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Effects of Gender and Aggression Type on Perceptions of Aggressive Behavior at Work

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Effects of Gender and Aggression Type on Perceptions of Aggressive Behavior at Work

by

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy
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Abstract

This dissertation sought to examine the interactive effects of participant gender, aggression type (physical vs. relational), aggressor gender, and target gender on two sets of dependent variables. The first set consisted of a performance rating, the acceptability of the aggression, the perceived aggressiveness of the aggressor, and the perceived aggressiveness of the act. The second set consisted of perceived masculinity, perceived femininity, and perceived gender ideal. The main hypothesis was that gender stereotypes of aggression would influence performance evaluations of aggressive behavior. Other hypotheses were based on previous research regarding the effect of gender and aggression type on the acceptability and perceived aggressiveness of the aggressive behavior. Hypotheses regarding the gender perception dependent variables were based on the connection between aggression and gender stereotypes. In order to test the study hypotheses, a sample of 552 adults was recruited via an online crowdsourcing tool. Although most of the study hypotheses were not supported, the other significant results suggest that physical aggression is generally perceived to be more aggressive than relational aggression, and that there appears to be a strong connection between the female stereotype and relational aggression, even more so than the connection between the male stereotype and physical aggression, among other findings. The lack of effect of participant gender and lack of significant effects on the performance rating variable suggest that there may be less potential for discrimination in the evaluation of aggressive behavior.
Chapter One

Introduction

Stereotypes are a powerful influence on attitudes and behavior, and have a long history of study in the social psychological literature. The consensus on stereotypes is that they are the cognitive influence on the development of one’s attitudes, as compared to prejudices, which are more affective in nature (Devine, 1989; Fiske, 1998). Given the long history of research on stereotypes, it is unsurprising that researchers whose focus is on employees and organizations have begun to pay more attention to the effects that stereotypes can have in a workplace context. Some specific stereotypes that have been examined in a workplace setting are those related to age (e.g. Henkens, 2005; Posthuma & Campion, 2009), ethnicity (e.g. Cocchiara & Quick, 2004), and gender (e.g. Gorman, 2005; Heilman & Chen, 2005).

Researchers examining gender stereotypes in the workplace have found profound effects on employee outcomes. Most commonly, this results in a disadvantage for female employees (Heilman, 2012). Specifically, female employees who exhibited helping behavior outside of their typical job duties received lower performance evaluations than male employees who exhibited the same behavior (Heilman & Chen, 2005). The authors concluded that the female employees were acting according to their gender norms and prescriptions by being helpful, and thus their performance evaluations did not benefit from their extra-role behavior. Because the male gender norm does not include helpfulness, the helpful male employees were seen as truly going beyond their expected behavior, and thus received higher performance
evaluations. However, stereotype effects are not exclusive to female employees. Heilman and her fellow researchers have repeatedly found that both men (Heilman & Wallen, 2010) and women (Heilman & Okimoto, 2007; Heilman, Wallen, Fuchs, & Tamkins, 2004) suffer negative consequences as a result of their success on tasks inconsistent with the norms of their gender.

The literature regarding gender stereotypes and employee performance has been limited to organizational citizenship behavior (OCB; Organ, 1988) and task performance. Task performance is typically defined as performance of one’s main job duties, while OCBs are altruistic behaviors performed outside of one’s main job duties for the benefit of coworkers or the organization. As discussed above, male employees tend to benefit more from performing OCBs than women. In terms of task performance, the gender effects are unclear. One meta-analysis of field studies in organizations showed that there was no effect of gender bias on actual job performance appraisals (Bowen, Seim, & Jacobs, 2000), except in instances where the raters consisted only of men. Another more recent meta-analysis showed that female employees actually scored slightly higher than male employees in terms of performance, although male employees scored slightly higher relative to promotion potential, and there was no control for actual pay levels of the employees (Roth, Purvis, & Bobko, 2012).

The final component of job performance that deserves attention in relation to gender stereotypes is counterproductive work behavior (CWB; Rotundo & Sackett, 2002), which is negative or deviant behavior targeted at coworkers or the organization. Aggression is a key component of CWB (e.g. Spector et al., 2006), and because there are strong gender stereotypes surrounding aggression (see discussion below), this set of behaviors will be the focus of this dissertation. Specifically, this study will involve evaluations of behaviors performed by hypothetical employees. Performance evaluations can be viewed as person perception in a
specific context (i.e. at work). Thus, because stereotypes are an important aspect of attitude formation (Fiske, 1998), gender stereotypes should influence evaluations of employee performance. The relationship between gender stereotypes and their effect on evaluations of aggressive behavior was previously examined by the author as part of a Master’s thesis (Way, 2011). However, the results were that no stereotype effects were found in relation to employee performance evaluations. The details of this will be discussed in a later section, but the purpose of this study is to build upon the existing study by taking into account additional variables that could explain the lack of significant effects found previously. What follows is a review of the literature surrounding gender stereotypes that is relevant to the aggressive CWBs that will be the focus of this study, as well as a more in-depth discussion of the CWB construct.

Gender and Aggression

Aggressiveness is a common trait associated with masculinity. It shows up as a primary component of the male stereotype in western (particularly American) societies (Frodi, Macaulay, & Thome, 1977; Kaukiainen et al., 2001; Oswald & Lindstedt 2006; Williams & Bennett, 1975), in addition to non-western societies and primitive societies (Gilmore, 1990). Unlike most demographic-based stereotypes, there is an abundant research literature that shows that males are, in general, more aggressive than females (e.g. Eagly & Steffen, 1986; Lindeman, Harakka, & Keltikangas-Jarvinen, 1997). This is especially true for instances of physical aggression and scenarios that require aggressive behavior. This literature reports episodes of objective observations of aggressive behavior, and not subjective perceptions or attitudes regarding the aggressiveness of males. In the case of the latter, the consensus seems to be that male aggression is typically judged to be more aggressive than female aggression (e.g. Basow, Cahill, Phelan, Longshore, & McGillicuddy-DeLisi, 2007). However, at least one study using vignettes found
that participants assigned equal levels of aggressiveness to males and females who performed the same aggressive acts (Stewart-Williams, 2002).

One model that attempts to provide a link between gender and aggression is known as the threat model, which proposes that a perceived or actual threat is the driving force behind aggressive behavior. There are two underlying assumptions that form the basis of the threat model. The first is that males are more prone to perceive threats when interacting with others (Richardson, Vandenberg, & Humphries, 1986) and the second is that aggression is a probable response to a perceived or actual threat (Taylor & Epstein, 1967). Taking these two assumptions together (both of which have empirical support), the threat model concludes that males are more likely to behave aggressively (Richardson & Green, 1999).

