When is physical attractiveness not beneficial? Perceptions of warmth and competence, emotions, and job behaviors.

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Abstract

Diverging from the dominant positive view of physical attractiveness, I propose that attractive individuals at times experience negative outcomes at work. Research substantiates that judgments of competence and warmth combine to affect perceivers' emotional and behavioral reactions to target individuals. Attractive individuals are perceived as highly competent, but not necessarily highly warm. Perceived warmth moderates the effects of competence on emotional and behavioral responses to targets. Thus, although attractive individuals may elicit positive responses (e.g., admiration, altruistic helping) if perceived as highly warm, they may elicit negative responses (e.g., envy, workplace aggression) if perceived as lacking warmth. I used a laboratory experiment and a field study to test the theoretical model. Given some aspects of the study design and data, it is hard to be conclusive regarding the study findings. However, the laboratory study found support for the positive relationship between physical attractiveness and perceived competence, and some support for a negative relationship between physical attractiveness and job behaviors when the perceived warmth was low.

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Chapter 1: Introduction and Overview

"Personal beauty is a greater recommendation than any letter of reference." – Aristotle

"Beauty and folly are old companions." – Benjamin Franklin

Many age-old maxims are informative about the value of physical attractiveness. Some of them emphasize the significant positive effect physical attractiveness has on our lives, while others insist that physical attractiveness brings trouble. Apart from the mixed messages about beauty, physical attractiveness has been a focus across cultures throughout human history. For example, archaeologists have discovered ornaments (e.g., pierced shells colored with ochre), which symbolized the pursuit of beauty in Taforalt, Morocco (82,000 BP) and Blombos Cave, South Africa (75,000 BP). In ancient Greece, women would lighten their hair using arsenic because light hair was considered more beautiful (Azoulay, Demian, & Frioux, 2009). In the present, we are frequently exposed to mass media describing how much value can be added to one's life through physical attractiveness. It is not women only, but men also who are pressured toward placing a high level of importance on physical attractiveness. An interesting illustration of this phenomenon is that, in 2012, American consumers paid over $5 billion on men's cosmetic products, which is more than twice what they spent in 1997 ($2.4 billion) (Chumley, 2013).

Considering the interest in physical attractiveness throughout human history, it is not surprising that social scientists have long studied the effects of physical attractiveness in multiple disciplines. In general, it has been concluded that physical attractiveness has a positive effect on one's life. Even if there is a significant amount of contradictory research data, social scientists of many disciplines, including psychology, sociology, and

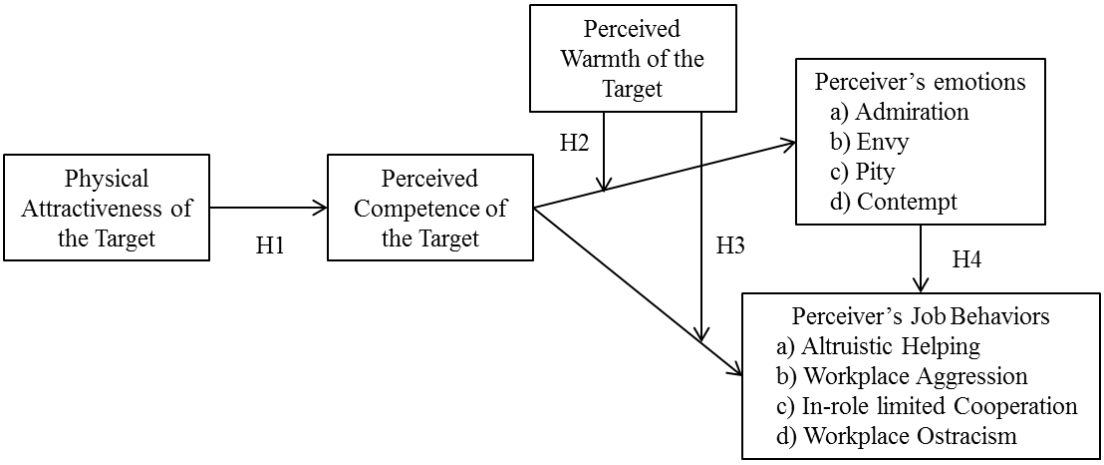
anthropology, have concluded that physical attractiveness shapes our lives in many ways, from cradle to grave (Patzer, 2008). For example, the Physical Attractiveness Stereotype (PAS) (Dion, Berscheid, & Walster, 1972) suggests that "what is beautiful is good," and predicts that attractive people will live better lives than unattractive people because attractive people possess "socially desirable" traits. In management studies, the PAS has also been supported in career success studies demonstrating that attractive people earn higher salaries (e.g., Judge & Cable, 2004; 2011; Judge, Hurst, & Simon, 2009) and have higher levels of occupational success and competence (see Hosoda, Sone-Romero, & Coats, 2003; Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000).

Physical attractiveness seems to play a positive role in individuals' lives, but is this always the case? Are there any circumstances when attractive individuals may receive negative outcomes? Although attractive individuals are judged to be significantly more competent (e.g., occupational competence), I propose that reactions to competent individuals can be negative, depending on their perceived warmth. The Stereotype Content Model (SCM) (Fiske, Cuddy, Glick, & Xu, 2002) and the Behavior from Intergroup Affect and Stereotypes (BIAS) map (Cuddy, Fiske, & Glick, 2007) suggest that the core of individuals' perception is their judgment of warmth and competence, and people behave differently according to how they perceive the target person. Attractive individuals who are perceived to have high competence (e.g., the ability to do work successfully and efficiently) may receive favorable treatment and evaluation in the workplace. However, the SCM and the BIAS map show that reactions to competent individuals depend on their perceived warmth. Thus, attractive individuals may receive

negative emotional and behavioral reactions from others when they are perceived to be low warmth.

The purpose of this study is to examine the negative effects of physical attractiveness on emotional and behavioral responses in organizations. Contrary to the PAS (Dion et al., 1972), I suggest that attractive people can also receive negative emotional or behavioral reactions as a result of how they are perceived by others. Whereas attractive individuals are anticipated to be perceived as competent, invoking the SCM and the BIAS map, I propose that emotional and behavioral reactions toward attractive individuals will vary according to evaluations of warmth (high vs. low). Specifically, I predict that the level of perceived warmth may decide the positive or negative emotional (e.g., admiration vs. envy) and behavioral (e.g., helping vs. harming) responses from others. Figure 1 displays the theoretical model for the current study. I test the hypotheses using a laboratory experiment and a field study.

Figure 1. Theoretical Model



I expect this study to make several theoretical and practical contributions. First, this study extends the scope of work regarding the effect of physical attractiveness by including the emotional and behavioral responses of perceivers in organizations. Previous

studies have discussed the effect of physical attractiveness on career related outcomes (e.g., salary, hiring recommendations) for attractive individuals. However, the current study extends the discussion by looking at the effects of physical attractiveness on employees' affective and behavioral job attitudes. Specifically, this study examines coworkers' emotions (e.g., envy) and job related attitudes (e.g., helping or harming) toward attractive individuals. Second, diverging from the dominant view of the positive effects of physical attractiveness, this study suggests contingency factors (i.e., perceived warmth) that explain why physical attractiveness can at times have negative effects. Third, this study provides meaningful data in testing the SCM/BIAS map with individual participants. The SCM/BIAS map focuses on the perceptions of societal groups (e.g., race, socio-economic status), whereas this study examines how individuals judge and behave toward a person depending on the perceived competence and warmth. Fourth, I develop four perceivers' job behaviors based on the BIAS map. These four distinct job behaviors follow behavioral patterns of the BIAS map, and reflect the perceivers' latent motivations (i.e., facilitation - harm) and the intensity of behaviors (i.e., active – passive). Thus, the current study can distinguish a range of perceivers' reactions toward attractive people, from genuine helping (or harming) to insincere helping, based on the intensity and valence of those behaviors. Therefore, this study allows further integration of social psychological theories (i.e., the SCM and BIAS map) into management literatures. Lastly, this study will help practitioners when they manage negative (or positive) job behaviors among employees by better understanding the mechanism behind stereotypes and perceptions. This study shows how attractive employees are treated negatively (or positively) by other employees; thus, management can find a proper way to encourage

positive job behaviors among employees regardless of their level of physical attractiveness.

Up to this point, I have briefly introduced the research questions and expected contributions (Chapter 1). In what follows, I review existing theories and develop hypotheses on the effects of physical attractiveness. First, I review the PAS and meta-analytic literature on physical attractiveness to propose a relationship between physical attractiveness and perceived competence. Second, I review the SCM and the BIAS map and build theory regarding the relationships among physical attractiveness, emotional reactions, and behavioral reactions in the workplace context. I propose four corresponding job behaviors based on the BIAS map and develop the theoretical model (Chapter 2). To test the hypotheses of this study, I develop a laboratory experiment design and a field study design and show results (Chapter 3), and finally, I discuss the implications of study results and approaches for future research (Chapter 4).

Chapter 2: Theory Development

In this chapter, I review past theory and research findings to build a theoretical model for the current study. First, I discuss the conceptual definition of physical attractiveness to develop clear implications for the current study (Patzer, 1985). Second, to build theory regarding the relationship between physical attractiveness and perceived competence, I review the Physical Attractiveness Stereotype (PAS) (Dion et al., 1972), and discuss empirical research evidence on the positive effects of physical attractiveness. Third, I review the Stereotype Content Model (SCM) (Fiske et al., 2002) and the Behavior from Intergroup Affect and Stereotypes (BIAS) map (Cuddy et al., 2007) to build theory regarding the relationship between the perceived competence based on physical attractiveness and emotional/behavioral reactions in organizations. I also propose four corresponding job behaviors based on the definition of behavioral patterns from the BIAS map. Consistent with the two behavioral dimensions (i.e., active – passive, facilitation – harm) of the BIAS map, I introduce four distinct job behaviors from management literatures. Lastly, I summarize the proposed model and briefly discuss the testing of the model.

Conceptualization of Physical Attractiveness

Much physical attractiveness research has been conducted without a conceptual definition of what attractiveness is (Rubenstein, Langlois, & Roggman, 2002, p.1), but a lack of a definition for physical attractiveness can undermine the implications of the present study. Without a definition, the researcher cannot make valid assumptions about the reference point that the raters use, and the raters will also be unclear about the

appropriate rating criteria (Patzer, 1985, p.40). As the saying "Beauty is in the eye of the beholder" suggests, it can be assumed that physical attractiveness is a unique evaluation by each individual. Thus, early studies attempted to identify traits and characteristics which constitute physical attractiveness (e.g., wearing eyeglasses, facial components, facial expression, mouth curvature, eye gaze, pupil size, etc.) by assuming that physical attractiveness is not a simple quantitative trait. However, measuring an overall construct of physical attractiveness is still ambiguous since it is not measurable by summing up the parts.

As a more recent development of measuring attractiveness, researchers have moved to the global measure of physical attractiveness ("*truth-of-consensus method*", Patzer, 1985). The high agreement of attractiveness ratings between raters (see Feingold, 1992 and Langlois et al., 2000, for the reliability coefficients) indicate that physical attractiveness is not in the eye of the beholder; rather, it has a consistent and universal standard across raters (e.g., rater gender, Bersecheid, Dion, Walster, & Walster, 1971; across culture, Cunningham, Roberts, Barbee, Druen, & Wu, 1995). It is also suggested that the determinants of physical attractiveness has a distinct composite of static components (i.e., stable and enduring physical characteristics: height or eye color) or of fluctuating components (i.e., grooming). Majority of researches have assumed that physical attractiveness is a static phenomenon, thus, a large number of studies assessing facial or body attractiveness to overall judgments of physical appearance. However, there is still a limitation to know about overall perceptions of appearance with face-only or body shape-only measures (Brown, Cash, & Noles, 1986).

I define physical attractiveness by considering all possible aspects of physical traits simultaneously. Perceivers will interact with the target in the workplace, and I assume perceivers will have multiple stimuli to assess the level of the target's attractiveness. For example, an employee may have an attractive body shape but have a less attractive face. Given that individuals will change their appearance to be more attractive (e.g., Webster & Driskell, 1983), they can gain this through fluctuating (i.e., changing) components (e.g., grooming, make-up). This effect can compensate for or offset less attractive features (e.g., his/her face by make-up). Thus, when the perceiver forms the overall perceptions of appearance, it can be hard to exclude fluctuating components and focus on static components only. Also, meta-analytic findings suggest that additional cues (e.g., face-only vs. additional information) find higher effect sizes than studies using only one measure (Langlois et al., 2000). Thus, I use the phrase, "appearance of body," which reflects the global measure of appearance, including face, height, weight, body composition, clothing, and many other detailed physical features. Therefore, the definition of physical attractiveness for the current study is as follows:

Physical attractiveness is the degree to which a person has a pleasing physical appearance as perceived by others.

Physical Attractiveness and Competence

The Physical Attractiveness Stereotype

The effects of physical attractiveness have been studied by social scientists since the mid-1960s, and multiple disciplines have studied physical attractiveness (Patzer, 1985). However, physical attractiveness had relatively little attention from psychologists until

Dion and colleagues' (1972) experimental study. Dion and colleagues (1972) argued that previous social psychologists tried to avoid accepting the positive effects of attractiveness because making judgments based on beauty does not fit the ways of democracy. For example, Aronson (1969) pointed out that, "in a democracy we like to feel that with hard work and a good deal of motivation, a person can accomplish almost anything. But, alas (most of us believe), hard work cannot make an ugly woman beautiful (p.160)."

The Physical Attractiveness Stereotype (PAS) (Dion et al., 1972) is the seminal empirical study of the "beauty is good" paradigm. As physical appearance is the most obvious personal characteristic, Dion and colleagues argued that appearance may forecast a person's inward character and personality. The reasoning behind the argument was that: 1) certain personality traits may influence one's appearance (e.g., a calm person may have fewer wrinkles than a tense person); and, 2) cultural stereotypes of beauty's proper personality may mold the relevant personalities of those individuals. In other words, when attractive people are constantly assumed to have more positive traits than unattractive people, this may cause attractive people to actually eventually attain those positive traits.

The study was designed to investigate: (1) whether, regardless of gender differences, physically attractive stimulus persons (i.e. the target) are assumed to have more socially desirable personality traits than unattractive persons; and, (2) whether attractive persons are expected to lead better lives than unattractive individuals. Sixty students (30 males and 30 females) participated in the experiment. Each subject was given three envelopes, each of which contained one photo of either a 1) physically attractive, 2) average attractive, or 3) relatively unattractive stimulus person. The subjects rated their judgments

of the three stimulus persons on different personality traits (e.g., 27 different personality traits and five additional personality traits), and estimated the stimulus person's future happiness, including (a) marital happiness, (b) parental happiness, (c) social and professional happiness, (d) total happiness (sum of indexes a, b, and c), and (e) occupational success.

The test results showed that attractive people were indeed judged to have more socially desirable personality traits than unattractive people, regardless of the rater and the stimulus person's sex. Also, attractive men and women were expected to attain more competent spouses and have happier marriages, have better social and professional lives, and have more prestigious occupations than unattractive persons. Overall, the attractive individuals were expected to have more total happiness in their lives than the unattractive individuals. Therefore, the results suggested that a physical attractiveness stereotype exists and is consistent with the "What is beautiful is good" thesis.

Research Evidence

Since Dion and colleagues' study, much research has focused on the effects of physical attractiveness, and there is a large body of research on the attractiveness stereotype with a variety of hypotheses and diverse methodologies in multidisciplinary research areas (e.g., anthropology, Gangestad & Scheyd, 2005). Most literatures have agreed that the PAS effect is strong and significantly positively related to many aspects of individuals' lives (e.g., trait attribution, Dion & Dion, 1987). Even though a few studies have noted a negative side of physical attractiveness (e.g., negatively perceived personality traits: egotism, vanity, Cash & Janda, 1984; vanity, likelihood of marital disaster, and bourgeois orientation, Dermer & Thiel, 1975; positive relationship to

narcissism, Holtzman & Strube, 2010 meta-analysis), stereotypes from attractiveness significantly and positively influence individuals' lives from birth (e.g., Langlois, Ritter, Casey, & Sawin, 1995) to grave (Patzer, 2008). Following the "what is beautiful is good" thesis, it is assumed that physically attractive people possess positive personality traits, are treated significantly more favorably than unattractive people, and are presumed to live happier and more successful lives. (e.g., for more detailed results, see meta-analyses: Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1990, 1992; Hosoda et al., 2003; Jackson, Hunter, & Hodge, 1995; Langlois et al., 2000; Luo & Zhang, 2009; Mazzella & Feingold, 1994; Pierce, 1996; Umberson & Hughes, 1987).

Building on this line of inquiry, many researchers have examined moderating factors that influence the relationship between attractiveness and trait attribution (i.e., characteristics of the target or situation). Of these, gender differences have been studied most frequently. It has been assumed that females experience more deferential judgment and treatment than males because human culture values attractiveness more in females than in males. However, meta-analyses have shown the strong positive effect of physical attractiveness on attribution of positive personal characteristics for both men and women (e.g., Eagly et al., 1991; Langlois et al., 2000). Likewise, the effects are equally strong for children versus adults and strangers versus non strangers (e.g., Eagly et al., 1991; Langlois et al., 2000)[1].

In terms of the workplace, results suggest that attractive people are judged significantly more positively on the dimensions of academic competence ($d_+ = 1.10$),

[1] However, some studies' participants' characteristics (e.g., participants' own physical attractiveness, Dermer & Thiel, 1975; constructions of relationship, Anderson, Adams, & Plaut, 2008) have been negatively related to attractiveness and trait attribution.

occupational competence (d_+ = .90), social competence (d_+ = .68) intellectual competence (d_+ = .46), and interpersonal competence (d_+ = .45) (Eagly et al., 1991; Langlois et al., 2000). Competence can be associated with better performance and success in the workplace (e.g., Mirable, 1997; Tett, Guterman, Bleier, & Murphy, 2000). In fact, prior research results show that physically attractive people experience more actual occupational success (d_+ = .76) than unattractive people (Langlois et al., 2000), and a significant amount of management research has also supported the bias effect of physical attractiveness for job related outcomes such as occupational and career success.

Taken together, organizational research on physical attractiveness and competence suggest the following points. First, attractive people are perceived to be more qualified (e.g., Dipboye, Fromkin, & Wiback, 1975), specifically in hiring recommendations (e.g., Cann, Siegfried, & Pearce, 1981). Second, interviewers give an advantage to attractive job applicants (e.g., Dipboye, Arvey, & Terpstra, 1977), and interviewers make real hiring recommendations in actual selection interviews (Barrick, Shaffer, & DeGrassi, 2009, r_c = .34)[2]. Third, once hired, attractive employees start jobs with higher starting salaries (e.g., Frieze, Olson, & Russell, 1991), and earn more over time. Specifically, physical attractiveness (i.e. facial attractiveness) exhibits both direct and indirect effects on income as mediated by educational attainment and core self-evaluation (Judge et al., 2009). Height is positively correlated with earnings (controlling sex, age, and weight) and significantly related to career success, mediated by social esteem, leader emergence, and performance (Judge & Cable, 2004). Similarly, weight is positively related to men's earnings (except for obese men) but negatively related to women's earnings (and steepest

[2] The interview scores from Barrick and colleagues' study (2009) were highest when the level of interview structure was low (r_c = .88).

at the "thin" end of the distribution) (Judge & Cable, 2011). Fourth, Hosoda and colleagues' meta-analysis results support the idea that decision makers use physical attractiveness as information in making decisions, even when they have job-relevant information about targets. For example, physical attractiveness enhances the chance of promotion only when the employee's performance is mediocre (Chung & Leung, 1988). In this regard, overall job related outcomes are positively related to attractive employees, such as employment potential (d = .44), suitability (d = .42), ranking (d = .36), and performance evaluation (d = .16) (Hosoda et al., 2003).

Given the benefits of physical attractiveness in the workplace, I propose a positive relationship between physical attractiveness and the target employee's perceived competence. As discussed earlier, attractive people are perceived to possess positive personality traits, including occupational competence. Also, management research supports that physical attractiveness influences positive job related outcomes in the workplace (Eagly et al., 1991; Hosoda et al., 2003; Langlois et al., 2000). Therefore, I theorize a positive effect of physical attractiveness on the perceived competence of the target employee.

Hypothesis 1: Physical attractiveness will be positively related to the perceived competence of the target employee.

Physical Attractiveness and Emotional Reactions

I theorize a positive relationship between physical attractiveness and the perceived competence of the target employee, but competence is not the only important personality trait to be considered in the work place. The Stereotype Content Model (SCM) and the

Behavior from Intergroup Affect and Stereotypes (BIAS) map suggest that the core of individuals' perception is judgments of warmth and competence, and combinations of warmth and competence generate distinct emotional and behavioral reactions (Cuddy et al., 2007; Fiske et al., 2002). Hereafter, I first review the SCM and the study results, and propose that perceived competence (i.e., from physical attractiveness) and warmth (i.e., additionally perceived personality trait) affect emotional reactions (Hypothesis 2). Second, I review the BIAS map and propose that four behavioral patterns of the BIAS map can be specified in four job behaviors. Lastly, I also hypothesize the relationships between perceived competence and warmth, and job behaviors (Hypothesis 3) and the relationship between emotion and job behaviors (Hypothesis 4).

