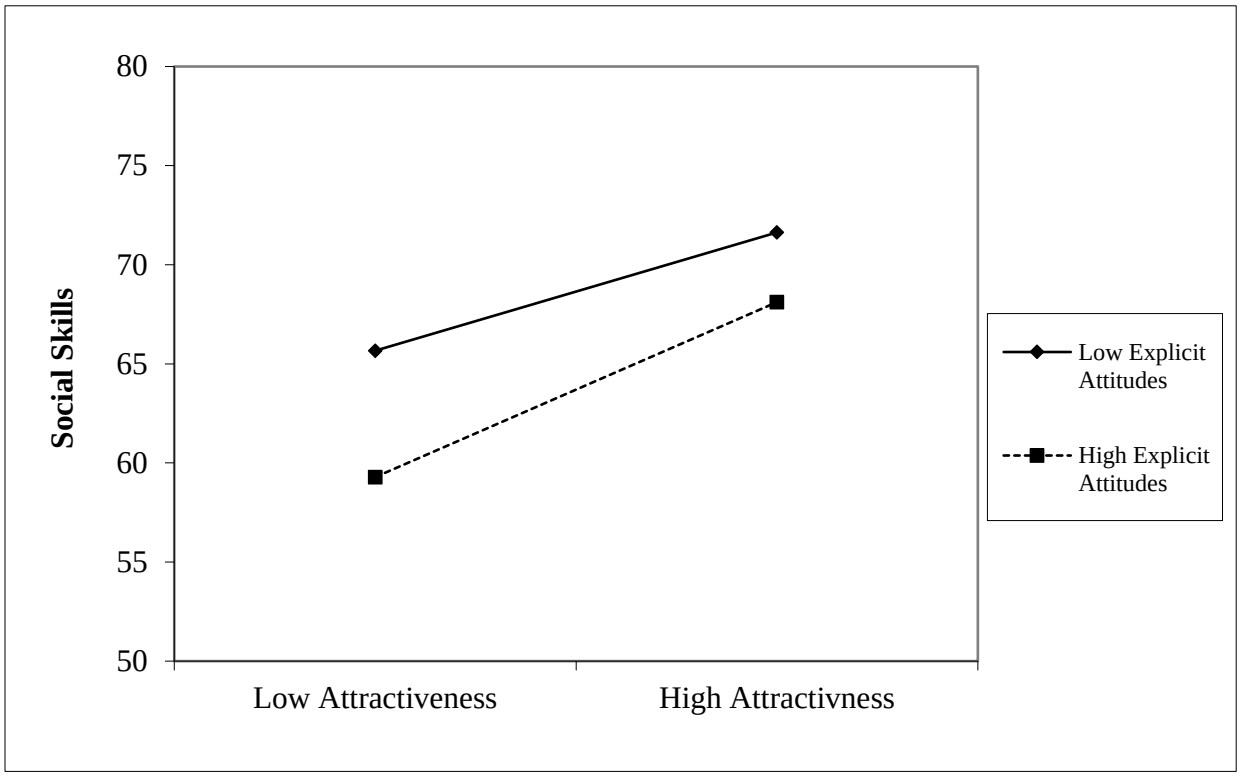

Figure 9. Interaction between dichotomous attractiveness and explicit attitudes predicting social skills.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 5.62$; df = 2; $p = .06$), so the more parsimonious model with fixed error terms was used. Explicit attitudes significantly predicted likability ($\beta = -2.44$; $p < .01$), such that participants with more positive explicit attitudes provided lower likability ratings. Attractiveness significantly and positively predicted likability ($\beta = 3.92$; $p < .01$), as did the cross-level interaction between attractiveness and explicit attitudes ($\beta = 1.18$; $p < .01$). Each of the simple slopes tests revealed a significant positive association between attractiveness and social skills, but attractiveness was more strongly related to social skills when explicit attitudes were more positive (b = 8.2; $t = 21.54$; $p < .01$) than when they were less positive (b = 5.8; $t = 30.47$; $p < .01$).