Areas in which the connection between gender and aggression has been examined include the developmental psychology literature and the research regarding relationship quality. Meta-analyses of studies involving aggressive behavior in children report that boys exhibit more verbal and physical aggressive behaviors than girls, although girls have a tendency to exhibit somewhat more indirect aggressive behaviors (Archer, 2004; Card, Stucky, Sawalani, & Little, 2008). One concern that has been noted by some researchers (e.g. Spector, 2012) is that these meta-analyses could include studies that are using different conceptualizations of aggression. In spite of the stereotype and the research discussed thus far, males are not universally more aggressive than women across all contexts. The context of the aggressive behavior must be a factor when comparing levels of aggression between men and women (Spector, 2012). In the context of intimate relationships, instances of initiating intimate partner violence (IPV; violence within intimate relationships) were much more common among women than among men, at least in a sample of newlyweds over the first 30 months of marriage (O’Leary et al., 1989).
One study examining reactions to instances of IPV had participants review instances of physical aggression in the lab (Felson and Feld, 2009). The researchers manipulated the gender of both the aggressor and the target of the aggression, as well as their relationship (either the two were married or they were merely acquaintances), but kept the level of aggression constant across conditions. The result was that instances where the male was the aggressor and the female was the target of the aggression were judged more harshly, considered more serious, and deemed more justifiable for reporting the act to the police than instances where the female was the aggressor and the male was the target, especially when the two were described in the vignette as being married. Thus, the authors concluded that the gender of the aggressor is a key variable in determining the reaction to aggressive behavior.

The tendency for males to be more aggressive than females has also been reported in the organizational psychology literature in the context of workplace aggression (e.g. Baron et al., 1999; Horschovis et al., 2007; McFarlin, Fals-Stewart, Major, & Justice, 2001). One meta-analysis concerning workplace aggression found that gender strongly predicted aggression directed at others as compared to aggression directed at the organization (Horschovis et al., 2007). However, both types of aggression were related to gender when the researchers entered the meta-analytic correlations into a path analysis model. It should be noted that a low base rate in the reporting of physical aggression could account for the lack of gender difference in relation to this form of aggression.

Physical aggression has also been studied as a tool that can be used to males’ advantage in social situations. In particular, one line of research has focused on aggression as a way of establishing or reasserting manhood following a threat to masculinity (Bosson et al., 2009; Vandello et al., 2008; Weaver, Vandello, Bosson, and Burnaford, 2010). It states that manhood
is both elusive (i.e. hard to attain), and tenuous (i.e. hard to maintain; Vandello et al., 2008). This concept also seems to exist regardless of the culture in question, in that it appears in many different, widely-varied cultures (Gilmore, 1990). The end results were that males who have their manhood threatened were more likely to interpret ambiguous stimuli in aggressive terms (using implicit word completion tasks; Vandello et al., 2008) and also exhibit more instances of physical aggression (e.g. punching a pad; Bosson et al., 2009), thus reinforcing the idea put forth by the stereotype of male aggressiveness that males consider aggression to be an important part of their gender identity.

Relational aggression is one form of aggression that is more often associated with females than males, in part because females are stereotyped to be more focused on relationships with others than males, as well as the fact that they actually put more effort into developing and sustaining relationships (Golombok & Hines, 2002; Underwood, 2002). Relational aggression is characterized by a desire to harm relationships with others through behaviors such as threatening social exclusion to elicit a desired behavior, spreading rumors to elicit peer dislike, or outright excluding others from group activities (Crick, Casas, & Mosher, 1997). Some researchers have categorized relational aggression as indirect because it often does not involve a direct confrontation (e.g., Crick & Grotpeter, 1995, 1996). However, others (e.g., Archer, 2004; Spector, 2012) have pointed out that direct confrontation is often the means by which relationally aggressive behavior is performed, and the goal of such behavior is to cause direct harm to an individual, and relational aggression should therefore be categorized as direct aggression.

Relational aggression has been most commonly studied in the developmental literature, where studies have reported that young girls seem to exhibit more relational aggression than young boys (e.g., Archer, 2004, Lagerspetz, Bjokqvist, & Peltonen, 1988).
However, this finding has held true for older females as well (e.g., Archer & Coyne, 2005). Few studies have examined such behaviors in adults, but Spector (2012) reports one sample that showed male employees report performing more relational aggression-related CWB than female employees. However, he notes that social desirability may be skewing the reporting of the frequency of the behavior, and the work context may have further discouraged female employees from accurately reporting their behavior.

In addition to the stereotypes of females being more relationally oriented than males mentioned above, cultural stereotypes often associate females with relational aggression (Stewart-Williams, 2002). Further, a survey of college females showed that they see relational aggression as normal behavior for women (Miller-Ott & Kelly, 2013).

**Aggression at Work**

Workplace aggression has been examined as a construct in and of itself, and as part of a broader conceptualization of CWB. It is typically considered to be a separate construct from physical violence in the workplace. Incidents of physical violence in the workplace (e.g. hostage-taking, gun violence, etc.) are widely reported in the news and social media, which results in the impression that these incidents occur much more often than they do in reality. Workplace aggression typically manifests in more minor ways, such as verbal altercations or indirect aggression. Indirect aggression involves harming someone covertly or without their knowledge, such as gossiping (Bjorkqvist, 2001). It is perhaps unsurprising that such behaviors might be more common in the workplace than outright physical violence, as such behavior would usually take place in full view of others, and the aggressor would be subject to the consequences of their actions. Out of self-interest, it is wiser for an aggressor to perform behaviors that hide his or her identity from the target of the aggression. This was the hypothesis
proposed by Baron and Neuman (1996) when they examined reports of aggressive behavior in the workplace, and they indeed found that aggressive behaviors that are verbal and passive (withholding certain behavior as a form of aggression) in nature were more frequent than more physical aggressive behaviors.