The Stereotype Content Model

The main hypotheses of the SCM model are that: (a) competence and warmth are two primary dimensions of stereotype contents; (b) many stereotypes include mixed competence and warmth as ambivalent stereotypes (e.g., combine high warmth with low competence or high competence with low warmth); (c) combinations of perceived competence and warmth create four unique emotional responses (i.e., admiration, contempt, envy, and pity).

Theoretical Rationale. As two primary dimensions of stereotype contents, Fiske and colleagues (2002) suggest that competence and warmth dimensions are two distinct fundamental dimensions of personal perception. In a social context, individuals (i.e., actors) perceive others (i.e., targets) with category-based social judgment (e.g., elderly people, Asians, rich people). When individuals judge others, two critical areas of criteria are determined in regard to being successful in a competitive social setting. First,

individuals need to anticipate and assess others' intentions toward them, and, second, individuals need to know others' capabilities for pursuing their intentions. Thus, individuals know whom to approach or avoid according to other individuals' purposes.

Two stereotype contents, competence and warmth, correspond to those two questions, where measuring others' capabilities is related to the competence dimension, and judging others' intentions is related to the warmth dimension. In other words, competence judgment affects assessment of others' ability to achieve their motives, and warmth judgments affects how much we trust (or doubt) others' motives. Specifically, the competence dimension includes traits describing self-profitability (e.g., intelligent, confident), agency, masculinity, task-oriented, and competence (i.e., including both possession of skills as potential actions as well as actual actions). On the other hand, the warmth dimension includes traits describing other-profitable traits (e.g., trustworthy, tolerant), communion, femininity, social-oriented, and morality (e.g., generous, helpful) (Cuddy, Fiske, & Glick, 2008; Fiske et al., 2002).

These stereotype contents often comprise both positive and negative traits (i.e., ambivalent stereotypes). In other words, individuals frequently perceive others with mixed stereotypes such as competent but not warm (e.g., Jews, Asian, the rich), or as warm but not competent (e.g., the disabled, housewives, elderly people). But, individuals also sometimes perceive others consistently as both warm and competent (e.g., societal reference groups: middle-class, Whites and Christians in the United States) or both cold and incompetent (e.g., poor, homeless, welfare recipients) as univalent stereotypes (Cuddy et al., 2008; Fiske et al., 2002).

Four combinations of perceived warmth (high vs. low) and competence (high vs. low) distinctly lead four distinct affective reactions: admiration, contempt, envy, and pity. Even when a person is perceived to be highly competent, the person can get positive (admiration), or negative (envy) emotional responses depending on the level of perceived warmth (high versus low, respectively). The emotions hypotheses are based on social comparisons (i.e., upward vs. downward) and related outcome attributions (i.e., dispositional vs. situational) (e.g., Weiner, 2006). Specifically, individuals evaluate themselves as both competent and warm (i.e., ingroup favoritism), and individuals evaluate others whether their outcomes (positive or negative) are from individuals' internal characteristics or from external influences from the environment.

First, individuals have *admiration* and pride when the target person seems to be competent and warm. In this case, individuals feel positive about the success of the target because the individuals assimilate themselves to the target. Second, individuals have *contempt* and disgust when the target person seems to be incompetent and cold. These negative emotions are caused by the target's negative outcomes (e.g., poverty), which are attributed to internal and controllable individual causes. Third, individuals have *envy* when the target person seems to be competent but cold. The target's positive outcomes (e.g., success) are attributed to external and situational causes when the individuals fail to earn the same (desired) outcome. Lastly, individuals have *pity* when the target person seems to be incompetent but warm. The target's negative outcomes (e.g., physical disability) are attributed to external causes, so the individuals evaluate the target as not being able to control the negative outcomes (Cuddy et al., 2007; Cuddy et al., 2008; Fiske et al., 2002).

Measurement and Result. A series of studies were conducted to test (1) two primary dimensions of stereotype contents, and (2) the correlations between stereotype contents and emotions (see Cuddy et al., 2008; Fiske et al., 2002 for details). First, Fiske and colleagues (2002) tested the centrality of warmth and competence as dimensions of stereotypes, and the prevalence of ambivalent stereotypes. Participants were asked to answer in, "as view by society, how [competent/warm] are members of this group?" and rated 23 different societal groups (e.g., rich people, Asians, Black professionals, elderly people etc.) on 5-point scales (e.g., 1 = not at all to 5 = extremely) reflecting the level of perceived competence and warmth. For results, cluster analyses show that both warmth and competence consistently emerge as core dimensions of social perception across both the 10 US samples and cross-cultural studies (Cuddy et al., 2008; Fiske et al., 2002).

Second, to test the correlations between stereotype contents and emotions, participants rated the 24 societal groups on 24 emotions items (i.e., Cuddy et al., 2007 asked 8 emotions; Fiske et al., 2002 asked 24 emotions). Using a 5-point scale (e.g., 1 = not at all, 5 = extremely), participants were asked, "as viewed by society, does [group name (e.g., poor people)] make your group feel [emotions (e.g., contempt)]?" Example emotion items included admiration (admiring, inspired, proud, respectful), contempt (contemptuous, disgusted, hateful, resentful), envy (envious, jealous), and pity (pity, sympathy). For results, factor analyses yield four factors consistently across groups: admiration (admiring, fond, inspired, proud, respectful; $\alpha = .86$; for Cuddy et al., 2007, $\alpha = .80$), contempt (angry, ashamed, contemptuous, disgusted, frustrated, hateful, resentful, uneasy; $\alpha = .93$; for Cuddy et al., 2007, $\alpha = .60$), envy (envious, jealous; $\alpha = .89$; for

Cuddy et al., 2007, α = .82), and pity (pity, sympathetic; α = .92; for Cuddy et al., 2007, α = .71). As predicted, emotion scores are significantly different within all clusters.

In sum, the warmth and competence dimensions have consistently appeared across various target groups (e.g., nationalities, occupations, ethnicities, gender subtypes, and socioeconomic groups) in studies with diverse samples (i.e., US samples, 17 other nations). Also, the high competence and high warmth cluster (e.g., middle class) elicit admiration, and the high competence and low warmth cluster (e.g., professionals) elicit envy, the high warmth and low competence cluster (e.g., disabled people) elicit pity, and the low competence and low warmth cluster (e.g., homeless people) elicit contempt (Cuddy et al., 2008; Fiske et al., 2002).

As the SCM and the BIAS map reveal how stereotypes lead to distinct emotional reactions, I first theorize the relationship among physical attractiveness, perceived competence and warmth, and emotional reactions. As stated previously, I predict that physical attractiveness will be positively related to the perceived competence of the target employee (Hypothesis 1). Since both competence and warmth are two primary dimensions of stereotype contents, I predict that the perceived competence will be significantly related to distinct emotional reactions, but that this relationship will be influenced by the perceived level of the target's warmth.

I predict that physical attractiveness will not be strongly related to perceived warmth, whereas it will be strongly positively related to perceived competence in a competitive workplace context. First, Fiske and colleagues (2002) suggest that stereotypes are often a mix of both positive and negative traits as ambivalent stereotypes, so many people are perceived to be high on competence but low on warmth, and vice versa. Also, these

mixed perceptions are confirmed through the target's behavior, so perceivers become more attuned to confirming the mixed perceptions through gathering and remembering information reflecting their prior stereotypes (Cuddy, Glick, & Beninger, 2011).

Since physical attractiveness has a strong relationship with competence (Eagly et al., 1991; Hosoda et al., 2003; Langlois et al., 2000), it is less likely to be related to warmth. To show this, the benefits of physical attractiveness in the workplace have been supported by a number of management studies (e.g., Judge et al., 2009), and many cases of occupational success for attractive people confirm the positive relationship between attractiveness and competence. On the other hand, attractive people are perceived to hold relatively cold personality traits, such as being selfish, narcissistic, and materialistic (Dermer & Thiel, 1975; Eagly et al., 1991; Feingold, 1992; Holtzman & Strube, 2010). Moreover, perceived warmth is more easily lost yet more difficult to regain compared to perceived competence. For example, one negative behavior (e.g., unethical and self-interested act) has more influence than positive behaviors when judging warmth, and vice versa. Perceived competence from physical attractiveness may not be changed easily (i.e., individual characteristics), and one's competence is only confirmed by his/her achievements. Also, warmth behavior can indicate a warm disposition but also a manipulative ingratiation, so one helping behavior may be evaluated as impression management rather than genuinely warm behavior. Thus, once a person is perceived to be low warmth, it is extremely difficult to reestablish perceived warmth even though the person shows apparently warm behaviors (Cuddy et al., 2011). Therefore, I propose that physical attractiveness will be strongly related to perceived competence, but not strongly related to perceived warmth.

In sum, I theorize that physical attractiveness will be positively related to the perceived competence, and the perceived competence will have a significant effect on four distinct emotions, depending on the level of perceived warmth. Thus, when the target employee is perceived to be highly competent, low perceived warmth will elicit envy, but high perceived warmth will elicit admiration. On the other hand, when the target employee is perceived to be highly competent, warmth and low competence related emotions (i.e., contempt, pity) will show negative relationships with perceived competence. Stated formally,

Hypothesis 2a: The perceived competence of the target employee will be positively related to admiration, but only when the perceived warmth is high.

Hypothesis 2b: The perceived competence of the target employee will be positively related to envy, but only when the perceived warmth is low.

Hypothesis 2c: The perceived competence of the target employee will be negatively related to pity, but only when the perceived warmth is high.

Hypothesis 2d: The perceived competence of the target employee will be negatively related to contempt, but only when the perceived warmth is low.

Physical Attractiveness and Job Behaviors

I theorize that physical attractiveness will be positively related to the perceived competence, and the perceived competence will be significantly related to four distinct emotions, depending on the level of perceived warmth of the target employee. Combinations of warmth and competence generate distinct emotional reactions, and these emotions and stereotypes predict distinct behaviors (i.e., the Behavior from Intergroup

Affect and Stereotypes (BIAS) map). I predict that four behavioral tendencies of the BIAS map will be reflected in specific job behaviors in the workplace. Hereafter, I review the BIAS map and the study results, and propose four specific job behaviors which reflect four behaviors of the BIAS map. Also, based on the proposed job behaviors, I theorize the relationships among physical attractiveness, two stereotype contents, and job behavioral responses.

The Behaviors from Intergroup Affect and Stereotypes (BIAS) Map

Theoretical Rationale. The BIAS map is built on the SCM, and it proposes that the four combinations of high or low warmth and competence elicit not only four distinct emotions, but also elicit four discrete patterns of behavioral reactions from the stereotype contents. Two behavioral dimensions capture a wide range of intergroup behaviors, and those dimensions are (1) active - passive and (2) facilitation – harm (Cuddy et al., 2007).

The active-passive distinction concerns the intensity of behaviors, so it distinguishes more overt and effortful social behaviors from more subtle types with less effortful social behaviors. Active behaviors are categorized as either *for* or *against* the group, and passive behaviors are categorized as either *with* or *without* the group. Active behaviors are defined as "those that are conducted with directed effort to overtly affect the target group; they act for or against the target group"; on the other hand, passive behaviors are defined as "those that are conducted or experienced with less directed effort but still have repercussions for the out-group; they act with or without the target group" (Cuddy et al., 2007, p. 633; Cuddy et al., 2008, p. 108).

The facilitation-harm distinction concerns the valence of behaviors, so it distinguishes the good (or bad) intentions of social behaviors, so that prosocial and helping behaviors

are facilitations, while antisocial and aggressive behaviors are harms. This distinction can be related to how social behaviors facilitate or hinder others' goals. Facilitation and harm are defined as follows: "facilitation leads to ostensibly favorable outcomes or gains for groups; harm leads to detrimental outcomes or losses for groups" (Cuddy et al., 2007, p. 633; Cuddy et al., 2008, pp. 108 - 109).

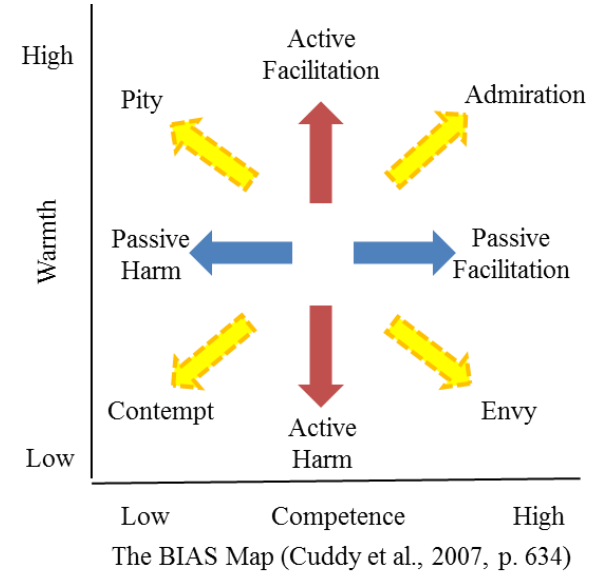
Four discrete patterns of behaviors can be created from two behavioral dimensions: active facilitation, active harm, passive facilitation, and passive harm. First, active facilitation is intended to benefit a target explicitly. Interpersonally, this behavior can be demonstrated as helping, assisting, and defending others (i.e., acting for). Second, active harm is aimed to hurt a target and a target's interest. Individual active harm can be demonstrated as verbal harassment, sexual harassment, bullying, and attacking others (i.e., acting against). Third, passive facilitation is aimed to benefit one's own purpose, but simultaneously benefits a target as a by-product, because passive facilitation limits association or cooperation with a target only at the sense of obligation. The actor does not desire contact with a target, but only tolerates facilitation in the service of other goals (i.e., acting with). Passive facilitation includes behaviors such as tolerating obligatory association in educational, commercial, or professional settings. For example, for a team project, the actor chooses to work with out-group members who are assumed to be smart. Lastly, passive harm is intended to dissociate with a target by diminishing the target's value. Interpersonally, the actor ignores the target, avoids eye contact with the target, and dismisses the target (i.e., acting without) (Cuddy et al., 2007, p. 633, Cuddy et al., 2008, p. 109).

Measurement and Result. To develop scales to measure the behavioral patterns, Cuddy and colleagues (2007) identified 31 items to represent active-passive and facilitation-harm behaviors (e.g., help, avoid, follow, compete with, etc.). Participants rated 23 groups by using a 5-point scale (1 = not at all; 5 = extremely) to respond the question, "how [they] think most Americans behave toward these groups (p.635)." Principal components factor analyses results consistently yielded four similar factors, which formed the scales for behavioral tendencies. The authors chose only two items with the highest average factor loadings: active facilitation (help, protect), active harm (fight, attack), passive facilitation (cooperate with, associate with), and passive harm (exclude, demean) (p. 635). With the behavioral tendencies scales, a series of study was conducted to test combinations of competence-warmth stereotypes, and distinct emotions are related to four patterns of behavioral tendencies. As expected, high warmth groups received more active facilitation, and low warmth groups received more active harm than other groups. Also, high competence groups received more passive facilitation, and low competence groups received more passive harm (Cuddy et al., 2007, pp. 637 - 638)

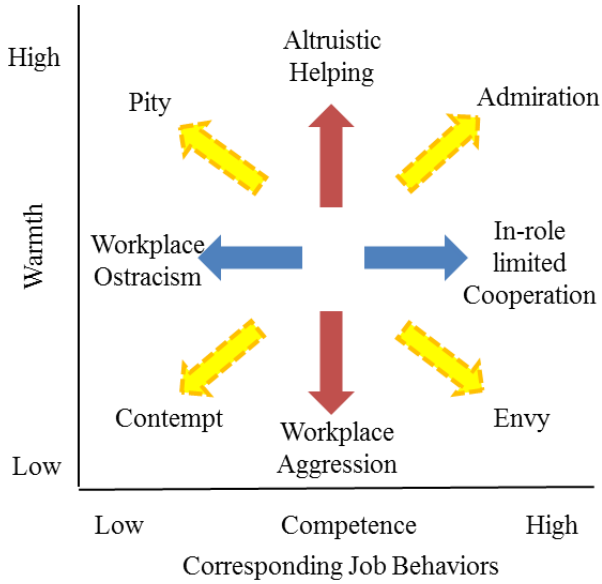
Four Behavioral Tendencies in Job Behaviors

Consistent with the two behavioral dimensions, active – passive and facilitation – harm, I suggest that the four combinations of behavioral tendencies will be demonstrated in job behavior constructs such as: (1) altruistic helping as an organizational citizenship behavior (OCB) (i.e., active facilitation); (2) workplace aggression as a workplace deviance behavior (i.e., active harm); (3) in-role limited cooperation in the workplace (i.e., passive facilitation); and (4) workplace ostracism as an antisocial behavior (i.e., passive harm) (see Figure 2 for corresponding job behaviors to the BIAS map).

Figure 2. Corresponding Job Behaviors to the BIAS map



The BIAS Map (Cuddy et al., 2007, p. 634)



Corresponding Job Behaviors

Altruistic Helping. I propose that active facilitation represents interpersonal helping behaviors in the workplace because both behaviors aim to explicitly and purposely benefit a target. There are overlaps between the definition of active facilitation and OCB in that both of them emphasize the prosocial and helping intentions (i.e., facilitation) which immediately benefit the target (i.e., active). OCB has been studied in many different domains and disciplines, and many different OCB forms have been identified

(see Podsakoff, MacKenzie, Paine, & Bachrach, 2000 for a review). However, for active facilitation, I focus on the individual-level altruistic citizenship behaviors toward a target employee.

Conceptual definitions of altruistic helping in management literatures demonstrate characteristics of active facilitation as follows. First, citizenship behavior includes an altruistic character that is "directly and intentionally aimed at helping a specific person in face-to-face situations" (Smith, Organ, & Near, 1983, p. 657). Similarly, facilitation distinguishes the valence of behavior as prosocial and helping behavior. Second, the defining characteristic of prosocial behavior is that it is "voluntarily and expressively directed toward the benefit of someone else (i.e., a specific person or an impersonally defined group) with no apparent prospect of immediate extrinsic reward to the benefactor" (Organ, 1988, p. 28). Lastly, helping behavior is an important form of citizenship behavior, demonstrating the concept of "voluntarily helping others with work-related problems," which includes altruism, interpersonal helping, and interpersonal facilitation (Podsakoff et al., 2000, pp. 516 - 517). Thus, I propose active facilitation will be presented as altruistic helping behaviors.

Workplace Aggression. I propose that active harm represents mistreatment of a target employee in the form of workplace aggression in interpersonal relations. Negative interpersonal behaviors in the workplace have been studied with numerous constructs such as deviant workplace behavior (Robinson & Bennett, 1995), antisocial behavior (Robinson & O'Leary-Kelly, 1998), bullying (Einarsen, 2000), social undermining (Duffy, Ganster, & Pagon, 2002), workplace victimization (Aquino, Grover, Bradfield, & Allen, 1999) and so on (see Hershcovis, 2011 for a review). However, for active harm, I

limit the construct to workplace aggression because the core dimension of workplace aggression includes overt (and covert) forms of aggression (i.e., active) with intentional attempts to harm others (i.e., harm).

Workplace aggression is defined as "efforts by individuals to harm others with whom they work, or have worked, or the organizations in which they are presently, or were previously employed" (Neuman & Baron, 1998, p. 395). The definition narrows the context to organizations and focuses on organizational insiders, so it fits more with the context of the current study. Following the general understanding of aggression from the literature, all forms of intentional harm-doing in organizations are included as workplace aggression. For example, employees can engage in both covert and overt forms of workplace aggression. Overt aggressions represent high intensity and harmful intentions, so example behaviors include non-fatal physical or sexual assault, property damage, and theft. Covert aggressions seem to have less intensity and less harmful intentions, but Baron and colleagues (1999) suggested that most attempts at harm-doing in work settings tend to be in covert forms of aggression. The actors perform the aggressive behavior to harm the target, but conceal their identity from the intended victim (i.e. the target). In other words, actors have the intention to harm the target employee, while at the same time they want to minimize the danger to themselves. Examples of covert aggressions include spreading damaging rumors, information blocking, and keeping the target from completing tasks (Baron, Neuman, & Geddes, 1999). Both overt and covert forms of aggression behaviors indicate intention to harm (i.e., harm) and directed effort to affect (i.e., active) the target employee. Thus, I propose active harm will be presented as workplace aggression behaviors.

In-Role Limited Cooperation. I propose that passive facilitation represents a type of cooperative behavior, but is very limited in scope for the individual's role in the workplace. Passive facilitation does not intend to benefit the target, but to benefit oneself; yet, the outcome benefits the target simultaneously as a by-product. This is closely related to the perceiver's own role playing in organization because the perceiver contributes to the accomplishment of organizational objectives, which will be shared with other members of organization (i.e., including the target). Specifically, an employee's cooperation will reflect passive facilitation because many organizational tasks demand employees to work together for accomplishing shared goals and maximizing productivity in the organization (Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; Johnson & Johnson, 1989).