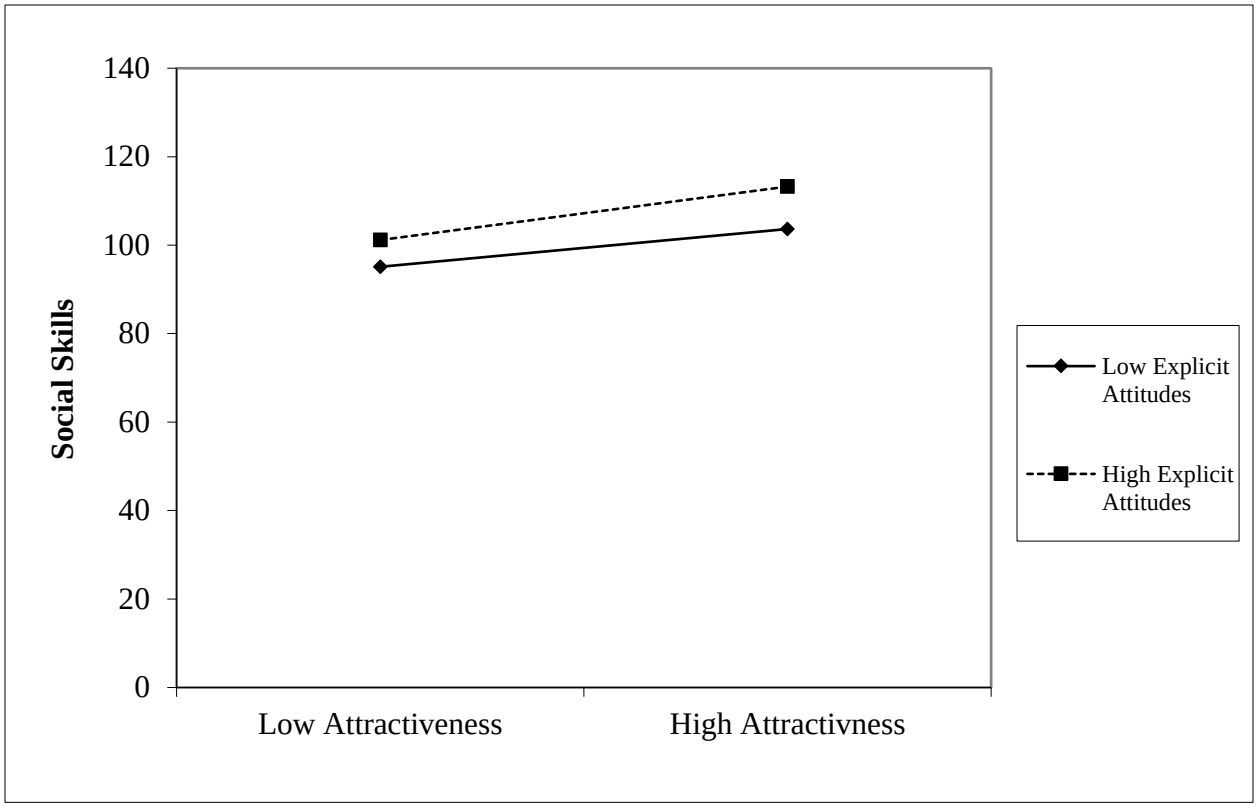

Figure 10. Interaction between continuous attractiveness and explicit attitudes predicting social skills.

Hypothesis 6a-c

Hypothesis 6a-c predicted that the relationship between candidate attractiveness and perceived a) intellectual competence, b) likability, and c) social skills would be moderated by implicit attitudes, such that the relationships would be stronger when explicit attitudes were more positive. This model was run six times, once for each outcome variable and with both the dichotomous and continuous attractiveness variables. When the interaction was significant, simple slopes were examined at one standard deviation above and one standard deviation below the mean, and the results were graphed to visualize the interaction.