These researchers consequently examined the underlying structure of the workplace aggression construct, which they defined as “efforts by individuals to harm others with whom they work, or have worked, or the organizations in which they were previously employed” (Neuman & Baron, 1998, p.395). Exploratory factor analyses of aggressive behaviors that had previously been identified in the research literature resulted in three emergent factors of workplace aggression: expressions of hostility (e.g., ridicule, harassment, obscene gestures), obstructionism (e.g., causing delays, interfering with work), and overt aggression (e.g., theft, threats, physical violence). The expressions of hostility factor seems to contain mostly instances of verbal aggression, with the added component of gesturing, a non-verbal form of communication. Thus, this factor revolves around the communication of aggressive intent towards the target of aggression, as the name implies. The obstructionism factor contains the content that relates to indirect, covert forms of aggression. These are acts that do not involve direct contact with the target of the aggressive behavior, but instead cause harm via indirect methods such as sabotage or intentional delays of work performance. The overt aggression is the factor that contains physical and other more direct, active forms of aggression. Similar to the findings from their earlier research, reports of the first two factors of aggression (verbal and indirect aggression) were more common than the third (physical aggression) factor (Neuman & Baron, 1998).
Neuman & Baron’s construct of workplace aggression as defined previously is conceptually analogous to other constructs that have sought to classify negative behavior in the workplace, such as workplace deviance (Robinson & Bennett, 1995), retaliation (Skarlicki & Folger, 1997), and counterproductive work behavior (Sackett, 2002; Spector et al., 2006). These constructs all include behaviors that are intentional, voluntary, and cause harm to the organization and/or its members. This is somewhat narrower than other conceptualizations of workplace aggression (e.g. abusive supervision; Mitchell & Ambrose, 2007), and recent taxonomies of CWB have been expanded to include sabotage, withdrawal, and theft behaviors (e.g. Spector et al., 2006). However, most researchers that have examined and attempted to define what constitutes CWB have kept aggressive behavior as a primary component of the construct. The taxonomies that have received extensive attention in the research literature will be summarized below.

Models of CWB

Several models of CWB have been put forth in the literature that include aggressive behavior as a primary component. Robinson and Bennett’s (1995) model of workplace deviance is one that has received a fair amount of attention in the research literature. The authors used multidimensional scaling techniques to develop a classification of a construct that they defined as workplace deviant behavior. Their taxonomy states that deviant workplace behavior varies along two dimensions and can be classified into four types. The first dimension reflects the extent of harm caused by the behavior, and was termed the minor vs. serious dimension. The second dimension reflects whether the target of the aggressive behavior (i.e. recipient of the intent to cause harm) is the individual or the organization. Thus, this dimension was labeled interpersonal vs. organizational deviance. Crossing these two dimensions resulted in four types
of deviant workplace behavior. The minor organizational type was labeled production deviance, and included such behaviors as leaving early and intentionally working slowly. These behaviors are more passive behaviors designed to indirectly cause harm to the organization. The serious organizational type was labeled property deviance, and included such behaviors as sabotaging equipment and stealing from the company. These behaviors are more active in nature, and have a greater impact on the organization than the minor type. The minor interpersonal type was labeled political deviance, and included such behaviors as showing favoritism and gossiping about coworkers. Similar to the minor organizational type, these behaviors are more indirect in that the target of the aggressive behavior is typically not actively confronted. Finally, the serious interpersonal type was labeled personal aggression, and included such behaviors as verbal abuse and stealing from coworkers. These behaviors are more confrontational and active in nature than the minor interpersonal type.

Another model of CWB that focuses primarily on aggressive behavior is the frustration-aggression model (Fox & Spector, 1999). In this model, frustration is the result of an interruption in goal-directed work behavior when there is no other means available to achieve the goal in question. A potential consequence of this is that the employee will respond with some form of aggressive behavior. However, in order for the employee to respond in an aggressive manner, the employee must first experience a negative affective response to the interruption in goal-directed behavior such as frustration or job dissatisfaction. This negative affective response is partially affected by a specific situation surrounding the interruption of work, such that if an employee’s work is interrupted, but there is another means to complete the work or the employee can go back to work after dealing with the interruption, then the employee will likely not exhibit aggressive behavior. The extent of these affective responses is also determined by related
individual difference variables such as locus of control, trait anxiety, and trait anger. The frustration-aggression model hypothesizes that those individuals who have an external locus of control and high levels of trait anxiety and trait anger are more likely to have negative affective reactions to such interruptions of goal-directed behavior, and are thus more likely to exhibit aggressive behavioral reactions to frustrating interruptions of work.

A more recent model of workplace aggression that has been proposed is the channeling hypothesis of aggression (Frost, Ko, & James, 2007). This model focuses purely on the aggressive behavior component of CWB, and predicts that explicit personal beliefs about one’s tendency towards aggression interact with one’s implicit level of aggression to determine aggressive behavior. The authors who proposed this model hypothesize that even people who have a natural inclination to be aggressive have a desire to appear to be adherent to the moral standards of society and maintain a favorable view of themselves as moral, responsible members of society. However, this dissonance between their aggressive impulses and the desire to behave in a socially acceptable manner creates a conflict which must be resolved when the person exhibits aggressive behavior. This model hypothesizes that the conflict is resolved through the use of defense mechanisms (specifically rationalization), in order to justify aggressive behavior while still holding on to a positive self-identity. Rationalization allows the person to ignore their desire to inflict harm, thereby freeing the person from the negative emotions (e.g. anxiety, guilt) that would result from perceiving oneself to be an aggressive person (p. 1301).

These models of CWB all include aggressive behavior as a key construct, highlighting its importance in the workplace environment. Although a great deal of research has been devoted to identifying the antecedents of workplace aggression and CWB, such behaviors are typically examined as final outcomes in larger predictive models. Research in this literature
examining the reactions to and consequences of such behavior in the workplace have been lacking, and this proposed study is designed to address this lack of attention. However, before the consequences of CWB can be discussed, it is important to provide a brief review of some of the antecedents of CWB that have been previously identified in the relevant research literature.

**Antecedents of CWB**

There have been several different classification systems used to describe the antecedents of CWB in the research literature (e.g. Neuman & Baron, 1998). One of the simplest is to separate them into situational and individual antecedents, a method used in a recent meta-analysis of workplace aggression (Hershcovis et al., 2007).

**Situational.** A situational antecedent of CWB that has often been examined in the research literature is perceived unfairness. It is often examined through the lens of equity theory (Adams, 1965) and organizational justice (Greenberg, 1990). If an employee perceives a difference in how the consequences of workplace behavior (i.e. rewards and punishments) are distributed (distributive justice), how company policies are decided upon or put into place (procedural justice), or in how employees are treated by their managers or the organization in general (interactional justice), then it is possible that they may react by exhibiting CWB. Indeed, several research studies have shown that a perceived unfairness on the part of the employee will lead to more instances of aggressive behavior in the workplace (e.g. Baron, Neuman, & Geddes, 1999; Fox, Spector, & Miles, 2001). In a similar vein, several studies examining retaliation at work have exhibited similar consequences of perceived injustice in the workplace (e.g. Barclay, Skarlicki, & Pugh, 2005; Skarlicki & Folger, 1997).