Following the definition of passive facilitation (Cuddy et al., 2007), I limit the scope of cooperation behaviors to individuals' designated role in the workplace. Cooperation is a behavioral outcome which is to achieve a shared goal of multiple people, but there can be different motivations and expectations of employees when they cooperate (e.g., desire for success of the task, just to get the work done). For example, helping behavior can be presented as cooperation (e.g., cooperation was measured with OCB items, De Cremer, van Dijke, & Mayer, 2010). Cooperation has been represented as helping and assisting to facilitate the goal achievement of the group (Johnson & Johnson, 1989, p.64). However, helping includes broad motivations, such as from altruistic motivation (e.g., Organ, 1988) to earning extrinsic rewards, or impression management (Bolino, 1999). Passive facilitation includes one's intention behind the behavior, and the intention limits associations with the target only under one's need. Thus, even if there is a cooperating

behavior, passive facilitation limits the motivation of cooperation to complete the task under one's duty.

In-role limited cooperation can broadly include many job-related behaviors in the workplace. For example, to complete tasks efficiently, employees need to share information, communicate effectively, exchange resources, discuss ideas openly, and assist and support each other (Alper, Tjosvold, & Law, 1998; Johnson & Johnson, 1989). All of these behaviors can be presented, but cooperation is only limited as it is needed. Thus, I propose passive facilitation can be demonstrated to be somewhat close to cooperation behavior, but the scope is limited to one's role only. In other words, the perceiver may help the target, but it will happen only when it is required for job performance. Thus, in-role limited cooperation can be defined as a cooperative behavior toward a person that is limited in order to accomplish job demands, with low motivation for helping.

Workplace Ostracism. I propose that passive harm represents mistreatment of a target employee in the form of social exclusion in the workplace. Passive behaviors are conducted with less directed effort and reflect less obvious intention, so, compared to active harm, passive harm demonstrates less intense, avoidant, and distancing behavior toward the target through excluding, ignoring or neglecting behaviors (Cuddy et al., 2007). There are numerous constructs describing mistreatment behaviors, but many of them are not specifically defined in terms of excluding or interacting with the target individuals (Ferris, Brown, Berr, & Lian, 2008). For example, antisocial behavior is characterized by its potential harm to individuals and/or the property of an organization, but it includes a broad range of actions, such as "any behavior that brings harm, or is

intended to bring harm" toward the target (e.g., damaged property belonging to employer, rude things said about one's supervisor) (see a review from Andersson & Pearson, 1999; see antisocial behavior scales from Robinson & O'Leary-Kelly, 1998). However, the workplace ostracism construct is specifically intended to examine the effect of being socially excluded.

Workplace ostracism is defined as "the perception that one is being ignored or excluded," and interchangeably used with *social exclusion*, which includes the similar behavioral experiences of being rejected, excluded, or isolated (Ferris et al., 2008, pp. 1348 - 1350). The ostracism construct has not often been measured as a distinct deviant behavior construct because it has been treated as part of other interpersonal deviance constructs, such as workplace deviance (Bennett & Robinson, 2000), social undermining (Duffy et al., 2002) or workplace incivility (Andersson & Pearson, 1999). However, workplace ostracism is a theoretically distinct concept, and it specifically demonstrates passive harm characteristics, such as ambiguous intention (i.e., passive), *acting without* the target (e.g., excluding, rejecting), and disregarding others (e.g., avoiding eye contacts) (Cuddy et al., 2007; Ferris et al., 2008). Therefore, I propose passive harm will be presented as workplace ostracism.

Based on four proposed job behaviors, I predict that the perceived competence from physical attractiveness will be significantly related to distinct job behaviors, depending on the target employee's perceived warmth. It is suggested that competence information only demands passive behaviors, and the level of perceived competence will decide whether the behavior will be facilitation or harm. The competence dimension of stereotypes is attributed to whether the target has the ability to accomplish his/her goals

regardless of intention (good or bad) toward the perceiver. In the workplace, the perceived competence of the target can signal how the perceiver will make associations with (or without) the target. For example, when they are assigned to work together for a common goal, a high competence target (i.e., capability) can be useful to achieving goals for the perceiver, so s/he will make associations with the target (i.e. acting with). On the other hand, a low competence target (i.e. incapable) will be excluded or shunned, since low competence is no use to the perceiver (i.e., acting without). Thus, in the job behavior terms, high competence will be related to in-role limited cooperation (i.e., not to benefit, but eventually help the target), but low competence will be related to workplace ostracism (i.e., not to severely harm, but still damage the target by exclusion) in the workplace.

On the contrary, it is suggested that the warmth dimension would predict the valence of active behaviors for both facilitative and harmful behaviors. The warmth dimension will predict the goal of a target, so the perceiver will judge whether the goal of the target will be beneficial (e.g., assist the perceiver's project) or harmful (e.g., be a threatening competitor) to the perceiver. Hence, warmth will elicit behaviors in both facilitation and harm, so the perceiver will be helpful to the high warmth target but aggressive to the low warmth target (Cuddy et al., 2008). In the job behavior terms, high warmth stereotypes will be positively related to altruistic helping (i.e. acting for, Cuddy et al., 2008), but lack of warmth will elicit aggressions (i.e., sabotage the target, acting against, Cuddy et al., 2008) in the workplace.

Therefore, I theorize that the perceived competence based on physical attractiveness will have a significant effect on job behaviors, and the perceived warmth of the target

employee will be actively related to both facilitation and harm behaviors. Also, I theorize that the perceived competence of the target employee will be passively related to both facilitation (i.e., in-role limited cooperation) and harm (i.e., workplace ostracism) behaviors. Thus, high warmth will be positively related to both active and passive facilitation behaviors: altruistic helping and in-role limited cooperation. On the other hand, low warmth will be positively related to both active and passive harm behaviors: workplace aggressions and workplace ostracism. Stated formally,

Hypothesis 3a: The perceived competence of the target employee will be positively related to both altruistic helping and in-role limited cooperation, but only when the perceived warmth is high.

Hypothesis 3b: The perceived competence of the target employee will be positively related to both workplace ostracism and workplace aggression, but only when the perceived warmth is low.

Emotions to Job Behaviors

The combination of competence and warmth stereotypes generate four distinct emotions, and these distinct emotions predict behavioral tendencies. Cuddy and colleagues (2007) hypothesized that two emotions will predict each behavioral tendency based on social comparisons, outcome attributions, and cognitive appraisal theories.

First, admiration can lead to both active and passive facilitation because individuals assimilate themselves to the target and feel positive about the target's success. Thus, admiration can motivate contact (i.e., high competence, act for) and cooperation toward the target (i.e. high warmth, act with) in either active or passive ways. Second, envy can

lead to both passive facilitation and active harm because envy involves both resentment (e.g., injustice) and respect feelings (e.g., inferiority) from the out-group's achievement. Thus, envy leads to cooperation that might benefit the perceiver, but at the same time, envy leads to hostile acts against the envied group because the perceiver believes the envied group has the ability (i.e. high competence, act with) to disrupt society when the society is unstable (i.e. low warmth, bad intention, act against). Third, pity can lead to both active facilitation and passive harm because pity comprises both compassion and sadness from appraising the out-group's negative outcome as uncontrollable. Hence, sympathy brings out the need to help (i.e., high warmth, act for), but at the same time, sadness can dissociate the perceiver from the pitied group (i.e., low competence, act without). Lastly, contempt can lead to both active and passive harm because the negative outcomes of the out-group are considered to be controllable. Contempt would be elicited from downward contrastive comparisons, and the perception of the controllable negative outcomes causes the perceiver to despise, exclude (i.e., low competence, act without) and carry out offensive actions (i.e., low warmth, act against) (Cuddy et al., 2007, p. 634 – 635).

Correlations between emotions and behavioral tendencies support the hypotheses. Admired groups are positively related to active facilitation and passive facilitation, and envied groups are positively related to passive facilitation but not significantly related to active harm. High contempt groups are positively related to both active harm and passive harm, and pitied groups are positively related to active facilitation and passive harm (Cuddy et al., 2007, p. 637).

I predict that emotional reactions from the combination of competence and warmth will also be related to specific job behaviors from comparisons of the level of competence and warmth of the target employee. Specifically, if the perceiver believes the target employee has a goal against him/her with either high or low competence (e.g., competing for promotion), the perceiver will distinctly behave in a way to achieve or keep limited resources (i.e., to win the promoting position) in the workplace. On the other hand, if the perceiver believes the target employee's goal is not against him/her (e.g., not in a competing situation), the perceiver will also behave differently to attain resources with (or without) the target employee by his/her level of perceived competence.

First, I predict that admiration can lead to both altruistic and role-limited helping behaviors toward the target employee. For example, when a target employee displays achievement (or potential to achieve) with a beneficial goal for the perceiver, s/he would see the target employee as a role model (i.e. social reference group) or identify with the target employee (i.e. in-group) (Algoe & Haidt, 2009; Schindler, Zink, Windrich, & Menninghaus, 2013). Since the target employee is not perceived to hold a harmful intention, the perceiver will help the target to make positive outcomes, which might be beneficial to the perceiver as well (Schindler et al., 2013, p.102). Thus, the perceiver may voluntarily help the target to achieve positive performance (i.e. act for), or at least collaborate with the target within his/her responsibility (i.e. act with) to make positive outcomes for oneself (e.g., Algoe & Haidt, 2009; admiration motivates self-improvement).

Hypothesis 4a: Admiration will be positively related to both altruistic helping and in-role limited cooperation.

Second, I predict that envy can lead to passive helping behavior, but it also can lead to aggressive behaviors toward the target employee. Envy is an ambivalent feeling which is composed of affective elements that are both positive and negative. For example, admiration is elicited from another's superior achievement that the perceiver does not have (Polman & Ruttan, 2012) and ill will (e.g., harm) toward the superior to remove or destroy the object of envy for equalization of positions (Cohen-Charash, 2009; Cohen-Charash & Mueller, 2007). Envy implies an unpleasant, painful emotion characterized by feeling inferior to others (i.e., lack of warmth), which involves recognition that others have possessions that oneself does not have (e.g., high status – high competence) from upward social comparisons (Smith & Kim, 2007). Thus, the perceiver may associate with the target within one's responsibility because of the expectation of one's own positive outcome (i.e., act with), but, at the same time, the perceiver may become aggressive and interfere (with covert forms – withhold information) or destroy (with overt forms – verbally abusive) the target's accomplishments (i.e. act against) (e.g., Cohen-Charash & Mueller, 2007, counterproductive work behaviors).

Hypothesis 4b: Envy will be positively related to both in-role limited cooperation and workplace aggression.

Third, I predict that pity can lead to altruistic helping, but also lead to workplace ostracism toward the target employee. Pity is elicited from a target who is perceived to be low competent but not competitive (i.e. high warmth) to the perceiver. For example, when a target employee fails to achieve a positive outcome but not in a competitive situation (e.g., lower rank promotion than the perceiver), the perceiver may sympathetically view the target employee's failure as unfortunate (e.g., it was highly

competitive, so the target couldn't control the situation). However, at the same time, the perceiver may want to keep a distance from the target employee since the failure is attributed to the lack of ability of the target employee (e.g., Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003, helping and rejecting responses from a causal attribution). Therefore, the perceiver may voluntarily help the target (i.e., act for) because the target is not a threat to the perceiver's own success, but still want to dissociate from the target (i.e., act without) because the target is not helpful to the perceiver.

Hypothesis 4c: Pity will be positively related to both altruistic helping and workplace ostracism.

Lastly, I predict that contempt will lead both aggressive and social exclusion behaviors to the target employee. When a target employee is perceived to have low ability (i.e., low competence) but to be an adversary (i.e. low warmth), the perceiver feels contempt for the target. For instance, in the case of a promotion evaluation, the perceiver may want to harm the target employee since s/he is a competitor for the given evaluation (i.e., act against: e.g., Mackie, Devos, & Smith, 2000 study 3). However, if the target employee does not have high ability, the perceiver may ignore and reject the target (i.e., act without: e.g., Fischer & Roseman, 2007) because the target is not a threat and the target's capability is not beneficial by any means to the perceiver (e.g., Ufkes, Otten, van der Zee, Giebels, & Dovidio, 2012). Thus, the perceiver may choose to be overtly and covertly aggressive to prevent any chance of losing the competition, but at the same time, want to keep a distance, make demeaning remarks, and exclude the target from professional companionship.

Hypothesis 4d: Contempt will be positively related to both workplace aggression and workplace ostracism.

Summary of Proposed Model

I reviewed past research on the physical attractiveness stereotype and theorized a positive effect of physical attractiveness on perceived competence (Hypothesis 1). Also, based on the SCM and the BIAS map, I predicted that perceived competence will be related to distinct four emotional (Hypothesis 2) and job behavioral reactions (Hypothesis 3), depending on perceived warmth. I also hypothesized a relationship between emotional reactions to job behaviors (Hypothesis 4). I used a laboratory experiment and a field study to test the proposed model.

Chapter 3: Method and Results

The purpose of the current research is to show that physical attractiveness can elicit negative emotional/behavioral reactions based on the perceived warmth and competence of a target in the workplace. Two separate studies tested the proposed hypotheses: 1) a laboratory experiment was conducted to test how the target (i.e., confederates) would be evaluated by study participants (i.e., assumed to be the target's coworkers); and 2) a field study was developed to assess how the perceiver (i.e., the coworkers of participants) would evaluate the target (i.e., participants) in a business context.

For the laboratory experiment, the following variables were manipulated: target's gender (i.e., male vs. female), physical attractiveness (i.e., high vs. low), and warmth (i.e., high vs. low). I did not hypothesize a gender effect on attractiveness, but I manipulated the target's gender to examine how gender influences the relationship between physical attractiveness and perceived competence. Meta-analyses support the result that physical attractiveness benefits for both men and women (Eagly et al., 1991; Hosoda et al., 2003; Langlois et al., 2000), but the "beauty is beastly" effect suggests that attractive females are perceived to be less competent for male-typed jobs (Heilman, 1983; Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985a; 1985b). However, a relatively neutral job type (e.g., marketing manager, Johnson, Podratz, Dipboye, & Gibbons, 2010) may not elicit a more negative effect of attractiveness for women than for men. Thus, the current study treats gender as an exploratory variable and tests the gender effect on physical attractiveness and perceived competence[3]. To conduct the experiment, I hired

[3] The perceiver's gender might influence the emotional or behavioral reactions to the target. However, it has been found that a rater's gender is similarly influenced by the target's gender or attractiveness

confederates who played the target employee role and manipulated each condition. After the laboratory experiment, a field study was conducted to test the proposed model.

Study 1 –Laboratory Experiment

A laboratory experiment tested how the target would be evaluated by the perceivers. The study participants were the perceivers, and each participant evaluated the target (i.e., confederate), who was assumed to be the participant's coworker.

Confederate Selection

The current study required at least two confederates (i.e., one male and one female) who played their roles through video recordings. I sent a recruitment notice to the theatre arts department of the University of Minnesota for the study. I chose theatre arts students for the potential confederates because of their ability to perform role playing more naturally for the video recording, and for their experience with disguise and make-up.

First, I sent an email indicating that the study would need two male and two female students to record video clips for an experiment because I wanted to manipulate high and low attractiveness, which would be reflected in the four different actors. I received application e-mails from theatre art students who wanted to participate for the casting, and sent them an e-mail instruction with detailed information.

To be selected, each applicant had a screen test, which required taking photos (head to shoulder and full-length body) and recording a short video clip at a designated place and time. For the screen test, I asked the applicants to wear business casual attire. I only included Caucasian applicants to control for race in the study. Ten people applied for the

(Langlois, et al., 2000). Thus, I do not propose the perceiver's gender effect, but I will also explore the perceiver's gender effect and discuss it in the results section.

casting but only eight people (i.e. six female and two male) showed up. After taking two photos, they read a short script for the video clip recording (see manipulations section for the whole script). After the screen test, participants filled out a short survey questionnaire which asked about demographic information including age and work experience. Due to the lack of male participants, I posted a casting call at a professional modeling website (Model Mayhem: www.modelmayhem.com). It was difficult to recruit professional models for a non-paying screen test at the university, so I asked them to send their profile photos in business casual attire. Only one applicant contacted and sent his profile photos, so I used those materials to evaluate the level of physical attractiveness for that applicant.

In order to gain an objective view on physical attractiveness, third party raters evaluated the level of physical attractiveness of potential confederates. Raters with various backgrounds (i.e., race, gender, nationality) rated the level of physical attractiveness. Ten raters observed two photos and video clips of each applicant (with the exception of the applicant for whom only photos were available) and responded to one item: "How physically attractive is this individual?" (1 = not attractive to 7 = very attractive). I selected four applicants, two of whom (one male, one female) were rated with high consensus as high on attractiveness and two (one male, one female) of whom were rated with high consensus as low on attractiveness (ICC (1) = .49, ICC (2) = .91). For the male applicants, the mean attractiveness rating was 5.90 (s.d. = .80) for the high attractiveness applicant and 3.20 (s.d. = 1.03) for the low attractiveness applicant, and the difference in attractiveness between the two was significant ($t = 9.75$, $p < .01$). For the female applicants, the mean attractiveness rating for the high attractiveness individual

was 5.80 (s.d. = .92) and 3.70 (s.d. = 1.16) for the low attractiveness individual, and the difference in attractiveness between the two was significant ($t = 7.23$, $p < .01$).

I reserved a study room with an office setting, and had all four selected confederates record video clips in the same place. To add more variance in attractiveness across conditions, I asked all four confederates to use extra make-up and disguises to exaggerate high and low physical attractiveness. Therefore, all four selected confederates recorded video clips for four conditions (Physical attractiveness: high vs. low × Warmth: high vs. low) for the experiment. Upon completion of the video recording, each confederate received $100.

Even though I had recorded video clips with all four selected confederates, I used video clips recorded by only one male and one female confederate for four conditions. With four actors and extra disguises, I could add more variance in attractiveness across conditions, but I could not control other factors which could influence the perception on physical attractiveness (e.g., voice quality, Hall & Friedman, 1999).

Therefore, I chose only high attractive male and female confederates' video clips for the experiment because I would not be able to get high ratings on physical attractiveness with low attractive confederates. To test the level of attractiveness across gender, I tested the mean difference between the male high attractiveness and the female high attractiveness individuals, and they were similarly attractive ($t = -.34$, *n.s.*).

Participants and Design

I recruited 170 participants from the university subject pool, which is open to all members of the university community. The sample was 60% female, 57.1% White, 32.9% Asian, 2.4% Black, and 2.9% Hispanic (2.4% reported other ethnicities). The

average age was 25.54 years (*s.d.* = 10.13) and the average work experience was 5.39 years (*s.d.* = 7.94). Participants were randomly assigned to the conditions of a 2 (physical attractiveness: high vs. low) × 2 (gender: male vs. female) × 2 (warmth: high vs. low) between-subjects design. Participants received $10, and the laboratory study took about 20 minutes to complete.

Procedure

When participants arrived at the laboratory, the experimenter disclosed that they would be participating in a study to investigate individual characteristics and interpersonal relationships. Once participants agreed to join the study, the experimenter escorted participants to a workstation. When participants received the study description, the experimenter explained that they would be asked to assume the role of a HR manager at a large multinational corporation, and there would be two tasks. After the instruction, the experimenter presented a video request and asked them to watch a full video clip lasting about a minute.

The video clip included a common conversation topic in the workplace. Participants assumed the HR manager role at a multinational company, and the confederates played the role of a marketing manager (i.e., gender-neutral job type, Johnson et al., 2010). The scenario for the experiment indicated that the company was launching a new product line initiative, so it would be natural for the marketing manager (confederate) to send a request to the HR manager (participants) indicating that new employees were needed (see Appendix A for the study description). The script for the video request is as follows:

> *Hi, this is [Sarah/Matthew Anderson] from the marketing department.*
> *I have a request related to our new health care product line launching in Ohio.*

We're expanding our market for this new product line, so we need to add more employees in the marketing department. We've opened three positions for new employees, and they'll be working on market research and promotion for this new health care product line. We're looking for candidates with a specific expertise, people who'll provide support and long-term commitment to this initiative. I'll send you the detailed job descriptions and employee requirements for those positions by noon tomorrow. The interviews and selection must be completed in 4 weeks for all three positions. My deadline is to have the new employees by the end of next month because all of them should be ready and on board in 6 weeks. So, if you can set up their interviews by the end of this month that'll be really great. I've enclosed a file containing the resumes of 50 of the applicants for these new positions. If you have spare time, could you file them in alphabetical order by their last names? It's not urgent, so you don't need to do it now or finish sorting them at all.

Thank you for your cooperation.