Competence

Level-1 Model

$$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ImplicitAttitudes_j) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ImplicitAttitudes_j) + u_{1j}$$

Mixed Model

$$Competence_{ij} = \gamma_{00} + \gamma_{01}*ImplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*ImplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .02$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Implicit attitudes did not significantly predict competence ($\beta = .57$; $p = .79$). Attractiveness also did not significantly predict competence ($\beta = .00$; $p = .99$), and neither did the cross-level

interaction between attractiveness and implicit attitudes (β = .61; p = .73). Thus, Hypothesis 6(a) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2$ = 1.40; df = 2; p > .50), so the more parsimonious model with fixed error terms was used. Implicit attitudes did not significantly predict competence (β = .88; p = .66). Attractiveness did significantly and positively predict competence (β = 1.68; p < .01), but the cross-level interaction between attractiveness and implicit attitudes was not significant (β = .73; p = .54). Thus, Hypothesis 6(a) was not supported with the continuous attractiveness variable.

Likability

Level-1 Model
$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Level-2 Model
$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ImplicitAttitudes_j) + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ImplicitAttitudes_j) + u_{1j}$

Mixed Model
$Likability_{ij} = \gamma_{00} + \gamma_{01}*ImplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} +$
$\gamma_{11}*ImplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2$ = 3.91; df = 2; p = .14), so the more parsimonious model with fixed error terms was used. Implicit attitudes did not significantly predict likability (β = 2.13; p = .34). Attractiveness did significantly predict likability (β = 3.13; p < .01), but the cross-level interaction between

attractiveness and implicit attitudes was not significant (β = -.05; p = .97). Thus, Hypothesis 6(b) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2$ = 7.89; df = 2; p = .02), so the more complex model with random error terms was used. Implicit attitudes did not significantly predict likability (β = 2.10; p = .32). Attractiveness did significantly predict likability (β = 3.30; p < .01), but the cross-level interaction between attractiveness and implicit attitudes was not significant (β = -.02; p = .99). Thus, Hypothesis 6(b) was not supported with the continuous attractiveness variable.

Social Skills

Level-1 Model

$$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(ImplicitAttitudes_j) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}*(ImplicitAttitudes_j) + u_{1j}$$

Mixed Model

$$SocialSkills_{ij} = \gamma_{00} + \gamma_{01}*ImplicitAttitudes_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*ImplicitAttitudes_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2$ = 8.86; df = 2; p < .01), so the more complex model with random error terms was used. Implicit attitudes did not significantly predict social skills (β = 1.50; p = .52). Attractiveness significantly and positively predicted competence (β = 3.96; p < .01), but the cross-level interaction

between attractiveness and implicit attitudes was not significant (β = .96; p = .53). Thus, Hypothesis 6(c) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2$ = 15.53; df = 2; p < .01), so the more complex model with random error terms was used. Implicit attitudes did not significantly predict social skills (β = 1.99; p = .34). Attractiveness significantly and positively predicted competence (β = 4.05; p < .01), but the cross-level interaction between attractiveness and implicit attitudes was not significant (β = .44; p = .68). Thus, Hypothesis 6(c) was not supported with the continuous attractiveness variable.

Hypothesis 7a-c

Hypothesis 7a-c predicted that the relationship between candidate attractiveness and perceived a) intellectual competence, b) likability, and c) social skills would be moderated by customer visibility, such that the relationships would be stronger for jobs with high customer visibility than for jobs with low customer visibility. This model was run six times, once for each outcome variable and with both the dichotomous and continuous attractiveness variables. When the interaction was significant, simple slopes were examined at one standard deviation above and one standard deviation below the mean, and the results were graphed to visualize the interaction.

Level-1 Model

$$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(CustomerVisibility_j) + u_{0j}$$

$\beta_{1j} = \gamma_{10} + \gamma_{11}*(CustomerVisibility_j) + u_{1j}$

Mixed Model
$Competence_{ij} = \gamma_{00} + \gamma_{01}*CustomerVisibility_j + \gamma_{10}*Attractiveness_{ij} +$
$\gamma_{11}*CustomerVisibility_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .29$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Customer visibility did not significantly predict competence (β = -1.76; $p = .21$). Attractiveness also did not significantly predict competence (β = -.36; $p = .65$), and neither did the cross-level interaction between attractiveness and customer visibility (β = .95; $p = .39$). Thus, Hypothesis 7(a) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 1.51$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Customer visibility did not significantly predict competence (β = -.13; $p = .32$). Attractiveness did significantly and positively predict competence (β = 1.39; $p = .008$), but the cross-level interaction between attractiveness and customer visibility was not significant (β = .64; $p = .39$). Thus, Hypothesis 7(a) was not supported with the continuous attractiveness variable.