Several other situational antecedents can have substantial effects on the level of CWB exhibited by employees. The first is the occurrence of frustrating events in the workplace, as
discussed above. To reiterate, frustration resulting from the interruption of a goal-directed behavior that wholly prevents the goal from being accomplished can lead to the employee exhibiting workplace aggression (Fox & Spector, 1999; Spector, 1975). Additionally, diversity in the demographic makeup of the workforce has been hypothesized to lead to greater instances of workplace aggression. These hypotheses are based on the idea that having more people in the organization who differ widely in demographic characteristics could lead to more interpersonally-directed negative emotion due to decreased interpersonal attraction (derived from the matching hypothesis on interpersonal attraction; Folkes, 1982) and increased difficulties in interpersonal communication, leading to greater mistrust, interpersonal conflict, and aggressive behavior (Neuman & Baron, 1998). These hypotheses have found some support in the extant research literature; increased diversity in the workforce positively predicted workplace aggression that was both experienced and witnessed by employees (Baron & Neuman, 1996). Finally, Neuman and Baron (1998) discuss how social norms could influence the level of aggression typical to an organization. For example, a norm of aggressive behavior in the workplace, a norm of there being a competitive environment, or the violation of important social norms could potentially lead to the greater likelihood of retaliatory behavior (p. 403).

**Individual.** In addition to these situational antecedents, several individual-level variables have been examined as antecedents to CWB and workplace aggression. One example of such variables is dispositional, stable personality traits, such as trait anger and trait anxiety, which have been found to positively predict aggression in tests of the frustration-aggression model (Fox & Spector, 1999). Other research has shown that employees who score high on measures of trait anger are more likely to behave aggressively in the workplace than those who score low on measures of trait anger (e.g. Douglas & Martinko, 2001). In contrast to these
findings, one study found only weak support for the hypothesis that trait anger and trait anxiety would moderate between job stressors and CWB (Fox et al., 2001). However, the authors noted that this could have been due to the conservative alpha level used in the significance tests. The strongest support for the relevance of these two personality variables to the construct of workplace aggression comes from a recent meta-analysis which showed moderate positive correlations between these two personality traits and workplace aggression directed toward both interpersonal and organizational targets (Hershcovis et al., 2007). The Type A personality and behavior pattern has also been shown to be related to workplace aggression. Employees who exhibited the Type A pattern (e.g. ambitious, impatient, and competitive) were more likely to report having engaged in workplace aggression against other employees (Baron et al., 1999). Similarly, Fox and colleagues have shown that short-term negative emotions, which are not as stable as dispositions or general affect, mediate the relationship between organizational constraints and instances of performing CWB (Fox & Spector, 1999; Fox et al., 2001).

Demographic characteristics (such as gender, which was addressed previously) have also been linked to CWB. Another example is that age has been found to negatively predict aggressive behavior in the workplace (Baron et al., 1999), as well as CWBs in general (Berry, Ones, & Sackett, 2007).

**Present Study**

The purpose of this study is to bring together the research on gender stereotypes and aggression at work in order to determine if these stereotypes have an effect on performance ratings of employees who perform interpersonal aggressive behaviors at work. In particular, the stereotypes in question will be the male stereotype of being more physically aggressive, and the female stereotype of being more relationally aggressive. The study will be a vignette study, with
participants rating fictional employees on their work performance as servers in a restaurant. The aggressive behavior of the employees (i.e., physical or relational) and the genders of the people in the vignettes will be manipulated across the study conditions, whereas the employee’s task performance of their main job duties outside of the CWB episode will be controlled across conditions. Participant gender will serve as a subject variable. The study design and variables are described in more detail below.

**Gender and performance hypotheses.** Although these behaviors should be avoided in the workplace as a general rule, it is possible that male employees who perform physically aggressive behaviors will be perceived as simply following the stereotype of how males typically behave. Thus, a male employee’s performance ratings may be higher after behaving in a physically aggressive manner compared to female employees who behave this way (i.e., males’ performance ratings could be less negatively affected by physically aggressive behavior). There is no such stereotype for females regarding physically aggressive behavior, and as such, female employees would not be expected to behave in such ways toward other employees. Female employees who behave physically aggressively toward others could, in fact, be violating norm prescriptions that they are supposed to be friendly and helpful toward others, which are typically penalized (Cialdini & Trost, 1998; Heilman & Chen, 2005). Similarly, it is possible that those females who perform relationally aggressive behaviors at work will be perceived as simply following the stereotype of how females typically behave. A female employee’s performance ratings may therefore be higher after behaving in a relationally aggressive manner compared to male employees who behave this way (i.e., females’ performance ratings could be less negatively affected by relationally aggressive behavior). There is no such stereotype for males regarding relationally aggressive behavior, and as such, male employees would not be expected to behave
in such ways toward other employees. This would coincide with previous findings (discussed previously) showing that identical aggressive acts are judged differently depending on the gender of the actor (Felson & Feld, 2009). Thus, the following hypotheses are proposed:

**H1a:** Engaging in physically aggressive CWB will result in lower performance ratings for women compared to men, because physical aggression is in line with a stereotype of men’s behavior.

**H1b:** Engaging in relationally aggressive CWB will result in lower performance ratings for men compared to women, because relational aggression is in line with a stereotype of women’s behavior.

Because these hypotheses are based on stereotypes of men and women’s typical or appropriate behavior, which should influence the rating given by the participant regardless of the participant’s gender or the employee who is not being rated (i.e., the target of the aggression), there are no hypothesized effects of participant gender and target gender on performance ratings. Additionally, these hypothesized effects are in the opposite direction of the hypothesized effects on acceptability and perceived aggressiveness (see H3a and H4a below). However, in spite of physical aggression being rated as less acceptable for men than women and relational aggression being rated as less acceptable for women than men, this information may not be weighted as much when making the performance ratings because the stereotypes associated with these behaviors at least somewhat discount the personal responsibility of the employee for that behavior.