At the end of the video clip, the actor asked the viewer (i.e., participant) to complete a file sorting task. After watching the video clip, the experimenter brought the file including 50 fictitious resumes to participants. The experimenter explained that the file sorting task was from his/her coworker in the video, and asked the participants to sort the fictitious resumes in alphabetical order by last name. All 50 fictitious resumes included fictitious applicants' information who were applying for the marketing position referred to in the video clip. The experimenter explained to participants that the filing task was of a voluntary nature and would help his/her coworker in the video, so they were not obligated to start the task and could stop whenever they wanted. After the file sorting task, participants received a note from the HR director and a performance appraisal sheet

they used to evaluate the person in the video clip as a coworker (see Appendix A for example evaluation packet materials).

Manipulations

Physical Attractiveness, Warmth, and Target Gender. I selected four confederates (i.e., two male and two female), who played the role of the target, and had each record four different video clips in order to meet the 2 (physical attractiveness: high vs. low) × 2 (the level of warmth: high vs. low) conditions. However, I chose only one male and one female's video clips for the experiment to control for voice and height. Clothing can be a component of one's physical attractiveness (i.e., fluctuating component, Brown et al., 1986), so I used clothing and grooming to manipulate the level of physical attractiveness. For the attractive condition, actors used make-up and tidy clothes. For the unattractive condition, actors used skin rashes, teeth stain, untidy looking wigs, glasses, and shabby clothes. Confederates used common White names, Sarah and Matthew, which have been used in prior research (Leslie, Manchester, Park, & Mehng, 2012).

To manipulate warmth, the confederates read through a script displayed on a projector as they played their role. After enough practice, I recorded at least 10 takes for each warm and cold condition. For the warmth condition, confederates played their roles with a friendly and kind manner (i.e., open gestures with smiles) with a high tone and regular speech speed. For the cold condition, confederates played their roles with no gestures (i.e., closed position) and no facial expressions with a low tone and high speed speech (see Picture 1 & 2).

Picture 1. Female Condition: From the right top picture clockwise (1) high attractiveness and high warmth; (2) high attractiveness and low warmth; (3) low attractiveness and low warmth; (4) low attractiveness and high warmth condition

Picture 2. Male Condition: From the right top picture clockwise (1) high attractiveness and high warmth; (2) high attractiveness and low warmth; (3) low attractiveness and low warmth; (4) low attractiveness and high warmth condition

Measurement

Competence. After watching the video clip, participants indicated their perceptions of the target's competence. I used five competence items (α = .85 adapted from Cuddy et al., 2007 and Fiske et al., 2002) on the performance appraisal form (Grote, 1996). All items began with the same stem: "What do you think about the coworker?" An example item is, "How (competent) is s/he?" Competence traits included *competent, confident, independent, competitive,* and *intelligent* (5-point Likert scale: 1 = Not at all to 5= Extremely). I conducted one-factor confirmatory factor analysis with 5 items. The results showed that overall the model fit the data, so I averaged all items for further analysis (χ^2 (5) = 46.89, CFI = .89, RMSEA = .22; SRMR = .06).

Emotions. Participants rated 24 emotion items (Fiske et al., 2002) on the coworker performance appraisal form. All items began with the same stem: "How do you feel about the coworker?" A sample item is, "I am [envious] of him/her. (5-point Likert scale: 1 = never to 5 = fairly often)" (see Appendix B for all emotions). Following Fiske and colleagues (2002) measure, I conducted four-factor confirmatory factor analysis with 16 items. *Admiration* included *admire, fond, inspired, proud,* and *respectful* (α = .87). *Envy* included *envy* and *jealousy* (α = .62). *Pity* included *pity* and *sympathetic* (α = .43). *Contempt* included *angry, ashamed, contemptuous, disgusted, frustrated, resent,* and *uneasy* (α = .87). The results showed that overall the model fit reasonably well (χ^2 (98) = 192.87, CFI = .92, RMSEA = .08; SRMR = .09). Thus, I combined all items for each emotion and averaged them for further analysis.

Job Behaviors. To measure helping and harming intentions, four job behavior constructs measured the participants' behavioral intentions toward the target. I used a

coworker evaluation context, so all questions were categorized under coworker relationship in the coworker performance appraisal form. All four job behavior items began with the same stem, "While working with him/her…" but the subject of items were referred accordingly. Also, the verb of all job behaviors were in the subjunctive, so the participants could rate their behavioral intentions without real work experience with the target.

First, participants rated five items for altruistic helping measure (α = .93; adapted from Podsakoff, MacKenzie, Moorman, & Fetter, 1990). An example item is, "I would be likely to help him/her when s/he has heavy workloads." Second, participants rated five items for in-role limited cooperation (α = .93; adapted from Alper et al., 1998). All items were modified from Alper and colleagues' (1998) examples of cooperative behaviors. An example item is, "I would be likely to communicate with him/her only when it is needed for the task." Third, for workplace aggression (α = .81; adapted from Baron, Neuman, & Geddes, 1999), I selected and modified six items (i.e., three overt and three covert aggressions) from Baron and colleague's study for the measurement. An example item is, "would you be likely to physically or verbally attack him/her (e.g., shoving, insulting)?" Lastly, participants rated five items for workplace ostracism (α = .94; adapted from Ferris, Brown, Berry, & Lian, 2008). An example item is, "would you be likely to refuse to talk to him/her at work?" All items had a 7-point scale ranging from 1 = Not at all to 7 = Extremely (see Appendix B for all job behavior measures). I conducted four-factor confirmatory factor analysis with all 21 items. The results showed that overall the model fit reasonably well (χ^2 (183) = 395.55, CFI = .93, RMSEA = .08; SRMR = .05), so I combined all items for each behavior and averaged them for further analysis.

Manipulation Checks. After the performance evaluation on the target, the experimenter brought a follow-up survey questionnaire including manipulation check and demographic background. Participants recalled the target from the video clip and indicated the target's name, gender, level of attractiveness, and warmth. Participants rated one item for the level of physical attractiveness. The item is, "How physically attractive was the person in the video clip? (1 = very unattractive to 7 = very attractive). For warmth measure, participants rated five items adapted from Cuddy and colleagues (2007) study with 7-point scale ranging from 1 = Not at all to 7 = Extremely. An example item is, "How warm was the person in the video clip?" Warmth traits included *warm, friendly, good natured, sincere,* and *trustworthy* ($\alpha = .89$). Finally, participants answered several demographic questions including gender, age, race, and work experience. I conducted one-factor confirmatory factor analysis with 5 items. The results showed that overall the model fit the data, so I averaged all items for further analysis (χ^2 (5) = 89.12, CFI = .86, RMSEA = .32; SRMR = .09).

To have a helping behavior measure, I used a file sorting task to measure voluntary helping behavior in an office setting. Participants were asked to sort 50 fictitious resumes into a new file folder in an alphabetical order by their last names in resumes. The experimenter clarified the task as a non-obligatory aid to their coworker from the video clip, so participants could decide how much time and effort they would spend on the file sorting task. Participants received two different file folders for the task. Each folder designated on the front whether it contained sorted resumes or unsorted resumes. Participants put sorted resumes into the designated file folders accordingly. The

experimenter counted the total number of resumes in the sorted file folder after participants left the workstation.

Results – Study 1

Manipulation Check

Participants accurately recalled the target's gender ($\chi^2 = 168.00$, $p < .01$). Also, participants perceived both manipulation conditions consistently as designed. The level of physical attractiveness was higher in the high attractiveness condition (mean = 4.65) than the low attractiveness condition (mean = 2.38, $t = 12.60$, $p < .01$), and the level of perceived warmth was higher in the high warmth condition (mean = 5.13) than the low warmth condition (mean = 3.28, $t = 10.87$, $p < .01$). Table 1 shows the descriptive statistics and correlations among all of the study variables.

Regression Results

I tested all Hypotheses (Hypotheses 1, 2, 3, and 4) by using linear regression (see Table 2, 3, & 4). In the first step, I entered control variables (i.e., participant gender and manipulated gender). In the second step, I entered manipulated physical attractiveness, manipulated warmth, and perceived competence. In the third step, I entered the interaction between perceived competence and warmth. In the fourth step, I entered the four emotions.

Hypothesis 1 states that physical attractiveness will be positively related to the perceived competence of the target employee. In support of Hypothesis 1, the perceived competence coefficient was significant ($b = .53$, $p < .01$), and indicated that a physically

attractive target was perceived as more competent than the target in physically unattractive condition (see Table 2).

Hypothesis 2 states that the perceived competence of the target employee will be positively related to (a) admiration and (b) envy, but negatively related to (c) pity and (d) contempt, contingent on the level of perceived warmth. Perceived competence was positively related to admiration (b = .45, p < .01) and partially positively related to envy (b = .11, p < .10), but negatively related to pity (b = -.20, p < .05) and contempt (b = -.20, p < .05). The interaction between perceived competence and manipulated warmth was significantly related to admiration (b = .24, p < .05). However, it was not significantly related to envy (b = -.02, *n.s.*), pity (b = -.02, *n.s.*), and contempt (b = .00, *n.s.*) (see Table 2).

For the significant interaction, I assessed the significance of the simple slopes for perceived competence on admiration at the high and low level of manipulated warmth (0 and 1) (Aiken & West, 1991). Hypothesis 2a states that the perceived competence of the target employee will be positively related to admiration, but only when the perceived warmth is high. I took the coefficient for the perceived competence (b = .45) and added the product of the coefficient for the manipulated warmth (b = -.77) and the interaction between perceived competence and manipulated warmth (b = .24) and the high warmth value (1). The resulting simple slope was significant (b = .68, t = 8.29, p < .01). The simple slope for the low warmth value (0) was also significant (b = .45, t = 6.31, p < .01), but the significant interaction indicates that the effect is stronger when warmth was high. Thus, Hypothesis 2a was supported (See Figure 3). Therefore, Hypothesis 2a was supported, but Hypotheses 2b, 2c, and 2d were not supported.

Hypothesis 3 states that the perceived competence of the target employee will be positively related to (a) both active and passive helping behaviors and negatively related to (b) both active and passive harming behaviors, but only when perceived warmth is high. Perceived competence was positively related to altruistic helping (b = .47, p < .01), and negatively related to in-role limited cooperation (b = -.43, p < .01), workplace aggression (b = -.26, p < .01), and workplace ostracism (b = -.35, p < .01). The interaction between perceived competence and manipulated warmth was marginally significant for in-role limited cooperation (b = .43, p =.05), but it was not significantly related to altruistic helping (b = .10, *n.s.*) and both harming behaviors (Workplace aggression: b = .10, *n.s.*; Workplace ostracism: b = .15, *n.s.*) (see Table 3).

I tested the simple slopes for the marginal interaction. Hypothesis 3a states that the perceived competence of the target employee will be positively related to in-role limited cooperation, but only when the perceived warmth is high. I tested the simple slope for perceived competence at the high and low warmth conditions (0 and 1). I took the coefficient for the perceived competence (b = -.43) and added the product of the coefficient for manipulated warmth (b = -2.12) and the interaction between perceived competence and manipulated warmth (b = .43) for the high warmth value (1). The resulting simple slope was not significant (b = .00, t = .01, *n.s.*). On the other hand, the simple slope for the low warmth (0) was significant (b = -.43, t = -3.01, p < .01). The result indicates that perceived competence will be negatively related to in-role limited cooperation when warmth is low. Thus, Hypothesis 3a was partially supported (see Figure 4).

Hypothesis 4 states that emotions will be related to job behaviors. First, Hypothesis 4a states that admiration will be positively related to both altruistic helping and in-role limited cooperation. Admiration was positively related to altruistic helping (b = .37, p < .01), but negatively related to in-role limited cooperation (b = -.40, p < .05). Hypothesis 4b states that envy will be positively related to both in-role limited cooperation and workplace aggression. In support of Hypothesis 4b, envy was significantly positively related to both in-role limited cooperation (b = .52, p < .01) and workplace aggression (b = .63, p < .01). Hypothesis 4c states that pity will be positively related to both altruistic helping and workplace ostracism. In support of Hypothesis 4c, pity was significantly positively related to both altruistic helping (b = .24, p < .05) and workplace ostracism (b = .31, p < .01). Hypothesis 4d states that contempt will be positively related to both workplace aggression and workplace ostracism. In support of Hypothesis 4d, contempt was significantly positively related to both workplace aggression (b = .65, p < .01) and workplace ostracism (b = 1.03, p < .01). Thus, Hypotheses 4b, 4c, and 4d were supported, and Hypothesis 4a was partially supported (see Table 4).

As an exploratory analysis, I tested predictors of voluntary helping behavior, measured through the file sorting activity, but it was not significantly related to manipulated physical attractiveness (b = -.03, *n.s.*), perceived competence (b = .04, *n.s.*), manipulated warmth (b = .10, *n.s.*), and the interaction between perceived competence and manipulated warmth (b = -.01, *n.s.*) (see Table 3).

Table 1. Descriptive Statistics for Study 1 Variables

Variable	Mean	s.d.	1	2	3	4	5	6	7
1. Participant Gender	.60	.49	--						
2. Manipulated Target Gender	.51	.50	.06	--					
3. Manipulated Physical Attractiveness	.51	.50	-.13	.00	--				
4. Manipulated Warmth	.50	.50	-.01	.00	-.01	--			
5. Perceived Competence	4.64	1.11	.07	**.34 ****	**.23 ****	-.04	(.73)		
6. Admiration	2.42	.95	-.01	.13	**.19 ***	.14	**.61 ****	(.87)	
7. Envy	1.40	.60	-.05	.05	.15	-.06	**.19 ***	**.35 ****	(.62)
8. Pity	1.92	.84	-.10	**-.17 ***	.02	-.08	**-.28 ****	.02	**.24 ****
9. Contempt	1.66	.72	**-.16 ***	-.05	.05	-.11	**-.27 ****	**-.15 ***	**.30 ****
10. Voluntary Helping Behavior	.77	.33	.10	.07	-.03	.09	.13	.10	-.01
11. Altruistic Helping	4.47	1.33	**.19 ***	.09	-.08	**.18 ***	**.37 ****	**.40 ****	-.02
12. In-role Limited Cooperation	3.86	1.51	-.05	**-.15 ***	**.17 ***	-.05	**-.17 ***	**-.21 ****	**.19 ***
13. Workplace Aggression	1.56	.79	-.06	.07	.03	-.13	**-.23 ****	-.06	**.43 ****
14. Workplace Ostracism	1.73	1.16	-.06	-.05	-.08	-.13	**-.26 ****	**-.26 ****	.15

Notes: n = 170; Participant gender: 1 = female, 0 = male; Manipulated target gender: 1 = female, 0 = male;
**p* < .05, ***p* < .01 (2-tailed).

Table 1. Descriptive Statistics for Study 1 Variables (Cont.)

Variable	8	9	10	11	12	13	14
1. Participant Gender							
2. Manipulated Target Gender							
3. Manipulated Physical Attractiveness							
4. Manipulated Warmth							
5. Perceived Competence							
6. Admiration							
7. Envy							
8. Pity	(.43)						
9. Contempt	**.47 ****	(.87)					
10. Voluntary Helping Behavior	.05	-.10	--				
11. Altruistic Helping	-.01	**-.29 ****	**.30 ****	(.85)			
12. In-role Limited Cooperation	.09	**.35 ****	-.06	**-.38****	(.93)		
13. Workplace Aggression	**.37 ****	**.63 ****	-.10	**-.21****	**.28 ****	(.93)	
14. Workplace Ostracism	**.29 ****	**.65 ****	-.12	**-.29****	**.30 ****	**.65 ****	(.81)

Notes: n = 170; Participant gender: 1 = female, 0 = male; Manipulated target gender: 1 = female, 0 = male;
*$p < .05$, **$p < .01$ (2-tailed).

Table 2. Regression Results for Hypotheses 1 & 2 - Study 1

Variables	Perceived Competence		Emotions							
			Admiration		Envy		Pity		Contempt	
	b	β	*b*	β	*b*	β	*b*	β	*b*	β
Step 1										
Participant Gender (1 = female, 0 = male)	.19	.08	-.09	-.05	-.06	-.05	-.12	-.07	-.18	-.13 †
Manipulated Gender (1 = female, 0 = male)	.75	.34 **	-.09	-.05	-.02	-.02	-.15	-.09	.06	.04
Step 2										
Manipulated Physical Attractiveness	.53	.24 **	.09	.05	.12	.10	.14	.08	.18	.12
Perceived Competence			.45	.52 **	.11	.20 †	-.20	-.26 *	-.20	-.31 *
Manipulated Warmth			-.77	-.41	.02	.02	-.06	-.03	-.17	-.12
Step 3										
Perceived Competence × Manipulated Warmth			.24	.60 *	-.02	-.06	-.02	-.06	.00	.01
R^2_{step1}	.12 **		.02		.01		.04 *		.03 †	
ΔR^2_{step2}	.06 **		.39 **		.05 †		.07 **		.09 **	
ΔR^2_{step3}			.02 *		.00		.00		.00	
R^2_{model}	.18 **		.43 **		.06		.11 **		.12 **	

Note: n = 170, † p <.10, * p <.05, ** p <.01.

Table 3. Regression Results for Hypotheses 3 - Study 1

Variables	Altruistic Helping		In-role limited Cooperation		Workplace Aggression		Workplace Ostracism		Helping Behaviors	
	b	β	*b*	β	*b*	β	*b*	β	*b*	β
Step 1										
Participant Gender (1 = female, 0 = male)	.40	.15 *	-.03	-.01	-.06	-.04	-.12	-.05	.05	.08
Manipulated Gender (1 = female, 0 = male)	-.16	-.06	-.16	-.05	.28	.18 *	.13	.05	.01	.02
Step 2										
Manipulated Physical Attractiveness	-.41	-.15 *	.65	.22 *	.18	.12	-.03	-.01	-.03	-.05
Perceived Competence	.47	.39 **	-.43	-.31 *	-.26	-.36 **	-.35	-.33 **	.04	.15
Manipulated Warmth	.08	.03	-2.12	-.70	-.67	-.43	-1.02	-.44	.10	.16
Step 3										
Perceived Competence × Manipulated Warmth	.10	.18	.43	.68 †	.10	.31	.15	.32	-.01	-.05
R^2_{step1}	.04 *		.02		.01		.01		.01	
ΔR^2_{step2}	.19 **		.06 *		.09 **		.08 **		.03	
ΔR^2_{step3}	.00		.02 †		.00		.01		.00	
R^2_{model}	.23 **		.10 **		.10 **		.09 *		.04	

Note: n = 170, † p <.10, * p <.05, ** p <.01.