Likability

Level-1 Model
$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Level-2 Model
$\beta_{0j} = \gamma_{00} + \gamma_{01}*(CustomerVisibility_j) + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}*(CustomerVisibility_j) + u_{1j}$

Mixed Model
$Likability_{ij} = \gamma_{00} + \gamma_{01}*CustomerVisibility_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*CustomerVisibility_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = .85$; df = 2; $p > .50$), so the more parsimonious model with fixed error terms was used. Customer visibility did not significantly predict likability (β = -.05; $p = .97$). Attractiveness did significantly and positively predict likability (β = 2.99; $p < .01$), but the cross-level interaction between attractiveness and customer visibility was not significant (β = .08; $p = .94$). Thus, Hypothesis 7(b) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 5.00$; df = 2; $p = .08$), so the more parsimonious model with fixed error terms was used. Customer visibility did not significantly predict likability (β = -.01; $p = .99$). Attractiveness did significantly and positively predict likability (β = 3.23; $p < .01$), but the cross-level interaction between attractiveness and customer visibility was not significant (β = .20; $p = .71$). Thus, Hypothesis 7(b) was not supported with the continuous attractiveness variable.

Social Skills

Level-1 Model
$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Attractiveness_{ij}) + r_{ij}$

Level-2 Model
$\beta_{0j} = \gamma_{00} + \gamma_{01}*(CustomerVisibility_j) + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}*(CustomerVisibility_j) + u_{1j}$

Mixed Model

$$SocialSkills_{ij} = \gamma_{00} + \gamma_{01}*CustomerVisibility_j + \gamma_{10}*Attractiveness_{ij} + \gamma_{11}*CustomerVisibility_j*Attractiveness_{ij} + u_{0j} + u_{1j}*Attractiveness_{ij} + r_{ij}$$

Dichotomous attractiveness condition variable. The chi-square difference test between the models with fixed and with random error terms was not significant ($\Delta\chi^2 = 3.08$; df = 2; $p = .21$), so the more parsimonious model with fixed error terms was used. Customer visibility did not significantly predict social skills ($\beta = -.05$; $p = .73$). Attractiveness did significantly and positively predict social skills ($\beta = 3.49$; $p < .01$), but the cross-level interaction between attractiveness and customer visibility was not significant ($\beta = .55$; $p = .57$). Thus, Hypothesis 7(c) was not supported with the dichotomous attractiveness variable.

Continuous attractiveness variable. The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 9.95$; df = 2; $p < .01$), so the more complex model with random error terms was used. Customer visibility did not significantly predict competence ($\beta = -.22$; $p = .87$). Attractiveness did significantly and positively predict competence ($\beta = 3.65$; $p < .01$), but the cross-level interaction between attractiveness and customer visibility was not significant ($\beta = .54$; $p = .42$). Thus, Hypothesis 7(c) was not supported with the continuous attractiveness variable.

Hypothesis 8a-c

Hypothesis 8 predicted that candidates in the high qualifications condition would receive more favorable ratings of a) intellectual competence, b) likability, and c) social skills than those in the moderate qualification condition. This model was run three times, one for each outcome variable. The results are presented for each outcome below.

Competence

$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 1564.87$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of qualification in predicting competence was significant ($\beta = 25.58$; $p < .01$), meaning that candidates in the high qualification condition received higher competence ratings than candidates in the moderate qualification condition. Thus, Hypothesis 8(a) was supported.

Likability

$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 900.68$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of qualification in predicting competence was significant ($\beta = 18.08$; $p < .01$), meaning that candidates in the high qualification condition received higher likability ratings than candidates in the moderate qualification condition. Thus, Hypothesis 8(b) was supported.