**Gender and perception of aggression hypotheses.** Another factor that could influence the effects of gender stereotypes on appraisals of aggressive behavior is the gender of the initiator (i.e., the aggressor) and the target of the aggressive behavior. In the previous iteration of
this study, the gender of the target was left ambiguous so as not to influence the results. However, it is likely the results would differ if the aggression target was male versus female. In terms of the target of physical aggression, the focus of the research literature has been on male aggressors and the differential effects of target gender. One line of research examines this phenomenon from the threat model perspective (see discussion above). According to the threat model, males are more of a threatening target of aggression than females, as they are stronger and more likely to retaliate physically (Baron & Richardson, 1994; Campbell, 1993). Thus, males are more likely to be physically aggressive towards males because they pose a greater threat of physical retaliation, and females are more likely to be physically aggressive towards females because they pose a smaller threat of physical retaliation. In support of this, male-male aggressive interactions have been found to be more threatening compared to other gender combinations (Richardson, Hammock, Smith, Gardner, & Signo, 1994), as well as less moral (Kanekar, Nanji, Kolsawalla, & Mukerji, 1981), and males are considered to be more acceptable targets of retaliation than females (Harris, 1991). In terms of relational aggression, girls in a grade-school sample were viewed more negatively for using relational aggression than for using physical aggression, which was not the case for boys (Rys & Bear, 1997).

Taking this a step further, other studies have examined the differences in the perceptions of aggression when the gender of the participant, the aggressor, and the target differ. For example, Harris and Knight-Bohnhoff (1996) examined all of these variables at once and their effect on how participants responded to descriptions of physically aggressive behavior. Where differences existed, female participants viewed aggression worse than male participants, aggression from males was viewed to be worse than aggression from females, and aggression towards females was viewed to be worse than aggression towards males. Basow et al. (2007)
extended this study by including relational aggression as an additional type of aggression in the study, and found that physical aggression was judged to be less acceptable and more aggressive when it was directed at females as compared to males, as well as that female participants judged all instances of aggression worse than male participants. This study also concluded that male-on-female aggression of any sort was judged to be the least acceptable compared to all other gender-dyad combinations. Another similar finding was noted previously, where Felson and Feld (2009) found that instances of male-on-female aggression were judged more harshly and to be more serious than when the genders were reversed. In particular, Basow et al., (2007) found that male physical aggression was perceived as less acceptable and more aggressive than female physical aggression. However, the opposite pattern of results held true for relational aggression, where female relational aggression was perceived as less acceptable and more aggressive than male relational aggression. Taken together, the research on gender and perceptions of aggression suggest the following hypotheses:

*H2a:* Female participants will perceive physical aggression as less acceptable and more aggressive than male participants.

*H2b:* Female participants will perceive relational aggression as less acceptable and more aggressive than male participants.

*H3a:* For physical aggression, conditions with male aggressors will be rated as less acceptable and more aggressive than conditions with female aggressors.

*H3b:* For relational aggression, conditions with female aggressors will be rated as less acceptable and more aggressive than conditions with male aggressors.
**H4a:** Conditions portraying physical aggression against female targets will be rated as less acceptable and more aggressive than conditions portraying physical aggression against male targets.

**H4b:** There will be no effect of target gender in the relational aggression conditions.

**H5a:** Male-on-female aggression will be rated as less acceptable and more aggressive than female-on-male aggression, male-on-male aggression, and female-on-female aggression, for both types of aggression.

**H5b:** Male-on-female physical aggression will be rated as less acceptable and more aggressive than male-on-female relational aggression.

In the case of the perceived aggressiveness variables, the previous studies did not support the hypothesized effects in H2 and H5, although they did find effects for acceptability. However, those studies had much smaller sample sizes than this study, and inadequate power may have resulted in some Type II errors. Additionally, these previous studies only looked at a single perceived aggressiveness/harm variable, whereas here the perceived aggressiveness is split into two variables, one of the aggressor, and one of the act, in order to capture more nuanced differences between the study conditions.

**Aggression and gender perception hypotheses.** An additional hypothesis can be made based on the connection between the gender stereotypes of male and female aggressive behavior described previously. Males who behave in a physically aggressive manner are more closely conforming to the male stereotype, and it is possible that they could be perceived as more masculine, less feminine, and better fitting with the cultural ideal of their gender than males who are not physically aggressive when given the chance to do so. Similarly, females who behave in
a relationally aggressive manner are more closely conforming to the female stereotype, and it is possible that they could be perceived as less masculine, more feminine, and better fitting with the cultural ideal of their gender than females who do not behave relationally aggressive when given the chance to do so. Thus:

**H6a**: Males who exhibit physical aggression will be rated as more masculine, less feminine, and more highly fitting their gender ideal than males who exhibit relational aggression.

**H6b**: Females who exhibit relational aggression will be rated as less masculine, more feminine, and more highly fitting their gender ideal than females who exhibit physical aggression.

**Shifting standards research question.** Drawing connections between general stereotypes and specific judgments of others is a commonly studied phenomenon. One theory that has focused on this is the shifting standards model (Biernat & Manis, 1994; Biernat, Manis, & Nelson, 1991). This theory states that the standards used to judge an individual member of a stereotyped group on a stereotyped dimension will vary based on the individual’s group membership. For example, when judging athletic ability, a woman’s ability would be judged according to the (presumably lower) stereotyped standards of women, whereas a man’s ability would be judged according to the (presumably higher) stereotyped standards of men, even when their athletic ability was identically described.

This effect has been found across a variety of individual characteristics and stereotyped groups, including in a study on athletic ability that produced the results described above (Biernat & Vescio, 2002). The authors found that male and female athletes who were described as having an identical level of athletic ability were judged differently, with the women judged as exhibiting
lower levels of athletic performance. Another characteristic to which the shifting standards model seems to apply is job applicant competence, where participants use lower standards when judging female or Black applicants as compared to male or White applicants (Biernat & Kobrynowicz, 1997). Finally, a study in the parenting domain showed that when mothers and fathers are described as being “very good” parents, the mothers were judged to have performed more parenting behaviors than the fathers, indicating that men have lower standards for what makes them good parents than women (Kobrynowicz & Biernat, 1997). Being a parent has also been found to interact with gender when making employment decisions, such that fathers are held to lower standards for good performance compared to mothers or men without children (Fuegen, Biernat, Haines, & Deaux, 2004).