Figure 3. Simple slope test for Hypothesis 2a – Study 1

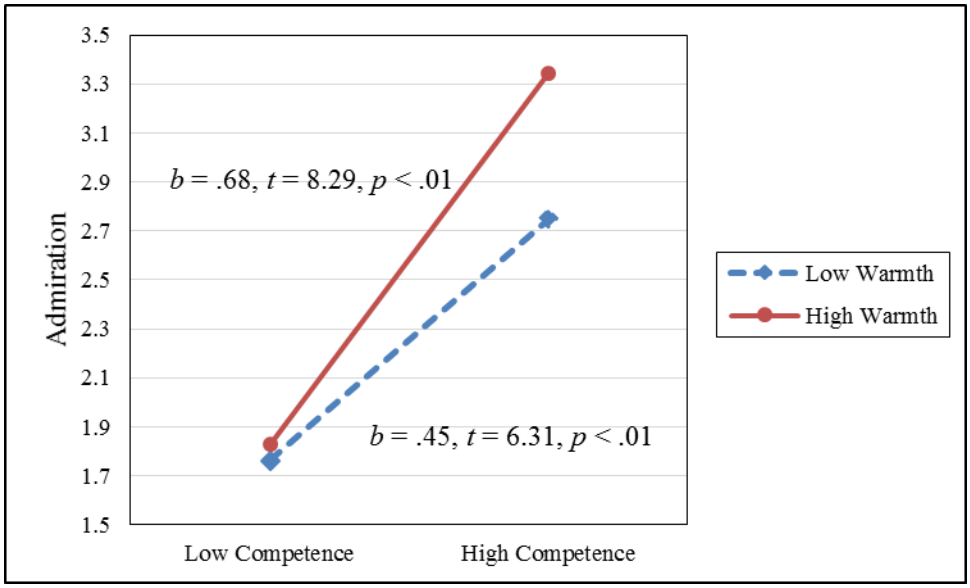


Figure 4. Simple slope test for Hypothesis 3a – Study 1

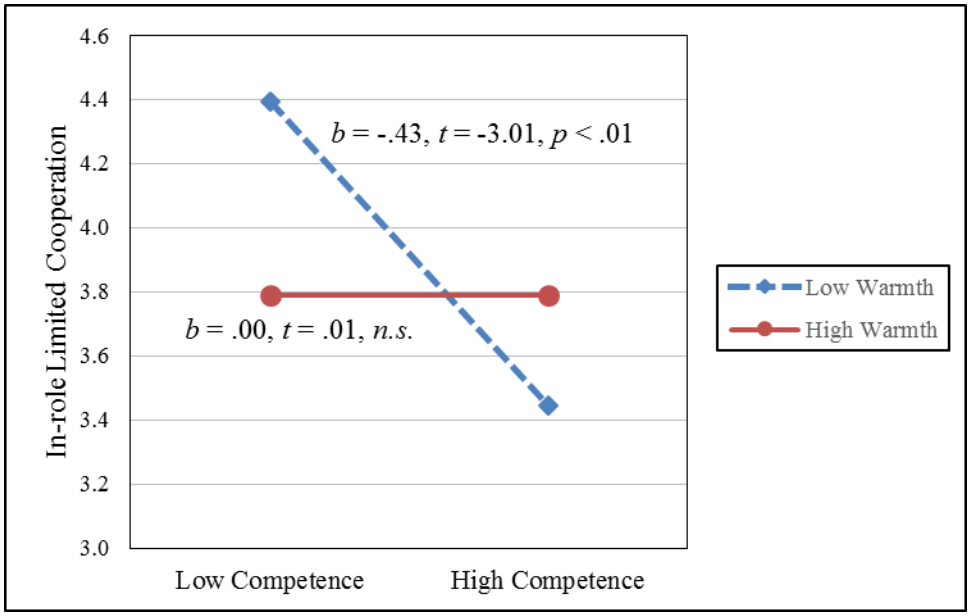


Table 4. Regression Results for Hypotheses 4 - Study 1

Variables	Altruistic Helping				In-role limited Cooperation			
	b	β	*b*	β	*b*	β	*b*	β
Step 1								
Participant Gender (1 = female, 0 = male)	.43	.16 *	.43	.16 *	-.07	-.02	.01	.00
Manipulated Gender (1 = female, 0 = male)	-.12	-.05	-.12	-.05	-.19	-.06	-.14	-.05
Step 2								
Manipulated Physical Attractiveness	-.44	-.16 *	-.44	-.17 *	.69	.23 **	.60	.20 *
Perceived Competence	.31	.26 *	.52	.43 **	-.25	-.19	-.48	-.35 **
Manipulated Warmth	.36	.14	.09	.03	-2.42	-.80 *	-2.11	-.70 *
Step 3								
Perceived Competence × Manipulated Warmth	.01	.02	.10	.19	.52	.83 *	.43	.68 *
Step 4								
Admiration	.37	.26 **			-.40	-.25 *		
Envy							.52	.20 **
Pity			.24	.15 *				
Contempt								
R^2_{step1}	.04 *		.04 *		.02		.02	
ΔR^2_{step2}	.19 **		.19 **		.06 *		.06 *	
ΔR^2_{step3}	.00		.00		.02 †		.02 †	
ΔR^2_{step4}	.04 **		.02 *		.04 *		.04 **	
R^2_{model}	.27 **		.25 **		.14 **		.14 **	

Note: n = 170, † p <.10, * p <.05, ** p <.01.

Table 4. Regression Results for Hypotheses 4 - Study 1 (Cont.)

Variables	Workplace Aggression				Workplace Ostracism			
	b	β	*b*	β	*b*	β	*b*	β
Step 1								
Participant Gender (1 = female, 0 = male)	-.01	-.00	.07	.04	-.08	-.03	.08	.03
Manipulated Gender (1 = female, 0 = male)	.30	.19 **	.24	.16 *	.17	.07	.07	.03
Step 2								
Manipulated Physical Attractiveness	.12	.07	.07	.04	-.07	-.03	-.20	-.09
Perceived Competence	-.32	-.45 **	-.13	-.18 *	-.29	-.27 *	-.14	-.14
Manipulated Warmth	-.65	-.42	-.55	-.35	-1.01	-.44	-.83	-.36
Step 3								
Perceived Competence × Manipulated Warmth	.10	.31	.10	.29	.16	.33	.15	.30
Step 4								
Admiration								
Envy	.63	.48 **						
Pity					.31	.23 **		
Contempt			.65	.59 **			1.03	.63 **
R^2_{step1}	.01		.01		.01		.01	
ΔR^2_{step2}	.09 **		.09 **		.08 **		.08 **	
ΔR^2_{step3}	.00		.00		.01		.01	
ΔR^2_{step4}	.22 **		.31 **		.05 **		.35 **	
R^2_{model}	.32 **		.41 **		.14 **		.45 **	

Note: n = 170, † p <.10, * p <.05, ** p <.01.

Moderated Mediation Effect

Hypotheses 1, 2 and 3 imply a moderated-mediation model, in which the effect of target physical attractiveness on emotions and job behaviors, contingent on the level of warmth, occurs through perceived competence of the target. As additional analyses, I tested the moderated mediation effect using a second stage moderation model (Edwards & Lambert, 2007), which allows the effect of mediator on dependent variable to be moderated while fixing the effect of independent variable on the mediator. The indirect effect of physical attractiveness (X) on emotions and job behaviors (Y) through perceived competence (M) includes the product of the effect of physical attractiveness on perceived competence and the mediating effect of perceived competence on emotions and job behaviors.

Hayes (2015) suggests that mediation and moderation analysis can be analytically integrated into a combined statistical model (see Figure 5 for the statistical model). The indirect effect of X on Y through M can be estimated as linearly related to a moderator Z. This test quantifies the association between an indirect effect and a moderator, and showed that two conditional indirect effects estimated at different values of the moderator are significantly different from each other (i.e., defined as the index of moderated mediation). A mediation process can be moderated if the proposed moderator variable has a nonzero weight *w* in the function linking the indirect effect of X on Y through M to the moderator Z.

The moderated mediation model requires the estimation of the coefficients in two regression equations. Specifically, (1) the product of the effect of physical attractiveness (X) on perceived competence (M) (Equation 1); and (2) the moderating effect of warmth

(Z) on the relationship between perceived competence (M) and emotions and job behaviors (Y) (Equation 2). The level of warmth moderates the direct effect of physical attractiveness on emotions and job behaviors by adding MZ to Equation 2 (Edwards & Lambert, 2007, p.8), which yields the second stage and direct effect moderation model.

$$M = i_M + aX + e_M \quad (1)$$

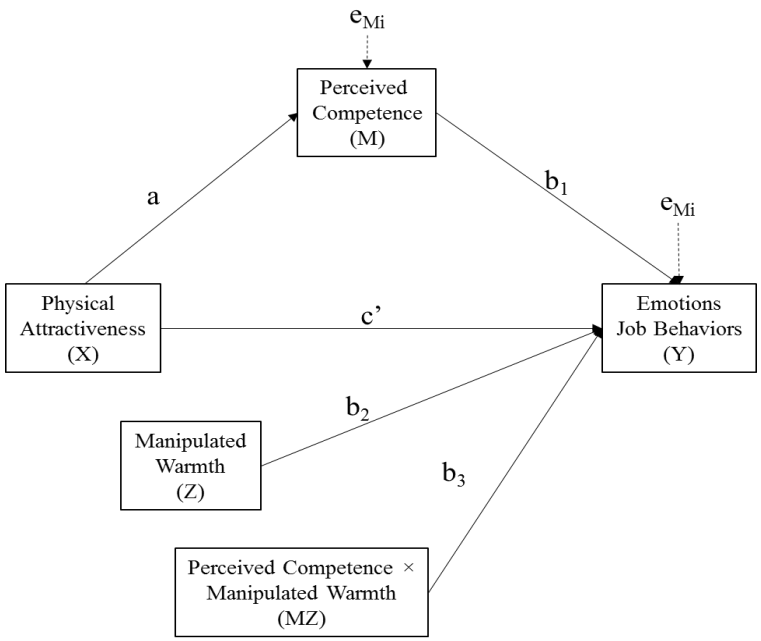
$$Y = i_Y + c'X + b_1M + b_2Z + b_3MZ + e_Y \quad (2)$$

A mediation process can be moderated if the proposed moderator variable has a nonzero weight *w* in the function (Equation 3) linking the indirect effect of X on Y through M to the moderator Z. In Equation 3, ab_3, which quantifies a nonzero weight *w* in the function linking the indirect effect of X on Y through M to the moderator (Equation 3) (Hayes, 2015).

$$w = a(b_1 + b_3Z)$$

$$\text{where simplified as } w = ab_1 + ab_3Z \quad (3)$$

Figure 5. Statistical Model



Regression results reported above showed significant interactions between perceived competence and manipulated warmth on admiration (Hypothesis 2a) and in-role limited cooperation (Hypothesis 3a). Thus, I used the PROCESS macro for SPSS (by Andrew F. Hayes) and tested the statistical significance of the moderated mediation effect for admiration and in-role limited cooperation by using 1,000 bootstrap samples with 95% bias-corrected confidence intervals ($CI_{95\%}$).

Table 5 presents the estimated path coefficients and 95% confidence intervals for admiration. Physical attractiveness (X) had a significant effect on perceived competence (M), a = .53, $CI_{95\%}$ = .22 to .84. The effect of perceived competence (M) on admiration was positive, b_1 = .45, $CI_{95\%}$ = .30 to .59, and the effect of perceived competence on admiration depended on the level of manipulated warmth (M×Z), b_3 = .24, $CI_{95\%}$ = .02 to .45.

The indirect effect of physical attractiveness on admiration, depending on warmth, is the product of the effect of attractiveness (X) on competence (M) (Equation 1) and the conditional effect of competence (M) on admiration (Y) (Equation 2). A nonzero weight *w* in the function linking the indirect effect of physical attractiveness on admiration through perceived competence to the manipulated warmth (Z) (Equation 3). Thus, the indirect effect of X on Y through M is a linear function of warmth (Z) with intercept ab_1 = .24 and slope ab_3 = .13 (Equation 3) (Hayes, 2015):

$$w = a(b_1 + b_3Z) = ab_1 + ab_3Z = .53\times.45 + .53\times.24Z = .24 + .13Z$$

The positive slope indicates that the indirect effect of physical attractiveness on admiration through perceived competence is an increasing function of perceived warmth. A bootstrap confidence interval for the moderated mediation slope ($CI_{95\%}$ = .01 to .30)

did not include zero, which indicates the moderated mediation slope was significant. Different from hypothesized model, at both high and low level of warmth (1 and 0), physical attractiveness had a significant conditional indirect effect on admiration (high warmth: b = .36, $CI_{95\%}$ = .11 to .62; low warmth: b = .24, $CI_{95\%}$ = .10 to .39).

Table 5. Moderated Mediation Path Analysis for Hypothesis 2a – Study 1

	Perceived Competence (M)			Admiration (Y)		
	Path	Coeff.	95% CI	Path	Coeff.	95% CI
Physical Attractiveness (X)	a	.53**	.22 to .84	c'	.12	-.14 to .32
Perceived Competence (M)				b_1	.45**	.30 to .59
Manipulated Warmth (Z)				b_2	-.77	-1.79 to .25
M × Z				b_3	.24*	.02 to .45
		R^2 = .18			R^2 = .43	
		F = 11.69, P < .01			F = 19.83, P < .01	

* p <.05, ** p <.01

Table 6 presents the estimated path coefficients and 95% confidence intervals for testing the conditional indirect effect of attractiveness on in-role limited cooperation, through competence, contingent on warmth. Physical attractiveness was positively related to competence, a = .52, $CI_{95\%}$ = .21 to .84. The effect of perceived competence (M) on in-role limited cooperation was negative, b_1 = -.43, $CI_{95\%}$ = -.71 to -.15, and the effect of perceived competence on in-role limited cooperation depends on the level of manipulated warmth (M×Z), b_3 = .43, $CI_{95\%}$ = .00 to .86. The indirect effect of physical attractiveness on in-role limited cooperation through perceived competence is a linear function of warmth (Z) with intercept ab_1 = -.22 and slope ab_3 = .22:

$$w = a(b_1 + b_3Z) = ab_1 + ab_3Z = .52\times-.43 + .52\times.43Z = -.22 + .22Z$$

The positive slope indicates that the indirect effect of physical attractiveness on in-role limited cooperation through perceived competence increases with perceived warmth.

However, a bootstrap confidence interval for the moderated mediation slope ($CI_{95\%}$ = -.02 to .57) included zero, which indicates the moderated mediation slope was not significant. At high levels of warmth (1), physical attractiveness did not have a significant conditional indirect effect on in-role limited cooperation (*b* = .00, $CI_{95\%}$ = -.20 to .21), but at the low level of warmth (0), physical attractiveness had a significant negative conditional indirect effect on in-role limited cooperation (*b* = -.22, $CI_{95\%}$ = -.50 to -.04). The result is consistent with the hypothesized model.

Table 6. Moderated Mediation Path Analysis for Hypothesis 3a – Study 1

	Perceived Competence (M)			In-role Limited Cooperation (Y)		
	Path	Coeff.	95% CI	Path	Coeff.	95% CI
Physical Attractiveness (X)	a	.52**	.21 to .84	c'	.65**	.19 to .1.12
Perceived Competence (M)				b_1	-.43**	-.71 to -.15
Manipulated Warmth (Z)				b_2	-2.12*	-4.15 to -.09
M × Z				b_3	.43*	.00 to .86
		R^2 = .17			R^2 = .10	
		F = 11.20, P < .01			F = 2.98, P < .01	

* *p* <.05, ** *p* <.01

The moderated mediation results indicated that perceived competence mediated the effect of physical attractiveness on admiration when manipulated warmth was both high and low, and perceived competence mediated the effect of physical attractiveness on in-role limited cooperation when the manipulated warmth was low, but not high. I also tested the moderated mediation for all dependent variables (see Table 7), but given the non-significance of the interaction between perceived competence and manipulated warmth, moderated mediation was not necessarily supported.

Table 7. Unstandardized OLS Regression Coefficients with Confidence Intervals for Hypotheses 2 & 3

Emotions & Job Behaviors	X on M (a)	M on Y (b_1)	Direct Effects X on Y (c')	Index of Moderated Mediation ($ab_{3)}$		Conditional Indirect Effects (X on Y)		
				Coeff.	95% CI	Moderator (Z)	Coeff.	95% CI
Admiration	.53**	.44**	.09	.13	.01 to .30	High warmth	.36	.11 to .62
						Low warmth	.24	.10 to .39
Envy	.53**	.11†	.12	-.01	-.11 to .08	High warmth	.05	-.03 to .16
						Low warmth	.06	-.00 to .15
Pity	.53**	-.20*	.14	-.01	-.14 to .12	High warmth	-.12	-.25 to -.03
						Low warmth	-.10	-.24 to -.02
Contempt	.53**	-.20**	.18	.00	-.10 to .12	High warmth	-.10	-.23 to -.02
						Low warmth	-.10	-.22 to -.03
Altruistic Helping	.52**	.47**	-.41*	.05	-.18 to .29	High warmth	.30	.08 to .60
						Low warmth	.24	.06 to .51
In-role limited Cooperation	.52**	-.43**	.65**	.22	-.02 to .57	High warmth	.00	-.20 to .21
						Low warmth	-.22	-.50 to -.04
Workplace Aggression	.52**	-.26**	.18	.05	-.06 to .23	High warmth	-.08	-.23 to .00
						Low warmth	-.13	-.29 to -.04
Workplace Ostracism	.52**	-.35**	-.02	.08	-.09 to .34	High warmth	-.10	-.29 to .03
						Low warmth	-.18	-.41 to -.05

Note: n = 170, † p <.10, * p <.05, ** p <.01.

Path Analyses Results

I used the path analysis to the hypothesized model simultaneously. I tested paths for all proposed Hypotheses, including control variables (i.e., subject gender, manipulated gender), manipulated physical attractiveness, perceived competence, manipulated warmth, the interaction between manipulated warmth and perceived competence, the four emotions, and the four job behaviors (see Figure 6). The model fit test was relatively poor: CFI = .72; RMSEA = .16, SRMR = .09, χ^2 (42) = 222.15.

I first examined the coefficient for the main effect of physical attractiveness on perceived competence (Hypothesis 1). The path from manipulated physical attractiveness to perceived competence was significant (b = .52, p < .01), and indicated that manipulated physical attractiveness is positively related to perceived competence.

I examined the relationships among perceived competence, manipulated warmth, the interaction between perceived competence and manipulated warmth, and the four emotions (Hypothesis 2). Paths from perceived competence to admiration (b = .44, p < .01) and envy (b = .12, p < .05) were positively significant, and path from perceived competence to pity (b = -.22, p < .01), and contempt (b = -.17, p < .01) were negatively significant. Paths from manipulated warmth to admiration (b = -.80, *n.s.*), envy (b = .05, *n.s.*), pity (b = -.11, *n.s.*), and contempt (b = -.04, *n.s.*) were not significant. Paths from the interaction between perceived competence and manipulated warmth to admiration (b = .24, p < .05) was positively significant, but envy (b = -.02, *n.s.*), pity (b = -.01, *n.s.*), and contempt (b = -.03, *n.s.*) were not significant.

I examined the relationships among perceived competence, manipulated warmth, the interaction between perceived competence and manipulated warmth and the four job

behaviors (Hypothesis 3). Paths from perceived competence to altruistic helping (b = .31, p < .05) was positive and significant, and to workplace aggression (b = -.13, p < .05) and workplace ostracism (b = -.17, p < .05) were negatively significant, but to in-role limited cooperation (b = -.23, *n.s.*) was not significant. Paths from manipulated warmth to altruistic helping (b = -.01, *n.s.*), workplace aggression (b = -.36, *n.s.*), and workplace ostracism (b = -.85, *n.s.*) were not significant, but to in-role limited cooperation (b = -2.47, p < .01) was negatively significant. Paths from the interaction between perceived competence and manipulated warmth to altruistic helping (b = .10, *n.s.*), workplace aggression (b = .05, *n.s.*), and workplace ostracism (b = .15, *n.s.*) were not significant, but to in-role limited cooperation (b = .55, p < .01) was positively significant.

I examined the relationships among four emotions and four job behaviors (Hypothesis 4). Paths from admiration to altruistic helping (b = .26, p < .10) was partially positively significant, but to in-role limited cooperation (b = -.51, p < .01) was negatively significant. Paths from envy to both in-role limited cooperation (b = .65, p < .01) and workplace aggression (b = .42, p < .01) were both positively significant. Paths from pity to both altruistic helping (b = .15, *n.s.*) and workplace ostracism (b = -.06, *n.s.*) were not significant. Paths from contempt to both workplace aggression (b = .51, p < .01) and workplace ostracism (b = 1.00, p < .01) were positively significant.

For the regression results, both admiration and in-role limited cooperation were positively related to the interaction between perceived competence and manipulated warmth (Hypothesis 2a & 3a). Path analysis results also showed that paths from the interaction between perceived competence and manipulated warmth to admiration and in-role limited cooperation were positively significant. Thus, path analysis results converge

with the regression results for Hypothesis 2a and 3a. Also, for the regression results, all emotions were significantly positively related to two job behaviors as hypothesized (Hypothesis 4a, 4b, 4c, & 4d), but only in-role limited cooperation was negatively related to admiration (Hypothesis 4a). Similarly, the path analysis results also showed that most emotions were significantly positively related to two job behaviors, including the negative path from admiration to in-role limited cooperation. However, paths from pity to two job behaviors were not significant. Thus, these path analysis results converge with the regression results for Hypothesis 4a, 4b, and 4d, but not for Hypothesis 4c.

As an exploratory analysis, I also tested the gender effect on physical attractiveness. However, in the laboratory study, gender did not show any significant effects on physical attractiveness (subject gender: $b = .15$, $p < .10$; manipulated gender: $b = .02$, *n.s.*).

Discussion

Regression results indicated that the relationship between physical attractiveness and perceived competence was positively significant (Hypothesis 1), and the interaction between perceived competence and manipulated warmth was significantly related to admiration and in-role limited cooperation (Hypotheses 2a & 3a). Simple slope test results suggest that perceived competence is more strongly positively related to admiration when the perceived warmth is high. Also, perceived competence is negatively related to passive helping when the perceived warmth is low. In support of most Hypothesis 4, admiration was positively related to altruistic helping (i.e., active helping) but negatively related to in-role limited cooperation (i.e., passive helping) (Hypothesis 4a). Envy was positively related to both in-role limited cooperation and workplace aggression (i.e., active harming) (Hypothesis 4b). Pity was positively related to altruistic

helping and workplace ostracism (i.e., passive harming) (Hypothesis 4c). Contempt was positively related to both workplace aggression and workplace ostracism (Hypothesis 4d). I hypothesized that admiration will be positively related to both active and passive helping behaviors, but only active helping behavior was positively related. This result suggests that admiration is a positive emotion that causes more active helping rather than passive helping. Envy, pity, and contempt showed significant results on job behaviors as Cuddy and colleagues (2007) suggested.