Social Skills

$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 792.40$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of qualification in predicting social skills was significant ($\beta = 18.07$; $p < .01$), meaning that candidates in the high qualification

condition received higher social skills ratings than candidates in the moderate qualification condition. Thus, Hypothesis 8(c) was supported.

Hypothesis 9a-c

Hypothesis 9a-c predicted that the relationship between qualification and the continuous variable of recommendation for a job interview invitation would be mediated by perceived a) intellectual competence, b) likability, and c) social skills. This model was run once for each mediator variable.

Competence

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 1026.72$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of candidate qualification in predicting interview recommendation was significant ($\beta = 1.87$; $p < .01$), such that more qualified candidates received higher interview recommendations.

Step 2

$$Competence_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 1564.87$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of candidate qualification in predicting competence was significant ($\beta = 25.58$; $p < .01$), such that more qualified candidates received higher competence ratings.

Step 3

$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + \beta_{1j}*(Competence_{ij})\ r_{ij}$

The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was significant ($\Delta\chi^2 = 932.07$; df = 2; $p < .01$). When compared to the model with two random error terms, the difference test was again significant ($\Delta\chi^2 = 51.19$; df = 2; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, competence significantly predicted interview recommendations ($\beta = .027$; $p < .01$), such that candidates with higher competence ratings also received more positive interview recommendations. Additionally, the effect of candidate qualification was reduced from Step 1 ($\beta = 1.16$; $p < .01$), and the Sobel test of the indirect effect was significant (Sobel = 15.43; $p < .01$). This indicates partial mediation and supports Hypothesis 9(a).

Likability

Step 1

$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$

Candidate qualification significantly predicted interview recommendations, such that more qualified candidates received high interview recommendations as outlined above in Step 1.

Step 2

$Likability_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 900.68$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of candidate qualification in predicting

likability was significant (β = 18.08; $p < .01$), such that more qualified candidates received higher likability ratings.

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + \beta_{1j}*(Likability_{ij})\ r_{ij}$$

The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was significant ($\Delta\chi^2 = 1278.23$; df = 2; $p < .01$). When compared to the model with two random error terms, the difference test was again significant ($\Delta\chi^2 = 174.24$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, likability significantly predicted interview recommendations (β = .03; $p < .01$), such that candidates with higher likability ratings also received more positive interview recommendations. Additionally, the effect of candidate qualification was reduced from Step 1 (β = 1.30; $p < .001$), and the Sobel test of the indirect effect was significant (Sobel = 14.63; $p < .01$). This indicates partial mediation and supports Hypothesis 9(b).

Social Skills

Step 1

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$$

Candidate qualification significantly predicted interview recommendations, such that more qualified candidates received high interview recommendations as outlined above in Step 1.

Step 2

$$SocialSkills_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + r_{ij}$$

The chi-square difference test between the models with fixed and with random error terms was significant ($\Delta\chi^2 = 792.40$; df = 2; $p < .01$), so the more complex model with random error terms was used. The regression of candidate qualification in predicting likability was significant ($\beta = 18.07$; $p < .01$), such that more qualified candidates received higher social skills ratings.

Step 3

$$Recommendation_{ij} = \beta_{0j} + \beta_{1j}*(Qualification_{ij}) + \beta_{1j}*(SocialSkills_{ij})\ r_{ij}$$

The chi-square difference test between the model with all fixed error terms and the model with one fixed and one random error term was significant ($\Delta\chi^2 = 1252.20$; df = 2; $p < .01$). When compared to the model with two random error terms, the difference test was again significant ($\Delta\chi^2 = 225.85$; df = 5; $p < .01$). Therefore, the more complex model with two random error terms was used. In this model, social skills significantly predicted interview recommendations ($\beta = .03$; $p < .01$), such that candidates with higher social skills ratings also received more positive interview recommendations. Additionally, the effect of candidate qualification was reduced from Step 1 ($\beta = 1.31$; $p < .01$), and the Sobel test of the indirect effect was significant (Sobel = 14.16; $p < .01$). This indicates partial mediation and supports Hypothesis 9(c).

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