The shifting standards model is particularly relevant for this study, given its focus on the effect of stereotypes on performance. It is therefore reasonable to expect that because there is an aggressiveness stereotype associated with being male, the standards that participants use to judge aggressiveness may change when judging the identical aggressive behavior of male versus female employees. Thus, a male employee may be judged as less aggressive than a female employee who performs the same action, because it is more outside of the expected norm of behavior for a female employee to behave aggressively. However, previous research has noted that the shifting standards effect tends to be more substantial when objective judgments are used rather than subjective judgments (Biernat & Manis, 1994; Kobrynowicz & Biernat, 1997). This is because people can interpret the subjective anchors on subjective scales (such as Likert scales) using differing standards for different subgroups, while objective anchors on objective scales (such as behavioral anchored rating scales) have grounding in external reality, and provide opportunity for individual differences of interpretation. Because the Likert responses used in this
study are subjective scales, the shifting standards effect could be attenuated. In addition, the literature shows that male-on-female aggression is perceived to be more aggressive than male-on-male aggression (e.g., Basow et al., 2007, Harris & Knight-Bohnhoff, 1996). Given these contrasting effects, a formal hypothesis regarding the presence of the shifting standards effect in this study is not being proposed. Rather, this effect will be examined through the research question:

\textit{RQ1}: Do shifting standards cause male aggression to be rated as less aggressive than equivalent examples of female aggression? Or do perceptions of the greater severity of male aggression cause male aggression to be rated as more aggressive than equivalent examples of female aggression (i.e., the results hypothesized in H3a and H3b)?

\textbf{Design}

This study is a 2 x 2 x 2 x 2 factorial between-subjects design resulting in 16 study conditions, with the independent variables being gender of the employee being rated (i.e., the aggressor), gender of the target of the aggression in the vignette, gender of the participant, and the type of aggressive behavior (physical, relational). Aside from participant gender, participants were randomly assigned to the study conditions. Roughly equal numbers of male and female participants were recruited in an effort to balance the number of participants in the levels of that particular IV (see below).
Chapter Two

Method

Participants

Participants were recruited from an online pool of adults through Amazon’s Mechanical Turk (MTurk) tool. MTurk has proven to be an effective participant recruitment tool that results in more diverse samples than typical internet or college samples, as well as data with comparable reliability to those obtained with more traditional methods (e.g., Buhrmester, Kwang, & Gosling, 2011). The participants were offered $0.50 in exchange for participation in the study. The MTurk task contained a link to an external online survey hosted by Qualtrics, which contained the study vignettes and scales described below. A power analysis prior to the data collection determined that at a small effect size ($f^2 = .02$), 480 participants would provide sufficient power (.86) for this study. This would have allowed for 30 participants per condition (16 conditions). In multivariate designs, a group of 10 to 20 is recommended in order to allow for the normal approximation of moderately non-normal distributions (Stevens, 2009, p.221). The initial sample collected was 649 participants. The oversampling was due to trying to get at least 30 usable participant responses per condition, which depended on getting enough male and female participants into the right conditions and those participants passing the manipulation check questions.

After removing participants who did not pass the manipulation checks from the sample, the final number of participants was 552. The gender of the participants was almost
perfectly balanced, with 277 males (50.2%) and 275 females (49.8%). The average age of the sample was 36.1 years (SD = 12.4), although two participants chose not to respond to the age question. The ethnic makeup of the sample was as follows: 47 Asian/Pacific Islander participants (8.5%), 31 Black/African American participants (5.6%), 27 Hispanic/Latino participants (4.9%), 4 Native American participants (0.7%), 427 White/Caucasian participants (77.4%), 15 Other/More than one applies participants (2.7%). One participant chose not to respond to the ethnicity question. Participants came from a fairly even distribution in terms of regions of the United States: 138 participants (25.0%) were from the Northeast, 186 participants (33.7%) were from the South, 109 participants (19.7%) were from the Midwest, and 116 participants (21.0%) were from the West. The participants had an average of 15.6 years (SD = 11.6) of work experience. Of those participants that had supervisory experience (n = 353), the average amount of supervisory experience was 5.6 years (SD = 5.7). One participant chose not to respond to the work experience question and two participants chose not to respond to the supervisory experience question.

Procedure

The online survey contained the information sheet explaining the purpose of the study, background information about the employee to be rated (i.e., the aggressor), supervisor comments about that employee’s performance, a description of an interpersonal conflict episode, the study scales asking participants to evaluate the rate/aggressor on the dependent variables, and demographic items. The employees described in the vignettes were presented as servers working in an Italian restaurant. The survey randomly assigned participants to one of eight versions of the vignettes, which varied by aggression type, gender of the aggressor, and aggressor of the target (2x2x2). All participants then saw the same set of items after the vignettes, with employee
gender adjusted as appropriate. Copies of the vignettes and survey questions are found in Appendix B (physical aggression condition) and Appendix C (relational aggression condition). Following the data collection, the responses for the manipulation checks and the feasibility checks were screened as described below, which were followed by the main analyses of the study.

**Independent Variable Manipulations**

**Gender of participant.** The gender of the participant is a subject variable. Roughly equal numbers of male and female participants were recruited in order to attempt to balance the number of participants across conditions.

**Gender of aggressor.** The gender of the aggressor (i.e., the employee to be rated) was varied by the name (James or Sarah) and personal pronouns in the performance vignettes and employee information sheet.

**Gender of target.** The gender of the target of the aggression was varied by the name (Mike or Amanda) and personal pronouns in the performance vignettes and employee information sheet.

**Aggression type.** There were two aggression conditions, a physical aggression condition and a relational aggression condition. Both conditions included basic information about the aggressor employee, supervisor comments about his or her performance, and an employee incident report describing an interpersonal conflict episode. The conflict episode consisted of the target employee mistakenly taking a meal intended for the aggressor employee’s table while both employees were in the kitchen picking up meals during the dinner rush. An argument ensues about to whom the meal belongs, which escalates into the employees yelling at each other, and culminates in the aggressive behavior being performed by the aggressor employee. In the
physical aggression condition, the aggressor employee punched the target employee in the arm after the argument. In the relational aggression condition, the aggressor employee left the kitchen and spread a rumor about the target employee.