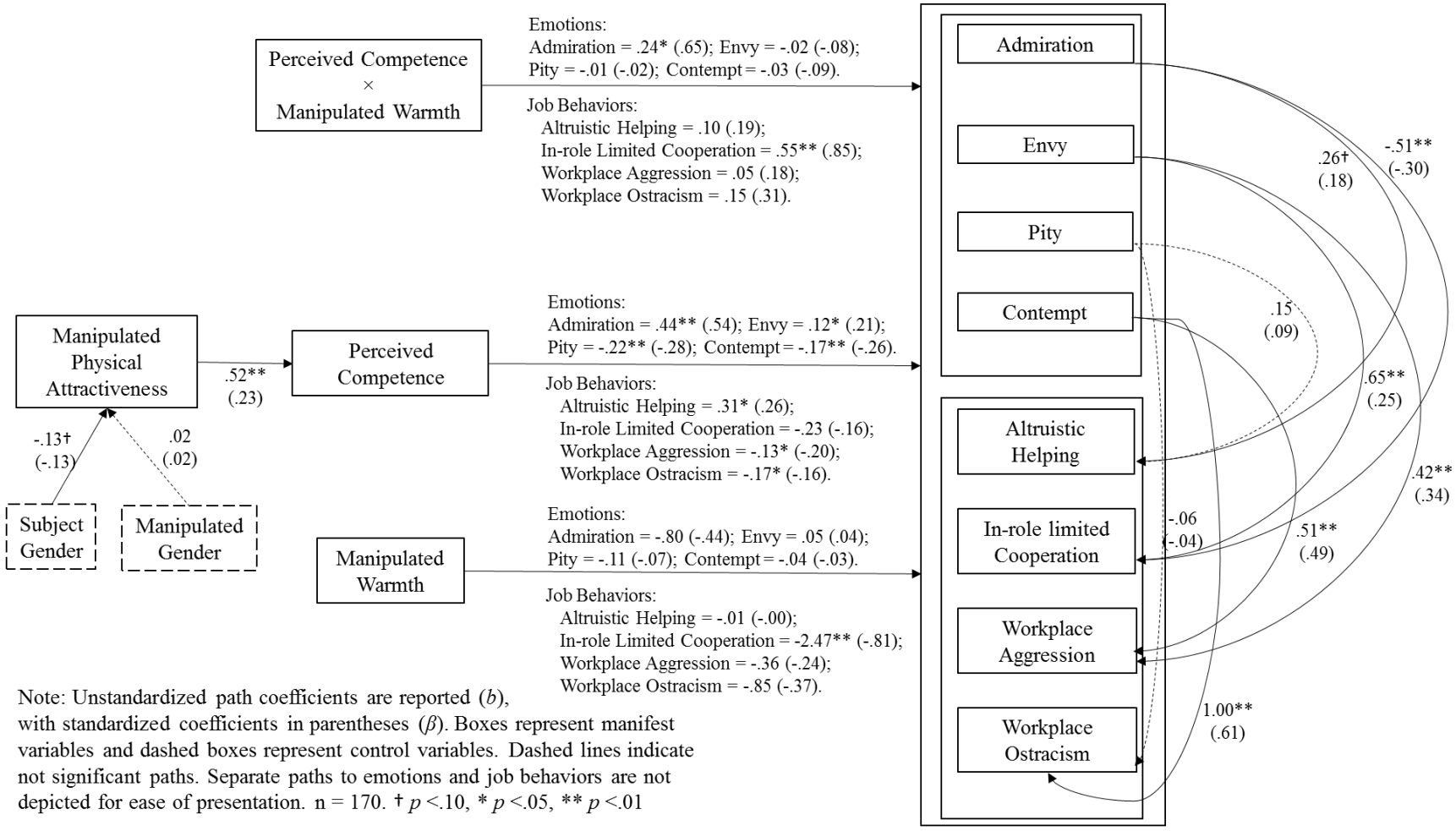
I also tested the moderated mediation effects of physical attractiveness on admiration (Hypothesis 2a) and in-role limited cooperation (Hypothesis 3a) based on the regression result with significant interactions between perceived competence and manipulated warmth. The results indicated that the indirect effect of physical attractiveness on admiration and in-role limited cooperation through perceived competence were contingent on the level of manipulated warmth. Specifically, physical attractiveness was positively related to admiration through perceived competence for both high and low level of manipulated warmth, but physical attractiveness was negatively related to in-role limited cooperation through perceived competence when the level of manipulated warmth was low. This result suggests that physical attractiveness can cause positive emotion through perceived competence regardless of the level of warmth. On the other hand, attractive individuals cannot receive passive helping through perceived competence especially when the level of warmth was low.

In line with regression results, the path analysis results also indicated that physical attractiveness was positively related to perceived competence. Also, perceived competence was positively related to admiration, envy, and altruistic helping, but

negatively related to the other negative emotions (i.e., pity and contempt) and negative job behaviors (i.e., passive helping – in-role limited cooperation, workplace aggression, and workplace ostracism). On the other hand, manipulated warmth was not significantly related to all emotions and most job behaviors, but only negatively related to in-role limited cooperation. The interaction between perceived competence and manipulated warmth was positively related to admiration and in-role limited cooperation. Most emotions were significantly related to job behaviors except pity. Admiration was positively related to altruistic helping (i.e., active helping) but negatively related to in-role limited cooperation (i.e., passive helping). Envy was positively related to both active and passive helping behaviors, and contempt was positively related to both active and passive harming behaviors. On the other hand, pity was not significantly related to both active helping and passive harming behaviors. Thus, path analysis results mostly converged with the regression results.

Due to the use of students in the subject pool and a scenario for the workplace context, the laboratory study had some limitations. Therefore, I sought additional support for the proposed hypotheses in a field study using working individuals.

Figure 6. Path Analysis Results for Study 1



Note: Unstandardized path coefficients are reported (*b*), with standardized coefficients in parentheses (β). Boxes represent manifest variables and dashed boxes represent control variables. Dashed lines indicate not significant paths. Separate paths to emotions and job behaviors are not depicted for ease of presentation. n = 170. † $p < .10$, * $p < .05$, ** $p < .01$

Study 2 – Field Study

The field study assessed how the perceiver evaluated the target. However, different from the laboratory experiment, the field study participants became the target of the evaluation, while participants' coworkers became the perceivers who evaluated the target participants. The same measures used in the laboratory study were used to test the proposed hypotheses.

Procedure and Participants

The sample groups were part-time/full time MBA, Masters' program, undergraduate students, and students from the university subject pool. First, for MBA and Masters' program students, I sent email invitations for the study and visited their classes to recruit participation. The study was described as an investigation of individual characteristics and coworker interactions in the workplace. The email invitation required targets to provide two or more coworkers' email addresses and give a permission to use their University student identification photos. Once targets read and agreed to an informed consent, they received an email which included an online survey link to ask demographic information about the target, and also a study information note for them to send to their coworkers. The online survey asked the target's job type, job status, salary, tenure year, and demographic information (e.g., gender, age, race etc.). Targets also provided coworkers' email information by sending the study invitation emails to coworkers while blind carbon copying the researcher. When coworkers were contacted to participate the study, I sent an online coworker survey link to them. The online survey link included measures of perceived competence and warmth, and emotional/behavioral reactions toward the focal participant.

I sent 137 emails to target subjects who were interested in study participation. The number of target who participated was 123, and all of them provided two to five of their coworkers' email addresses. I received 213 coworker emails from the study participants and the number of coworkers per subject varied from one to five. I sent the coworkers the survey link, and received 194 coworkers' responses total (no response = 19). Thus, there were a total of 98 pairs of targets and coworkers (mean number of coworkers per participant = 1.98). The target sample was 41.8% female, 33.5% White, the average age was 23.39 (*s.d.* = 3.34), and the average work experience was .97 years (*s.d.* = 1.37; Max = 8). Target's coworkers were 44.3% female, 35.1% White, the average age was 25.81 (*s.d.* = 8.64), and the average work experience was 2.08 years (*s.d.* = 3.78; Max = 32). I sent two weekly reminder emails to both the targets and the coworkers to remind them to participant in the study. All participants received $10, and the survey took about 15 minutes to complete.

Measures

Competence and Warmth. Coworkers (i.e., the perceivers) indicated their perception of the focal subject's competence and warmth. All items began with the same stem: "In your experience working with your coworker (i.e., the target), in your opinion". For competence, five items from Fiske and colleagues' (2002) study were modified and used. A sample item is, "how (competent) is s/he?" Competence traits included *competent, confident, independent, competitive,* and *intelligent* ($\alpha = .73$). For warmth, also, five items were modified and used, and a sample item is "how (warm) is s/he?" Warmth traits included *warm, friendly, good natured, sincere,* and *trustworthy* ($\alpha = .85$) (1 = not at all

to 5 = extremely) (Cuddy et al., 2007; Fiske et al., 2002). I conducted two-factor confirmatory factor analysis with 10 items. The results showed that overall the model fit the data, so I averaged all items for further analysis (χ^2 (34) = 138.24, CFI = .83, RMSEA = .13; SRMR = .09).

Emotions. Emotions toward the focal subject (i.e., the target) were measured with 24 emotion items from Fiske and colleagues' (2002) study. A sample item is, "As you have worked with him/her, does s/he make you feel (envy)? (1 = never, 5 = fairly often)" (see Appendix B for all emotions). Following Fiske and colleagues (2002) measure, I conducted confirmatory factor analysis with 17 items loading onto four latent factors. The results showed reasonably good overall model fit (χ^2 (113) = 196.96, CFI = .91, RMSEA = .06, SRMR = .07). Thus, I combined all items for each emotion and averaged them for further analysis (Admiration: α = .68; Envy: α = .70; Pity: α = .53; Contempt: α = .88).

Job Behaviors. Coworkers' behavioral reactions toward subjects were measured with four job behavior items. I used the same job behavior items, which were used during the experiment, and measured coworkers' behaviors toward the focal subject. All four job behavior items began with the same stem, "In your experience working with your coworker (i.e., the target), in your opinion". All items were in the present tense, and the subject of items were referred accordingly. For example, for negative job behaviors, I used "others" instead of "you" for the subject of questionnaire to reduce social desirability bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). An example item for workplace aggression is, "do others physically or verbally attack him/her (e.g., shoving, insulting)." For workplace ostracism, an example item, "do others refuse to talk to

him/her at work?" I conducted confirmatory factor analysis with 21 items loading onto four latent factors. The results showed reasonably good overall model fit (χ^2 (183) = 421.84, CFI = .89, RMSEA = .08, SRMR = .09). Thus, I combined all items for each job behavior and averaged them for further analysis (altruistic helping: α = .80; in-role limited cooperation: α = .75; workplace aggression: α = .94; and workplace ostracism: α = .97) (see Appendix B for all job behavior measures).

Physical Attractiveness. I used University ID photos to assess the level of attractiveness of the subjects. First, I received the subjects' permission to use their university ID photos, and requested their photos in an electric file format to the University Identification Management office. I built a separate survey so that third party individuals could rate the physical attractiveness of the targets (see Langlois et al., 2000).

I selected two male and two female students from outside of the current state to protect participants' privacy. Raters did not know the purpose of the study, and I only informed that this study was to measure whether individual differences affect perceptions. As instructions for the study, I included the definition of physical attractiveness for the current study at the beginning of the survey. Raters rated 102 subjects' photos by using one item: "How physically attractive is this individual?" (i.e., 7-point Likert scale; 1 = not attractive to 7 = very attractive). I calculated the intraclass correlation to assess interrater reliability of the ratings of physical attractiveness (ICC (1) = .46; ICC (2) = .78, F = 4.49, p < .01), which indicated strong agreement (LeBreton & Senter, 2008). Thus, I aggregated physical attractiveness scores across raters to serve as the physical attractiveness measure in the study.

Control variables. Both targets and coworkers answered several demographic questions including gender, age, ethnic background, and work experience (job type, job title, job status, salary, and tenure year). However, I used only target gender and coworkers' gender for the analysis to align with the laboratory study analysis.

Results – Study 2

Study 2 data includes the target (i.e., level 2) and the targets' coworkers (i.e., level 1). I asked targets to invite two to five of their coworkers to the study. Some targets had only one coworker response (n = 38), but the majority of targets had two or more coworker responses: two (n = 29), three (n = 27), four (n=3), and five (n=1). I expected coworker responses on emotions and job behaviors for a given target would be significantly different from the responses for other targets because the level of physical attractiveness would be different by each target. Thus, I used one-way between subjects ANOVA to compare the effect of targets on coworkers' responses to see whether there was a significant difference among coworkers' responses (i.e., level 1) toward each target (i.e., level 2). The results indicated that there was a significant difference on envy ($F = 1.40$, $p = .05$), contempt ($F = 1.40$, $p < .05$), and altruistic helping ($F = 2.36$, $p < .01$), but other variables did not show significant differences across targets. Each target did not have significant effects on coworkers' responses except envy, contempt, and altruistic helping, and this suggests that it would limit the power to detect cross-target effects.

To check interrater agreement on each target, I calculated $r_{wg(j)}$ to assess interrater agreement among coworkers rating the same target individual (see Table 8). The results showed strong agreement on perceived competence ($r_{wg(j)} = .86$), perceived warmth ($r_{wg(j)}$

= .83), envy ($r_{wg(j)}$ = .78), pity ($r_{wg(j)}$ = .77), workplace aggression ($r_{wg(j)}$ = .72), and workplace ostracism ($r_{wg(j)}$ = .72), but moderate agreement on admiration ($r_{wg(j)}$ = .67), contempt ($r_{wg(j)}$ = .59), and altruistic helping ($r_{wg(j)}$ = .69), and weak agreement on in-role limited cooperation ($r_{wg(j)}$ = .41) (LeBreton, Senter, 2008, p.836). This result indicated that there was reasonable agreement across raters of the same target overall. Table 8 shows the descriptive statistics and correlations among all of the study variables.

Regression Results

Based on overall reasonable interrater agreement on perceived competence and warmth and emotions and job behaviors, I aggregated all variables to the target level (level 2) for further analysis. I tested all Hypotheses by using linear regression (see Table 9, 10, & 11). I entered control variables (i.e., target gender and coworker gender) for the first step, entered physical attractiveness, perceived competence, and perceived warmth for the second step, entered the interaction between perceived competence and warmth for the third step, and entered emotions for the fourth step.

Hypothesis 1 states that physical attractiveness will be positively related to the perceived competence of targets. The perceived competence coefficient was not significant (*b* = .02, *n.s.*), and indicated that targets' physical attractiveness was not significantly related to the perceived competence. Thus, Hypothesis 1 was not supported (see Table 9).

Hypothesis 2 states that the targets' perceived competence will be positively related to (a) admiration and (b) envy, but negatively related to (c) pity and (d) contempt, contingent on the level of perceived warmth. Both perceived competence (*b* = -.80, *n.s.*) and perceived warmth (*b* = -.65, *n.s.*) were not significantly related to admiration, and the

interaction between perceived competence and perceived warmth (*b* = .24, *n.s.*) was not significantly related to admiration (Hypothesis 2a). Both perceived competence (*b* = -3.09, *p* < .05) and warmth (*b* = -3.31, *p* < .05) were negatively related to envy, but the interaction between perceived competence and perceived warmth was positively related to envy (*b* = .72, *p* < .05) (Hypothesis 2b). Both perceived competence (*b* = -1.76, *n.s.*) and perceived warmth (*b* = -2.38, *n.s.*), and the interaction between perceived competence and perceived warmth (*b* = .44, *n.s.*) were not significantly related to pity (Hypothesis 2c). Perceived competence was marginally negatively related to contempt (*b* = -2.06, *p* < .10), and perceived warmth was negatively related to contempt (*b* = -2.35, *p* < .05), but the interaction between perceived competence and perceived warmth was marginally positively related to contempt (*b* = .45, *p* < .10) (Hypothesis 2d) (see Table 9).

For the significant interaction coefficients, I assessed the significance of simple slopes for perceived competence on envy and contempt at the high and low level of perceived warmth with one standard deviation above and below the mean (perceived warmth mean = 4.33, high warmth = 4.92, low warmth = 3.74) (Aiken & West, 1991). Hypothesis 2b states that the perceived competence of the target employee will be positively related to envy, but only when the perceived warmth is low. I took the coefficient for the perceived competence (*b* = -3.09) and added the product of the perceived warmth (*b* = -3.31) and the interaction coefficient (*b* = .72) and the value for low warmth (3.74). The resulting simple slope was not significant (*b* = -.38, *t* = -1.53, *n.s.*). On the other hand, the simple slope for the high warmth value (4.92) was marginally significant (*b* = .47, *t* = 1.80, *p* < .10), which indicated that perceived competence was positively related to envy when the perceived warmth was high (see

Figure 7), and this result was opposite from what was hypothesized. Hypothesis 2d states that the perceived competence of the target employee will be negatively related to contempt, but only when the perceived warmth is low. I took the coefficient for the perceived competence (b = -2.06) and added the product of the perceived warmth (b = -2.35) and the interaction coefficient (b = .45) and the value for low warmth (3.74). The resulting simple slope was marginally negatively significant (b = -.37, t = -1.80, p < .10), which indicated that perceived competence was negatively related to contempt when the perceived warmth was low. The simple slope for the high warmth value (4.92) was not significant (b = .17, t = .78, *n.s.*). Given that the relationship between physical attractiveness and perceived competence was not significant, I cannot conclude that perceived competence was negatively related to contempt when perceived warmth was low. Thus, Hypotheses 2a, 2b, 2c, and 2d were not supported.

Figure 7. Simple slope test for Hypothesis 2b – Study 2

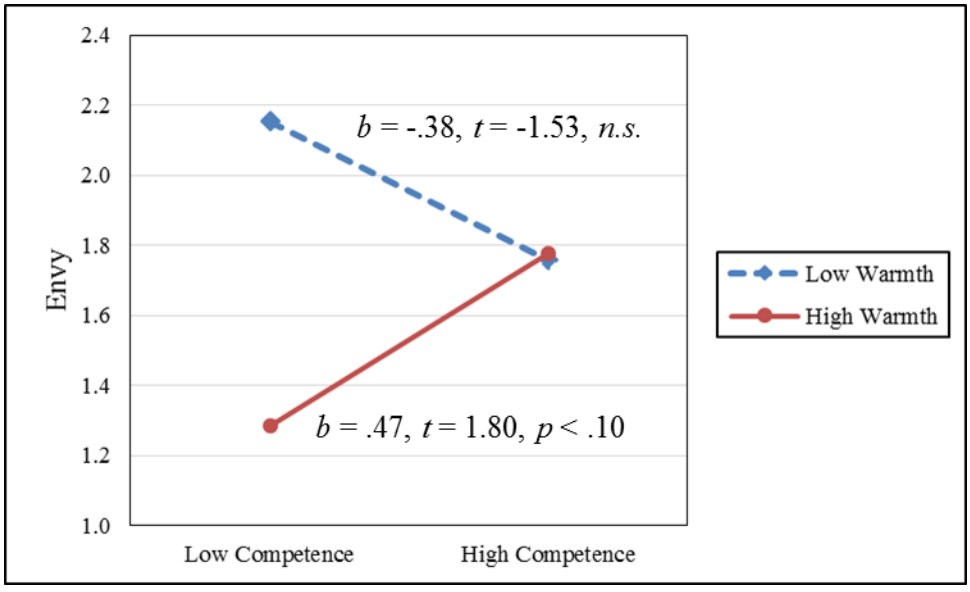
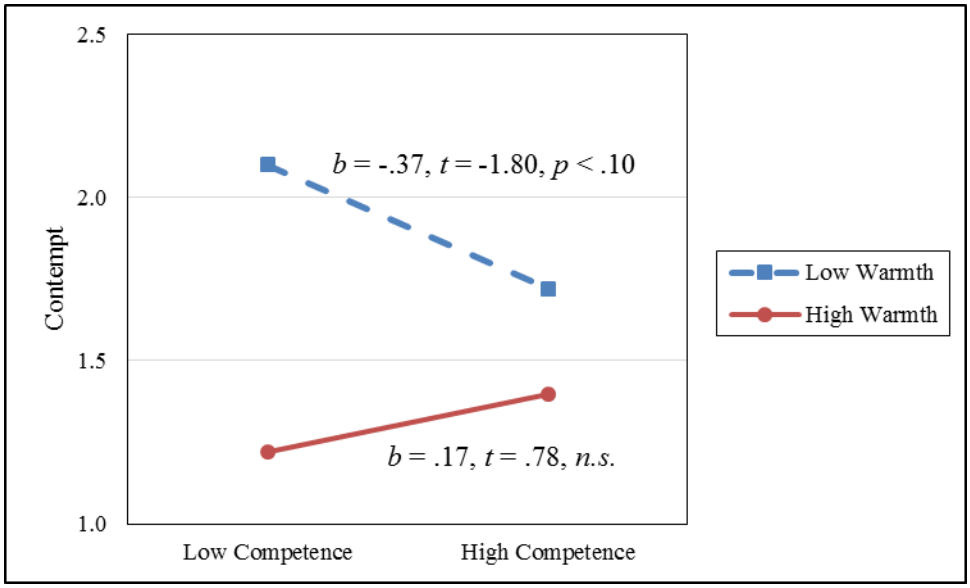


Figure 8. Simple slope test for Hypothesis 2d – Study 2



Hypothesis 3 states that the targets' perceived competence will be positively related to (a) both active and passive helping behaviors when the perceived warmth is high, and (b) both active and passive harming behaviors when the perceived warmth is low. Both perceived competence and warmth were not significantly related to all job behaviors: altruistic helping (competence: b = 2.17, *n.s.*; warmth: b = 2.03, *n.s.*), in-role limited cooperation (competence: b = -1.55, *n.s.*; warmth: b = -1.53, *n.s.*), workplace aggression (competence: b = -1.36, *n.s.*; warmth: b = -1.29, *n.s.*), and workplace ostracism (competence: b = -1.69, *n.s.*; warmth: b = -1.59, *n.s.*). Also, the interaction between perceived competence and perceived warmth was not significantly related to all job behaviors: altruistic helping (b = -.39, *n.s.*), in-role limited cooperation (b = .35, *n.s.*), workplace aggression (b = .27, *n.s.*), and workplace ostracism (b = .32, *n.s.*). I did not test simple slope because the interaction between perceived competence and perceived warmth was not significant for all job behaviors. Thus, Hypotheses 3a and 3b were not supported (see Table 10).

Hypothesis 4 states the relationship between emotions and job behaviors. First, Hypothesis 4a states that admiration will be positively related to both altruistic helping and in-role limited cooperation. Admiration was positively related to altruistic helping (b = .44, p < .05), but not significantly related to in-role limited cooperation (b = .09, p = *n.s.*). Hypothesis 4b states that envy will be positively related to both in-role limited cooperation and workplace aggression. Envy was not significantly related to both in-role limited cooperation (b = .07, p = *n.s.*), but positively related to workplace aggression (b = .47, p < .01). Hypothesis 4c states that pity will be positively related to both altruistic helping and workplace ostracism. Pity was not significantly related to altruistic helping (b = .16, p = *n.s.*), but positively related to workplace ostracism (b = .29, p < .05). Hypothesis 4d states that contempt will be positively related to both workplace aggression and workplace ostracism. In support of Hypothesis 4d, contempt was significantly and positively related to both workplace aggression (b = .87, p < .01) and workplace ostracism (b = .79, p < .01). Thus, Hypothesis 4d was supported, and Hypotheses 4a, b, and 4c were partially supported (see Table 11).

The effect of physical attractiveness on perceived competence was not significant (Hypothesis 1), which indicates that mediated relationship is not significant for the moderated mediation model. Thus, I did not test conditional indirect effects and moderated mediation test for Study 2.

Path Analysis Results

To test the full model with nested data, I used path analysis in Mplus to correct biased standard errors and test overall model fit. I tested paths for all proposed Hypotheses including control variables (i.e., target gender, coworker gender), target physical

attractiveness, perceived competence, perceived warmth, the interaction between perceived competence and perceived warmth, and four emotions and four job behaviors (see Figure 9). I used maximum likelihood estimation with robust standard errors for the nested data, so I adjusted the χ^2 using the Satorra-Bentler scaling correction. The result showed that the overall model did not fit the data well (CFI = .42, RMSEA = .27, SRMR = .26, χ^2 (21) = 68.01).

I first examined the coefficients for the main effects of physical attractiveness and perceived competence (Hypothesis 1). The path from physical attractiveness to perceived competence was not significant (*b* = .04, *n.s.*), and indicated that physical attractiveness is not related to perceived competence.

I examined the relationships among perceived competence, perceived warmth, the interaction between perceived competence and perceived warmth, and the four emotions (Hypothesis 2). Paths from perceived competence to admiration (*b* = .39, *n.s.*), envy (*b* = .03, *n.s.*), pity (*b* = .40, *n.s.*), and contempt (*b* = -.28, *n.s.*) were not significant. Paths from perceived warmth to admiration (*b* = .66, *n.s.*), envy (*b* = -.33, *n.s.*), pity (*b* = -.16, *n.s.*), and contempt (*b* = -.60, *n.s.*) were not significant. Paths from the interaction between perceived competence and perceived warmth to admiration (*b* = -.06, *n.s.*), envy (*b* = .01, *n.s.*), pity (*b* = -.07, *n.s.*), and contempt (*b* = .05, *n.s.*) were not significant.

I examined the relationships among perceived competence, perceived warmth, the interaction between perceived competence and perceived warmth, and the four job behaviors (Hypothesis 3). Paths from perceived competence to altruistic helping (*b* = -.29, *n.s.*), workplace aggression (*b* = -1.76, *n.s.*), and workplace ostracism (*b* = -1.96, *n.s.*) were not significant, but to in-role limited cooperation (*b* = -.94, $p < .05$) was

negatively significant. Paths from perceived warmth to altruistic helping (b = -.21, *n.s.*), workplace aggression (b = -1.18, *n.s.*), and workplace ostracism (b = -1.59, *n.s.*) were not significant, but to in-role limited cooperation (b = -.79 p < .10) was marginally negatively significant. Paths from the interaction between perceived competence and perceived warmth to altruistic helping (b = .09, *n.s.*), in-role limited cooperation (b = .18, *n.s.*), workplace aggression (b = .33, *n.s.*), and workplace ostracism (b = .40, *n.s.*) were not significant.

I examined the relationships among four emotions and four job behaviors (Hypothesis 4). Paths from admiration to both altruistic helping (b = .16, *n.s.*) and in-role limited cooperation (b = .03, *n.s.*) were not significant. Paths from envy to both in-role limited cooperation (b = .05, *n.s.*) and workplace aggression (b = .06, *n.s.*) were not significant. Paths from pity to both altruistic helping (b = -.01, *n.s.*) and workplace ostracism (b = -.03, *n.s.*) were not significant. However, paths from contempt to both workplace aggression (b = .85, p < .01) and workplace ostracism (b = .93, p < .01) were positively significant.

For the regression results, envy and contempt were positively related to the interaction between perceived competence and manipulated warmth (Hypothesis 2b & 2d). However, path analysis results showed that paths from the interaction between perceived competence and manipulated warmth to envy and contempt were not significant. Thus, path analysis results did not converge with the regression results for Hypothesis 2b and 2d. For emotions and job behavior regression results, admiration was positively related to altruistic helping (Hypothesis 4a), envy was positively related to workplace aggression (Hypothesis 4b), pity was positively related to workplace ostracism

(Hypothesis 4c), and contempt was positively related to both workplace aggression and workplace ostracism (Hypothesis 4d). However, path analysis results showed that all paths from emotions to job behaviors were not significant except paths from contempt to workplace aggression and workplace ostracism. Thus, these path analysis results did not converge with the regression results for Hypothesis 4a, 4b, and 4c, but only converged for Hypothesis 4d.

Additional Exploratory Analysis – Gender Effect

I tested the gender effect as an exploratory variable. In the field study, the correlation coefficient shows that target gender was positively related to physical attractiveness (r = .41, p < .01), target gender was positively related to coworker gender (r = .41, p < .01), and coworker gender was positively related to physical attractiveness (r = .20, p < .01). Thus, I controlled both target and coworker gender (both female = 1, male = 0) to in the path analyses described above. I also included the path from target gender and coworker gender to physical attractiveness, and tested the effects of target and coworker gender on physical attractiveness (see Figure 9). The path from target gender to physical attractiveness was positively significant (b = .97, p < .01), which suggests that female targets were rated higher on physical attractiveness than male subjects (female attractiveness = 4.17, male attractiveness = 3.26, F = 8.23, p < .01).

To investigate the effect of target gender on coworkers' responses, I put all dependent variables together, and used a oneway between subjects ANOVA. There was a significant effect of target gender on coworker responses, such that the female target was rated higher than the male target on perceived warmth (target female = 4.44, target male = 4.24, F = 2.38, p = .09), and rated lower than target male on contempt (target female =

1.39, target male = 1.79, $F = 6.09$, $p < .01$), pity (target female = 1.97, target male = 2.29, $F = 3.38$, $p < .01$), workplace aggression (target female = 1.37, target male = 1.88, $F = 4.40$, $p < .05$), and workplace ostracism (target female = 1.32, target male = 1.78, $F = 3.29$, $p < .05$). Thus, I tested multivariate ANOVA with target gender, coworker gender, and physical attractiveness. I entered target gender, coworker gender, and physical attractiveness as fixed factors (i.e. independent variables) and tested all other coworker response variables (i.e., dependent variables). However, there was no significant interaction effect among target gender, coworker gender, and physical attractiveness on all coworker response variables. Therefore, there were no significant interaction effects among target gender, coworker gender, and physical attractiveness on emotions and job behaviors.

Discussion

Regression results indicated that the relationship between target physical attractiveness and perceived competence was not significant (Hypothesis 1), and the interaction between perceived competence and perceived warmth was not significantly related to admiration and pity (Hypotheses 2a & 2c), and all job behaviors (Hypotheses 3a & 3b). This suggests that physically attractive targets were not perceived to be more competent than physically unattractive targets, and that the effect of competence on these emotional and behavioral reactions did not depend on the level of perceived warmth. The interaction between perceived competence and perceived warmth was positively related to envy (Hypothesis 2b) and marginally positively related to contempt (Hypothesis 2d). However, the simple slope test result showed that perceived competence was marginally positively related to envy when the perceived warmth was high, which was opposite

result from what was hypothesized. On the other hand, perceived competence was marginally negatively related to contempt when perceived warmth was low, which was consistent result from what was hypothesized. However, given that the relationship between physical attractiveness and perceived competence was not significant, I cannot conclude that perceived competence was related to contempt when perceived warmth was low. In partial support of Hypothesis 4, admiration was positively related to altruistic helping (i.e., active helping) but not significantly related to in-role limited cooperation (i.e., passive helping) (Hypothesis 4a). Envy was not significantly related to in-role limited cooperation but was positively related to workplace aggression (i.e., active harming) (Hypothesis 4b). Pity was not significantly related to altruistic helping but was positively related to workplace ostracism (i.e., passive harming) (Hypothesis 4c). Contempt was positively related to both workplace aggression and workplace ostracism (Hypothesis 4d). Thus, Hypothesis 4 results indicate that the four emotions predict distinct behavioral tendencies (Cuddy et al., 2007).

I used path analysis to test the overall fit of the hypothesized model. The hypothesized model did not show a good fit to the data, so the path analysis results must be interpreted with caution. In line with the regression results, the path analysis results also indicated that physical attractiveness was not significantly related to perceived competence. Perceived competence was not related to all four emotions and job behaviors, except for in-role limited cooperation (i.e., passive helping). Also, perceived warmth was not related to all four emotions and job behaviors, except for in-role limited cooperation. The interaction between perceived competence and perceived warmth was not significantly related to all four emotions and all four job behaviors. Also, most

emotions were not significantly related to the job behaviors. Only contempt was positively related to both active and passive harming behaviors. The study limitations and implications are discussed in Chapter 4.

Table 8. Descriptive Statistics for Study 2 Variables

Variable	Mean	s.d.	$r_{wg(j)}$	1	2	3	4	5
1. Target Gender (1 =female, 0 = male)	.42	.49	--	--				
2. Coworker Gender (1 = female, 0 = male)	.45	.50	--	**.41 ****	--			
3. Physical Attractiveness	3.64	1.22	--	**.41 ****	**.20 ****	--		
4. Perceived Competence	4.08	.52	.86	.01	.02	.10	(.73)	
5. Perceived Warmth	4.33	.59	.83	**.16 ***	.06	.11	**.43 ****	(.85)
6. Admiration	3.54	.68	.67	.12	.05	.05	**.27 ****	**.42 ****
7. Envy	1.75	.82	.78	-.10	**-.25 ****	-.11	-.01	**-.16 ***
8. Pity	2.17	.91	.77	**-.18 ***	**-.25 ****	-.14	-.04	**-.24 ****
9. Contempt	1.61	.65	.59	**-.32 ****	**-.30 ****	**-.18 ***	**-.21 ****	**-.38 ****
10. Altruistic Helping	4.79	1.14	.69	.03	.05	-.02	.09	.12
11. In-role Limited Cooperation	3.48	1.01	.41	**-.14 ***	-.08	-.01	-.09	-.06
12. Workplace Aggression	1.68	1.16	.72	**-.20 ****	**-.17 ***	**-.19 ****	**-.24 ****	**-.20 ****
13. Workplace Ostracism	1.62	1.23	.72	**-.18 ***	-.13	**-.18 ***	**-.25 ****	**-.27 ****

Notes: n = 194, *$p < .05$, **$p < .01$ (2-tailed).

Table 8. Descriptive Statistics for Study 2 Variables (Cont.)

Variable	6	7	8	9	10	11	12	13
1. Target Gender (1 =female, 0 = male)								
2. Coworker Gender (1 = female, 0 = male)								
3. Physical Attractiveness								
4. Perceived Competence								
5. Perceived Warmth								
6. Admiration	(.68)							
7. Envy	.09	(.70)						
8. Pity	.10	**.32** **	(.53)					
9. Contempt	-.07	**.59** **	**.57** **	(.88)				
10. Altruistic Helping	**.16** *	.11	-.00	-.02	(.80)			
11. In-role Limited Cooperation	-.01	.08	**.16** *	**.21** **	.07	(.75)		
12. Workplace Aggression	-.02	**.37** **	**.27** **	**.53** **	.04	**.21** **	(.94)	
13. Workplace Ostracism	-.11	**.35** **	**.27** **	**.54** **	-.04	**.25** **	**.89** **	(.97)

Notes: n = 194, *$p < .05$, **$p < .01$ (2-tailed).

Table 9. Aggregated Level 2 Regression Results for Hypotheses 1 & 2 – Study 2

Variables	Perceived Competence		Emotions							
			Admiration		Envy		Pity		Contempt	
	b	β	*b*	β	*b*	β	*b*	β	*b*	β
Step 1										
Target Gender (1 = female, 0 = male)	-.09	-.12	.20	.18	.17	.12	-.03	-.02	-.15	-.12
Coworker Gender (1 = female, 0 = male)	.12	.13	-.31	-.24 *	-.43	-.26 *	-.37	-.21 †	-.34	-.24 *
Step 2										
Physical Attractiveness	.02	.08	.01	.03	-.05	-.08	-.03	-.04	-.02	-.04
Perceived Competence			-.80	-.56	-3.09	-1.67 *	-1.76	-.88	-2.06	-1.31 †
Perceived Warmth			-.65	-.54	-3.31	-2.13 *	-2.38	-1.42	-2.35	-1.78 *
Step 3										
Perceived Competence × Perceived Warmth			.24	1.19	.72	2.80 *	.44	1.56	.45	2.06 †
R^2_{step1}	.01		.05		.08 *		.09 *		.18 **	
ΔR^2_{step2}	.01		.12 **		.04		.11 **		.14 **	
ΔR^2_{step3}			.01		.04 *		.01		.02 †	
R^2_{model}	.02		.17 **		.16 *		.21 **		.34 **	

Note: Cluster n = 98, † p <.10, * p <.05, ** p <.01.

Table 10. Aggregated Level 2 Regression Results for Hypotheses 3 – Study 2

Variables	Altruistic Helping		In-role limited Cooperation		Workplace Aggression		Workplace Ostracism	
	b	β	*b*	β	*b*	β	*b*	β
Step 1								
Target Gender (1 = female, 0 = male)	.11	.05	-.22	-.14	-.22	-.13	-.18	-.10
Coworker Gender (1 = female, 0 = male)	.01	.00	-.10	-.05	-.41	-.20 †	-.37	-.18
Step 2								
Physical Attractiveness	-.03	-.04	.06	.08	-.09	-.13	-.09	-.11
Perceived Competence	2.17	.80	-1.55	-.73	-1.36	-.60	-1.69	-.71
Perceived Warmth	2.03	.89	-1.53	-.86	-1.29	-.68	-1.59	-.79
Step 3								
Perceived Competence × Perceived Warmth	-.39	-1.02	.35	1.18	.27	.85	.32	.96
R^2_{step1}	.01		.02		.13 **		.10 **	
ΔR^2_{step2}	.08 †		.01		.03		.05	
ΔR^2_{step3}	.01		.01		.00		.01	
R^2_{model}	.09		.04		.16 *		.16 *	

Note: Cluster n = 98, † p <.10, * p <.05, ** p <.01.

Table 11. Aggregated Level 2 Regression Results for Hypotheses 4 - Study 2

Variables	Altruistic Helping				In-role limited Cooperation			
	b	β	*b*	β	*b*	β	*b*	β
Step 1								
Target Gender (1 = female, 0 = male)	.02	.01	.11	.05	-.24	-.15	-.23	-.14
Coworker Gender (1 = female, 0 = male)	.14	.06	.06	.03	-.07	-.04	-.07	-.04
Step 2								
Physical Attractiveness	-.04	-.04	-.03	-.03	.06	.08	.06	.09
Perceived Competence	2.53	.93	2.45	.90	-1.47	-.70	-1.34	-.64
Perceived Warmth	2.31	1.01	2.41	1.05	-1.47	-.83	-1.30	-.74
Step 3								
Perceived Competence × Perceived Warmth	-.49	-1.29	-.46	-1.20	.33	1.11	.30	1.02
Step 4								
Admiration	.44	.23 *			.09	.06		
Envy							.07	.06
Pity			.16	.12				
Contempt								
R^2_{step1}	.01		.01		.02		.02	
ΔR^2_{step2}	.08 †		.08 †		.01		.01	
ΔR^2_{step3}	.01		.01		.01		.01	
ΔR^2_{step4}	.05 *		.01		.00		.00	
R^2_{model}	.13 †		.10		.04		.04	

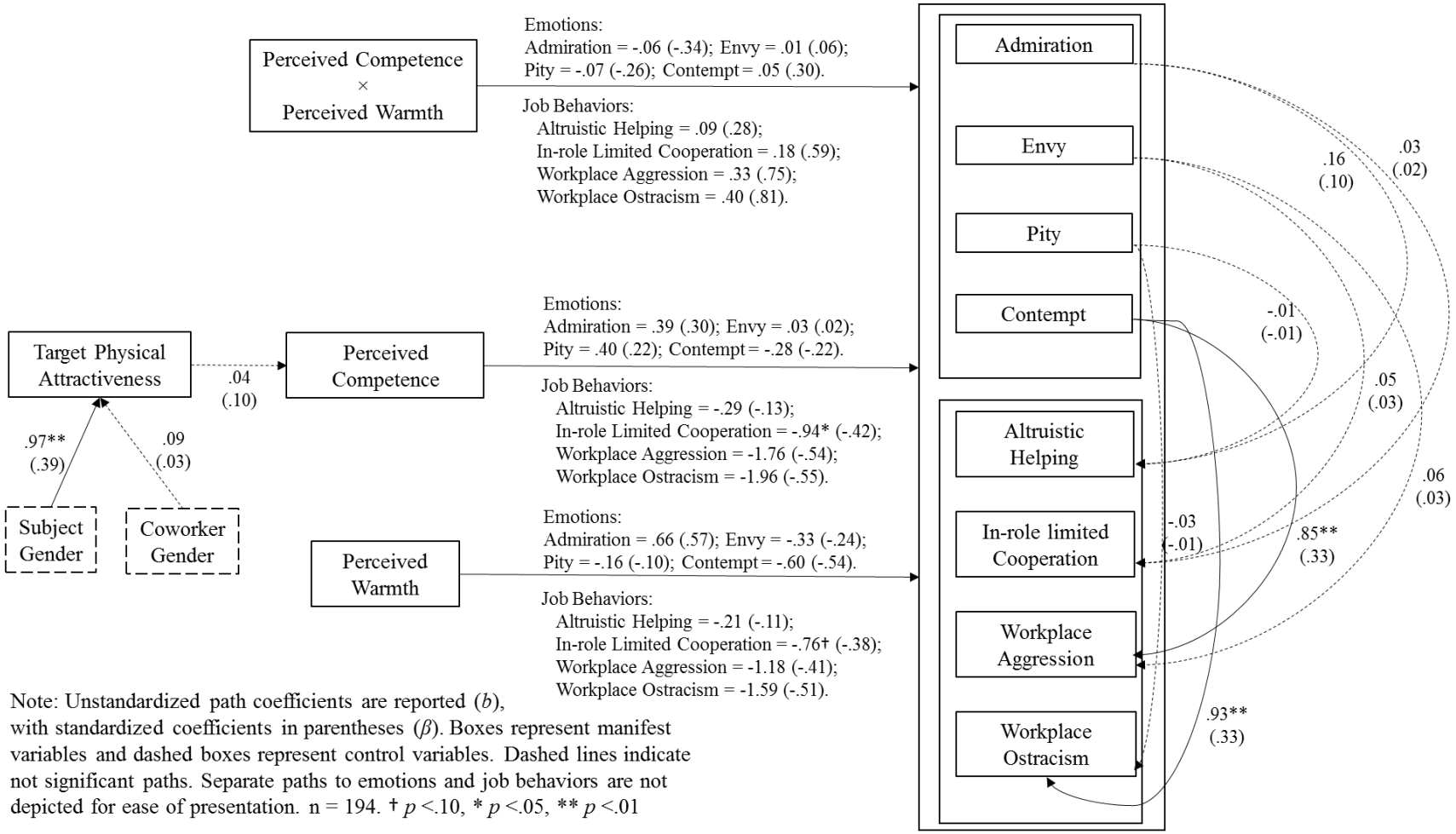
Note: Cluster n = 98, † p <.10, * p <.05, ** p <.01.