**Manipulation checks.** Three questions served as manipulation checks for the aggression conditions: “Was there an argument in the incident report?”, “Did the employee hit someone?”, and “Did the employee spread rumors about someone?”. Participants responded either “Yes”, “No”, or “Don’t Know”. The purpose of these questions was to make sure the participants were paying attention to the various types of information presented in the study about the employee whom they rated. Participants in all conditions should have responded “Yes” to the first question. Participants in the physical aggression conditions should have responded “Yes” to the second question and “No” to the third question. Participants in the relational aggression conditions should have responded “No” to the second question and “Yes” to the third question. Participants who did not respond appropriately to these questions (given their randomly assigned condition) or who selected “Don’t Know” for any of the questions were removed from the sample. Interestingly, the conditions with the most flagged participants were the two conditions where male participants saw physical aggression from a female ($n = 14, 12$), and the condition where female participants saw physical aggression from a man toward a female ($n = 11$). All other conditions had 7 or fewer flagged participants.

**Feasibility checks.** Two questions served to ensure that the interactions described in the vignettes were possible given the circumstances of the situations described in the vignettes: “Are these employee interactions possible in this context?” and “Is it conceivable that someone in this situation could act this way?”. The response scales for both items were “Yes”, “No”, or “Don’t Know”. Participants in the final sample thought that the situations and conflicts described in the
vignettes were feasible for the most part, with 512 participants (92.8%) responding “Yes” to the first question, and 509 participants (92.2%) responding “Yes” to the second question. Fourteen participants (2.5%) responded “No” and 26 participants (4.7%) responded “Don’t Know” to the first question, while 29 participants (5.3%) responded “No” and 14 participants (2.5%) responded “Don’t Know” to the second question, indicating that the vast majority of participants (more than 92% for both questions) did not think that the circumstances described in the vignettes were unrealistic to the point of their having no chance of happening in reality.

Initially, the questions used for this purpose were: “Are these interactions reasonable?” and “Would you expect this sort of reaction given the situation?”, and were answered using the same response scale described above. However, after a small pilot sample of six participants responded “No” to both questions, the items were changed to those mentioned previously (these participants were not included in the final sample). The purpose of these questions was to make sure that the circumstances described in the vignettes were believable and could potentially happen in an actual restaurant context. The revised items seemed to get at this better than the original items, which seemed to tap more into what the participants thought were appropriate reactions to the interpersonal conflict episode. Given this, the two original items were revised slightly and used as additional items for the acceptability of aggression scale, as this scale originally had only one item. These three items together had a good level of reliability, as described below.

**Dependent Variables**

**Performance rating.** Job performance was measured with three items used in Heilman and Chen (2005): “Overall, how would you rate this employee’s performance over the past year?”, “In your opinion, how likely is it that this employee will advance in the company?”,

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and “Give your assessment of the individual’s likelihood of success.” Each item was measured on a 7-point Likert scale with 1 indicating either poor (first item) or very unlikely, and 7 indicating either excellent (first item) or very likely. The reliability for this scale was $\alpha = .84$.

**Acceptability of aggression.** Initially, the acceptability of aggression variable was measured using a single item similar to how Basow et al. (2007) measured this variable: “How acceptable do you consider [X]’s behavior toward [Y]?”, with X and Y taking the place of the employee names across the two gender manipulations. However, it is not possible to assess reliability of single-item measures. Given this, and the fact that the original feasibility check items seemed to be tapping more into the appropriateness of the aggressive behavior rather than how realistic it was, these items were rephrased and combined with the extant acceptability item to form a three-item acceptability scale. The revised items were: “Was [X]’s behavior reasonable?” and “Would you expect this sort of reaction from [X] given the situation?”. These items were measured on a 7-point Likert scale with 1 indicating to a small extent, and 7 indicating to a large extent. The reliability for the three items was $\alpha = .72$.

**Perceived aggressiveness of aggressor.** This variable was measured using a single item from Basow et al. (2007)’s perceived aggression/harm scale, and a new item created for this study. The extant item is “How much do you think [X] wants to hurt [Y]?”, and the new item is “How aggressive does [X] seem as a person?”, with X and Y taking the place of the employee names across the two gender manipulations. These items were measured on a 7-point Likert scale with 1 indicating to a small extent, and 7 indicating to a large extent. The reliability for this scale was $\alpha = .62$.

**Perceived aggressiveness of act.** This variable was measured using three items from Basow et al. (2007)’s perceived aggression/harm scale: “How aggressive do you consider [X]’s
toward [Y]?”, “How harmful do you consider [X]’s toward [Y]?”, and “How distressed do you think [Y] is by [X]’s behavior?”, with X and Y taking the place of the employee names across the two gender manipulations. These items were measured on a 7-point Likert scale with 1 indicating to a small extent, and 7 indicating to a large extent. The reliability for this scale was $\alpha = .73$.

Issues have been brought up with popular existing scales that measure gender identity (Palan, Areni, & Kiecker, 1999). Additionally, most existing scales measure attitudes towards men, roles, or norms for men rather than the congruence of a specific individual’s behavior with their gender ideal (Thompson, Pleck, & Ferrera, 1992). Thus, the remaining three dependent variables were measured with items created for this study:

**Perceived masculinity.** The perceived masculinity of the aggressor was rated using three items: “How masculine did [X] seem to you?”, “How “manly” did [X] behave?”, and “To what extent did [X]’s behavior align with your ideas of masculinity?”, with X taking the place of the employee names across the aggressor gender manipulation. These items were measured on a 7-point Likert scale with 1 indicating not at all, and 7 indicating very much. The reliability for this scale was $\alpha = .90$.

**Perceived femininity.** The perceived femininity of the aggressor was rated using three items: “How feminine did [X] seem to you?”, “How “womanly” did [X] behave?”, and “To what extent did [X]’s behavior align with your ideas of femininity?”, with X taking the place of the employee names across the aggressor gender manipulation. These items were measured on a 7-point Likert scale with 1 indicating not at all, and 7 indicating very much. The reliability for this scale was $\alpha = .93$. 
Perceived gender ideal. The extent to which the aggressor employee behaved in a manner consistent with the ideals of his/her gender was rated using three items: “To what extent did [X]’s behavior conform to the cultural ideals of his/her gender?”, “To what extent would other men/women feel that X was a good representative of his/her gender?”, and “To what extent did [X] come across as “a real man/woman”?”, with X taking the place of the employee names across the aggressor gender manipulation. These items were measured on a 7-point Likert scale with 1 indicating not at all, and 7 indicating very much. The reliability for this scale was α = .80.
Chapter Three

Results

Analysis Plan

The first step in the analyses was to test the statistical assumptions of the multivariate analyses (independence, normality, homogeneity of variance). The next step was to analyze the manipulation check data to ensure that the manipulations worked as intended and perform the descriptive statistic and correlation analyses. A four-way factorial MANOVA and the related follow up tests tested for effects of the four IVs on acceptability, the two perceived aggressiveness variables, performance, and shifting standards, and another four-way factorial MANOVA and the related follow up tests tested for effects on masculinity, femininity, and gender ideal. The follow up tests consisted of ANOVAs that included all four independent variables and the significant interactions from the MANOVA tests, and Tukey tests to test for cell differences. The follow up tests used a Bonferroni approach in adjusting the alpha levels of the tests to ensure the experiment-wide alpha level remained at .05.