Table 11. Aggregated Level 2 Regression Results for Hypotheses 4 - Study 2 (Cont.)

Variables	Workplace Aggression				Workplace Ostracism			
	b	β	*b*	β	*b*	β	*b*	β
Step 1								
Target Gender (1 = female, 0 = male)	-.30	-.17	-.09	-.05	-.17	-.09	-.06	-.04
Coworker Gender (1 = female, 0 = male)	-.20	-.10	-.11	-.06	-.26	-.12	-.10	-.05
Step 2								
Physical Attractiveness	-.07	-.10	-.07	-.10	-.08	-.10	-.07	-.09
Perceived Competence	.11	.05	.43	.19	-1.18	-.49	-.08	-.03
Perceived Warmth	.28	.15	.75	.39	-.90	-.45	.26	.13
Step 3								
Perceived Competence × Perceived Warmth	-.07	-.22	-.12	-.38	.19	.58	-.03	-.10
Step 4								
Admiration								
Envy	.47	.38 **						
Pity					.29	.24 *		
Contempt			.87	.60 **			.79	.52 **
R^2_{step1}	.13 **		.13 **		.10 **		.10 **	
ΔR^2_{step2}	.03		.03		.05		.05	
ΔR^2_{step3}	.00		.00		.01		.01	
ΔR^2_{step4}	.12 **		.24 **		.05 *		.18 **	
R^2_{model}	.29 **		.40 **		.20 **		.33 **	

Note: Cluster n = 98, † p <.10, * p <.05, ** p <.01.

Figure 9. Path Analysis Results for Study 2



Note: Unstandardized path coefficients are reported (*b*), with standardized coefficients in parentheses (β). Boxes represent manifest variables and dashed boxes represent control variables. Dashed lines indicate not significant paths. Separate paths to emotions and job behaviors are not depicted for ease of presentation. n = 194. † $p < .10$, * $p < .05$, ** $p < .01$

Chapter 4: Discussion and Conclusion

I proposed that physically attractive individuals may at times experience negative outcomes in the workplace based on how they are perceived by others. Specifically, I proposed that perceived competence will mediate the relationship between physical attractiveness and emotions/job behaviors, but that the level of perceived warmth will moderate this relationship. I used a laboratory experiment and a field study to test the theoretical model. First, the results from the laboratory experiment support the theorized relationships between physical attractiveness and perceived competence, and support the relationships between physical attractiveness and positive emotions and passive helping behaviors moderated by perceived warmth. Also, the laboratory study results showed that physical attractiveness is not always beneficial, especially when the level of perceived warmth is low. On the other hand, the results from the field study did not support the proposition that physical attractiveness is positively related to perceived competence. The relationship between physical attractiveness and perceived competence was not significant, and regression analysis and path analysis results did not show significant relationship between physical attractiveness and emotions and job behaviors. Thus, the association between physical attractiveness and emotions and job behaviors through perceived competence were not supported in the field study. Due to some limitations of the study design and data, the theoretical model was not supported in the field study. Therefore, I focus the discussion on the theoretical and practical implications of the laboratory study findings, and then discuss the limitations and future directions for both laboratory study and the field study.

Implications for Theory and Practice

People of most cultures have a high interest and desire to be more beautiful, due to the premiums associated with beauty. Social scientists have been studying the effects of physical attractiveness in multiple disciplines, and it has been concluded that physical attractiveness has benefits even in the workplace. This study proposed that attractive individuals may be perceived as more competent, but they may also experience negative outcomes contingent on their perceived warmth. The laboratory study result showed some positive effects of physical attractiveness, but also showed some negative effects.

The laboratory study results showed positive effects of physical attractiveness in the workplace. First, physical attractiveness was positively related to perceived competence. The result consistently supports the Physical Attractiveness Stereotype (Dion et al., 1972), which suggested that attractive individuals will be perceived to possess socially desirable traits. Management studies have shown that attractive individuals enjoy positive outcomes in career success (e.g., Hosoda et al., 2003; Judge et al., 2009), and the positive relationship between physical attractiveness and perceived competence support the benefits of physical attractiveness in the workplace. Second, at both high and low level of warmth, physical attractiveness had a significant conditional indirect effect on admiration. Physical attractiveness was not directly related to admiration, but physical attractiveness had a significant positive indirect effect on admiration through perceived competence. Even though both high and low level of warmth have a positive indirect effect on admiration, the effect was stronger when the warmth was high. The result indicates that physically attractive individuals can experience more benefit when others perceive him/her as not only highly competent, but at the same time, as highly warm.

Third, moderated mediation test result showed that physical attractiveness has a positive indirect effect on in-role limited cooperation. The result indicates that physical attractiveness may have an advantage to receive passive helping from others in the workplace. Different from altruistic helping, in-role limited cooperation is a form of passive facilitation (Cuddy et al., 2007), and it occurs when the actor has a need to accomplish a shared goal with the target. For example, if there is a team project with the target, the actor wants to cooperate with the target to achieve a successful outcome of the project. Compared to altruistic helping, this cooperative behavior is driven by a motive to benefit the actor him/herself, but not to benefit the target only. Therefore, even though this passive facilitation will not benefit over the target's self-interest (e.g., receiving a high rating on individual performance by a manager), the target may receive shared outcome (e.g., outcome of the team project) with this passive form of cooperation. Thus, physical attractiveness has benefits in receiving positive emotions and passive helping from others in the workplace.

In addition to the benefits of physical attractiveness, the laboratory study results also showed a negative outcome of physical attractiveness in the workplace. First, moderated mediation analyses showed a negative direct effect of physical attractiveness on altruistic helping. This result indicates that physical attractiveness may not be beneficial for receiving active helping. In contrast to the physical attractiveness stereotype, Kunkel (209) reviewed some research in line with this result. The average or not-so-pretty people elicit strong feelings of trust and comfort, so not attractive people received better ratings on help, and perceived to be a safer bet to loan money to than the beautiful people (Kunkel, 2009, pp.22-28). This is because individuals feel safe with less attractive people

for the reason that they are more accessible and they have less likelihood to make others feel inferior. This result is also related to the laboratory study finding that physical attractiveness is positively related to perceived competence. Attractive individuals are perceived to be competent, so people may not have the motive to help them in an altruistic and benign manner. Second, I proposed that attractive individuals will receive negative behavioral outcomes when their perceived warmth is low. The interaction between perceived competence and manipulated warmth was marginally positively related to in-role limited cooperation. Simple slope test results supported that perceived competence negatively led to in-role limited cooperation when manipulated warmth was low. Similarly, moderated mediation test results showed that physical attractiveness had a negative conditional indirect effects on in-role limited cooperation when the level of warmth was low. This indicates that attractive individuals will not receive passive helping when their perceived warmth is low. The result suggests that physical attractiveness is not always beneficial in the workplace, especially when the level of perceived warmth is low.

The laboratory study findings suggest a few implications to practitioners. First, for the selection or hiring decisions, managers should be aware of the positive relationship between physical attractiveness and perceived competence. For example, many organizations in South Korea requires job candidates' photo on a job application form. Managers may need to go through a large number of applications in a limited time, and job candidates' photo can cause a misjudgment in the selection decision. The physical attractiveness stereotype suggests that physically attractive individuals are perceived to have a socially desirable personality traits, so managers may misjudge a job candidate,

especially when there is not enough job-related information on the application form. Thus, managers should be aware that using a job candidates' photo could lead to a potential misjudgment in hiring decisions (e.g., DeGroot & Motowidlo, 1999). Organizations can provide a short video training to inform managers who may not notice the physical attractiveness stereotype when they make HR decisions. Using a video training will be more efficient to present and inform the effect of physical attractiveness. The video clip should include a discussion of the potential for misjudgment in hiring decisions, when relying on physical appearance.

The Stereotype Content Model and the BIAS map focus on the perceptions of societal groups, but I tested the theory with individual participants in the workplace context. The laboratory study result extends the scope of theory by including the effect of physical attractiveness on perceived competence in organizations. Specifically, I examined coworkers' emotions and job related attitudes toward attractive individuals and showed people behave differently according to how they perceive the target person. The laboratory study result showed that physical attractiveness is positively related to perceived competence. Competence and warmth are two primary dimensions of stereotype contents, and the laboratory study result supports that physical attractiveness is related to perceived competence in the workplace context. It suggests that physical attractiveness can be an antecedent of perceived competence for individuals, especially in the workplace setting. Path analysis results also showed that perceived competence is significantly related to emotions and job behaviors. Compared to perceived competence, manipulated warmth was not significantly related to most emotions and job behaviors. Cuddy and others (2008) suggested that warmth judgments are made more quickly than

competence judgements (i.e., warmth primacy effect). However, Fiske and others (2011) also suggested that competence takes primacy in organizational contexts. Thus, the laboratory study result supports that perceived competence is more related to emotions and job behaviors in the workplace context (Fiske et al., 2011), and implies a potential boundary condition for the BIAS map in organizations.

To test behavioral tendencies, I used three existing job behavior constructs and modified one job behavior construct (i.e., in-role limited cooperation) by following the definition of behavioral patterns of the BIAS map. I examined the relationships among four distinct emotions and four job behaviors by following the BIAS map. The laboratory study results support that four emotions are related to most job behaviors as the BIAS map hypothesized. However, in-role limited cooperation showed a different pattern from passive facilitation. Altruistic helping, workplace aggression, and workplace ostracism characterize general social behavioral patterns in the work setting, but in-role limited cooperation includes specifically more task-related behavior context. First, the laboratory study results showed that admiration was positively related to altruistic helping but negatively related to in-role limited cooperation. Cuddy and colleagues (2007) suggested that admiration can lead to both active and passive facilitation because individuals assimilate themselves to the target and feel positive about the target's success. Admiration is a genuine positive emotion to promote target's success. Thus, I suggest that admiration was negatively related to in-role limited cooperation because in-role limited cooperation includes association with the target for task completion, but also includes constrained form of cooperation with self-centered motive. On the other hand, envy was positively related to both in-role limited cooperation and workplace aggression.

Compared to admiration, envy is a negative emotion toward the target. Envy leads to cooperation because that cooperative behavior benefits the actor. Passive facilitation toward the target includes more self-centered motive, so in-role limited cooperation construct was positively related to envy, but negatively related to admiration.

The field study result showed that physical attractiveness is not significantly related to perceived competence. Perceived competence was not significantly related to emotions and job behaviors except in-role limited cooperation. Path analysis results showed that also perceived warmth was not significantly related to emotions and job behaviors except in-role limited cooperation. Compared to the laboratory study results, the field study results did not show significant relationships between perceived competence, perceived warmth, and emotions/ job behaviors. I further discuss reasons for not supported field study results in the next section.

Limitations and Future Research Directions

There are three possible reasons why my theoretical model was not consistently supported in both the experiment and the field study. First, the majority of participants were students in both studies. I proposed hypotheses relevant to a competitive social setting (i.e., the workplace), but for both study samples were mostly students with little to no work experiences. For the laboratory study, participants' average age was 25.54 years with short work experience (average 5.39 years), while the field study participants were even younger (23.39 years) with even less work experience (less than a year: .97). For the laboratory study, I only needed to gather perceivers' emotions and job behaviors toward a target (i.e., video clip), so it was comparatively less invasive of participants' privacy.

Thus, the laboratory study was open to any subjects who could be accessed through the university subject pool study. On the other hand, for the field study, I had to recruit subjects who would be rated by their own coworkers. In addition, even though I did not explicitly inform that the study was about physical attractiveness, it was necessary to receive their permission to use their photos. Also, I had to ask them to recruit their coworkers for the coworker ratings. These factors may have prevented subjects with more work experiences (e.g., MBA students) from joining the study. Also, most field study subjects were recruited from the university subject pool with a large number of international students (n = 123, 63.4%), and most of their coworkers are from their classes, not from a real workplace. This may have contaminated the workplace context while they responded to survey questionnaires, and subject coworkers' responses may reflect a leniency bias toward their friends (Podsakoff et al., 2003). Therefore, in future studies, I recommend testing the theoretical model in a real work setting.

Second, physical attractiveness is the primary independent variable in the current research, but the measure of physical attractiveness could be an issue for in both the laboratory and the field study. First, for the laboratory study, the power of the manipulation may not have been sufficient. With a limited budget for the study, I could not hire a professional make-up artist, and it was difficult to make dramatic changes between the low and high attractiveness conditions. In terms of selecting the actors (i.e. confederates/targets), I could not recruit very many candidates to do the video clip recordings. Particularly in the male condition, there were only two male theatre art students, whose attractiveness ratings were not high enough for the high attractiveness conditions. Thus, I had to choose a professional model who did not participate in the

formal screen test. Even though manipulation check was successful, the mean of high attractiveness condition was only 4.65 out of 7, which means the power of the manipulation may not have been low. For the field study, it is hard to assure that the university ID photos accurately captured the overall physical attractiveness of the targets because the photos are limited to only a head to shoulder length photo. Even though most physical attractiveness studies use participants' photos for the third party measurement (Langlois et al., 2000), grooming and make-up can change the overall level of attractiveness of the focal person (e.g., Webster & Driskell, 1983). For example, I was able to manipulate attractiveness using make-up and clothing in the laboratory study, and I assume changes to clothing and grooming would affect the attractiveness of the field study participants as well. Participants' coworkers should have a relatively accurate overall impression of the physical attractiveness of the focal participant (e.g., grooming, Mehrabian & Blum, 1997; voice: Bruckert et al., 2006), and their ratings of the participants' attractiveness may therefore be different and more accurate than ratings obtained from a third party, who rated only one picture of the target. The idiosyncrasies of the two raters (coworkers versus targets) may cause the non-significant relationship between physical attractiveness (i.e., rated by the third party) and the perceived competence (i.e., rated by the coworkers). Therefore, for future studies, it will be important to check the power of the manipulation with a pilot test in the laboratory study, and to add more information of the subjects' appearance (e.g., full length photo) in the field study.

Lastly, the sample sizes for both the laboratory study and field study were small. In the laboratory study, I had eight different conditions to test with a limited budget. Thus, I

chose to have 20 subjects per condition. For the field study, it was challenging to recruit participants because of the complicated study design. I had to recruit subjects who would be willing to give permission to use their photo and invite their coworkers to be part of the study and to rate the participants. Moreover, even when subjects gave their coworker email addresses, I was not allowed to contact their coworkers directly in order to protect subjects' privacy. I had to ask participants' to send two weekly reminder emails to their coworkers. Thus, even though I had 123 target subjects, who gave me permission to use their photo and provided coworker contact information, I could use only 98 target subjects because of non-responses from the target subjects' coworkers (79.67% response rate).

Conclusions

I proposed that physical attractiveness is positively related to perceived competence, and perceived competence mediates the relationship between physical attractiveness and emotions and job behaviors, contingent on the level of perceived warmth. Given some aspects of the study design and data, it is hard to be conclusive regarding the study findings. However, the laboratory study found support for the positive relationship between physical attractiveness and perceived competence, and some support for a negative relationship between physical attractiveness and job behaviors when the perceived warmth was low.

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Appendix A

Evaluation Packet Material 1 - Study Description

Washington & Franklin Corp. is a multinational company with multiple subsidiaries. Recently, Washington & Franklin Corp. launched a new health care product line, featuring portable medical devices, and has built production facilities in Cleveland, OH. You will be assumed to be a human resources (HR) manager at Washington & Franklin Corp. For the new product line, many departments need to cooperate for a successful launching on time.

You will receive a video request from your coworker for the project. It will be a one-minute video clip and you will be able to watch it through the monitor in front of you. After watching the video clip, you will be asked to do a simple task from your coworker. Doing the requested job is voluntary, so whether you decide to do the task or not will not affect your participation in the study.

Also, Washington & Franklin Corp. has an annual review of employees at end of every fiscal year. Thus, there will be an annual review for evaluating coworkers who have mainly worked with you throughout the year. There is a note from the HR director about the peer evaluation, and you will evaluate your coworker who has sent you a video request. You will rate your coworker with the performance appraisal form enclosed in the evaluation packet.

If you finish read through this study description, please let the experimenter know. The experimenter will start the video clip for you.

Evaluation Packet Material 2 - A Note from the HR Director

Subject: Coworker Performance Appraisals

From: D. S. Morris, HR Director (morris_ds@washingtonfranklin.com)

We have been working hard throughout the year, and it is time for the annual review. You will evaluate six main coworkers you have been working with during the last year, and each appraisal form will be sent to you separately. I encourage you to be honest and fair when evaluating your coworkers.

This time, you will be evaluating [Sarah/Mathew Anderson], the marketing manager for the new health care product line. I've enclosed a coworker performance appraisal form.

Thank you.

DSM

Evaluation Packet Material 3 – A performance evaluation form

Coworker Performance Appraisal Form (HR79-D)

STRICTLY CONFIDENTIAL FOR OFFICERS ONLY

Employee name: Sarah/Matthew Anderson

Evaluation Date: ____/____/____

PART IV – ASSESSMENT OF PERSONAL QUALITY AND INTERPERSONAL RELATIONSHIPS

PERSONAL QUALITIES

Competence:

What do you think about the coworker? Not at all Extremely

how **competent** is s/he?	1	2	3	4	5	6	7
how **confident** is s/he?	1	2	3	4	5	6	7
how **independent** is s/he?	1	2	3	4	5	6	7
how **competitive** is s/he?	1	2	3	4	5	6	7
how **intelligent** is s/he?	1	2	3	4	5	6	7

INTERPERSONAL RELATIONSHIPS

Emotional Interactions: *(total 24 items)*

How do you feel about the coworker? Not at all Extremely

I am **envious** of him/her.	1	2	3	4	5
I **admire** him/her.	1	2	3	4	5
I feel **pity** on him/her.	1	2	3	4	5
I am **contemptuous** of him/her.	1	2	3	4	5

Coworker Relationships: *(measuring job behaviors, total 21 items)*

While working with him/her… Not at all Extremely

I would be likely to help her **when s/he has heavy workloads**.	1	2	3	4	5	6	7
I would be likely to communicate with him/her **only when it is needed for the job**.	1	2	3	4	5	6	7
would others be likely to **physically or verbally attack him/her at work** (e.g., shoving, insulting)?	1	2	3	4	5	6	7
would others be likely to **refuse to talk to him/her at work**?	1	2	3	4	5	6	7

Appendix B

Coworker Survey Questionnaires

Construct	Measures*	Source
Stereotypes scales	7-point scale 1 = not at all - 7 = extremely	
Competence (5 items)	As you have worked with [the participant], how *competent* is s/he? Competent, confident, independent, competitive, and intelligent	Cuddy et al., 2007; Fiske et al., 2002
Warmth (5 items)	As you have worked with [the participant], how *warm* is s/he? Warm, friendly, good natured, sincere, and trustworthy	
Emotions	5-point scale 1 = not at all - 5 = extremely	
(24 items)	As you have worked with [the participant], does s/he make you feel *envy*? Disappointed, fearful, sympathetic, envious, uneasy, proud, angry, disgusted, respectful, pitying, grateful, frustrated, jealous, admiring, resentful, inspired, contemptuous, compassionate, tense, ashamed, comfortable, fond, anxious, secure	Fiske et al., 2002
Job Behaviors	7-point scale 1 = not at all - 7 = strongly agree	
Altruistic helping (5 items)	As you have worked with [the participant], do you help him/her when s/he has heavy workloads even when not required? are you willing to lend a helping hand to him/her even when not required? do you help him/her when s/he is absent even when not required? do you willingly help him/her if s/he has work-related problems even when not required? do you help him/her even though it is not required?	Podsakoff, MacKenzie, Moorman, & Fetter, 1990 (Altruism items)
In-role limited cooperation (5 items)	As you have worked with [the participant], do you communicate with him/her only when it is needed for your task? do you share information with him/her only it would help to accomplish your task? do you exchange resources with him/her only to perform your task? do you discuss your idea with him/her only when it is required for your task? do you assist him/her only when it is needed for your task?	Newly developed from example behaviors in Alper, Tjosvold, & Law, 1998

Workplace aggression (6 items)	As you have worked with [the participant], do others physically or verbally attack him/her (e.g., shoving, insulting)? (overt) is s/he a target of sexual harassment physically or verbally? (overt) do others stare with dirty looks or have negative eye-contact ? (overt) do others talk behind him/her and spread false rumors? (covert) do others fail to transmit information needed by him/her? (covert) do others delay and prevent him/her from completing tasks? (covert)	Baron, Neuman, & Geddes, 1999
Workplace ostracism (5 items)	As you have worked with [the participant], do others refuse to talk to him/her at work? do others ignore him/her at work? do others avoid him/her at work? do others shut him/her out of the conversation at work? do others treat him/her as if s/he isn't there at work?	Ferris, Brown, Berry, & Lian, 2008