Tests of Statistical Assumptions

In order to assess the satisfaction of two of the three statistical assumptions required for the MANOVA analysis, the data were subjected to tests of normality and homogeneity of variance. The third assumption of statistical independence is generally considered to be the most important given the serious consequences for violating it (Stevens, 2009), and the design of the study must be examined to determine whether or not this assumption was satisfied. The
assumption of independence was satisfied due to the fact that each participant only took the study survey once, i.e., there are no participants who were in more than one condition.

Given that the analyses testing the study hypotheses were multivariate in nature, it was necessary to consider the multivariate aspects of the assumptions for normality and homogeneity of variance. Multivariate normality tests were conducted in SAS 9.2. The test for multivariate skewness was significant, $\chi^2 (10) = 8.97, p < .05$. The test for multivariate kurtosis was significant as well, with the confidence interval for the standardized $b_{2,p}$ statistic being (5.88, 6.85), which is above the 1.96 criterion for significance at the .05 level. These violations of normality raise some potential concern for the conclusions that can be drawn from analyses on these variables. However, given that the statistical analyses in this study are fairly robust to violations of non-normality and that moderately non-normal distributions can approximate a normal distribution in groups as small as 10 to 20 (Stevens, 2009, p.221), these violations of the normality assumption should not have a large effect on the following analyses given that the smallest cell size among the 16 conditions is 30 participants.

The multivariate analogue of the homogeneity of variance assumption in univariate analyses is that the covariance matrices should be homogeneous. Box’s M Test is a commonly used test that examines this assumption by converting the M test statistic into either a chi-square or F test. For this test, the null hypothesis is that the covariance matrices are equal. Using PROC DISCRIM in SAS 9.2, Box’s M Test for equality in covariance matrices of the dependent variables grouped by participant gender resulted in a test statistic of $\chi^2 (28) = 38.05, p > .05$, indicating that the covariance matrices are likely equal (or at least, the null hypothesis of non-equality cannot be rejected). Box’s M Test for equality in covariance matrices of the dependent variables grouped by aggression type resulted in a test statistic of $\chi^2 (28) = 67.59, p < .05,$
indicating that the covariance matrices are not equal. Box’s M Test for equality in covariance matrices of the dependent variables grouped by aggressor gender resulted in a test statistic of $\chi^2(28) = 371.55, p < .05$, indicating that the covariance matrices are not equal. Finally, Box’s M Test for equality in covariance matrices of the dependent variables grouped by target gender resulted in a test statistic of $\chi^2(28) = 48.04, p < .05$, indicating that the covariance matrices are not equal. However, if the number of participants in each condition are approximately the same (largest/smallest < 1.5), the statistical analyses are robust to violations of this assumption (Stevens, 2009, p.227). Given that the largest/smallest cell size ratio (43/30) is less than 1.5, these violations of multivariate homogeneity should not have a large effect on the following analyses. Additionally, it should be noted that Box’s M Test is very sensitive to non-normality, and will give a significant result in non-normal data even if the covariance matrices are equal (Stevens, 2009).

**Descriptive Statistics**

Means, standard deviations, and intercorrelations for participant gender (because it is an IV), age, work experience, supervisory experience, and the dependent variables can be found in Table 1. Neither work experience nor supervisory experience had substantial relationships with any of the dependent variables. Furthermore, the variables in the first set of dependent variables (performance rating, acceptability of aggression, perceived aggressiveness of the act, perceived aggressiveness of the aggressor) had, in most cases, stronger correlations with each other than with the second set of dependent variables (perceived masculinity, perceived femininity, perceived gender ideal), and vice versa, which allows for the separation of the dependent variables into the two MANOVAs described above. Cell sizes, means, and standard deviations of the dependent variables listed by condition can be found in Table 2. Participant responses on
the dependent variable items were summed to form scale scores for those variables, which were used in the main study analyses described below.

**MANOVAs and Follow Up Tests**

**MANOVA for Primary DVs.** A four-way multivariate analysis of variance was conducted using Wilk’s Lambda test statistic to test the effects of the independent variables of participant gender, aggression type, aggressor gender, target gender, and their interactions on the set of the performance rating, acceptability of aggression, and two perceived aggressiveness dependent variables. The MANOVA showed significant main effects for aggression type (\(\Lambda = 0.99, F(4, 533) = 0.73, p < .05\)) and target gender (\(\Lambda = 0.95, F(4, 533) = 6.83, p < .05\)), and a significant interaction effect for aggression type x aggressor gender (\(\Lambda = 0.97, F(4, 533) = 3.65, p < .05\)). All other main effects and interaction effects for this MANOVA were not significant. A full set of test statistics for this analysis can be found in Table 3).

**Follow Up Tests for Significant Main Effects.** In order to assess which of the dependent variables in the MANOVA were showing significant effects, a series of univariate ANOVAs and follow up Tukey tests were conducted, using a Bonferroni correction of the alpha levels of the tests to ensure that the experiment-wise error rate stayed at .05. Given that there were four dependent variables in this analysis, the alpha level for these ANOVAs and Tukey tests was set at .0125 (.05/4). In order to determine the nature of the univariate main effects on the dependent variables, a univariate ANOVA and follow up Tukey tests were conducted for each dependent variable using the independent variables of aggression type and target gender, as these were the only independent variables identified as having significant multivariate main effects. The univariate ANOVAs of performance rating (\(F(2, 549) = 4.57, p < .0125\)), acceptability of aggression (\(F(2, 549) = 8.35, p < .0125\)), and perceived aggressiveness of act
(F(2, 549) = 21.24, p < .0125) were all significant. The univariate ANOVA of perceived aggressiveness of the aggressor was not significant (F(2, 549) = .79, p > .0125), so no Tukey tests were conducted for this dependent variable.

Follow up Tukey tests for performance rating showed no mean difference for aggression type, but target gender had a mean difference such that aggression against male targets resulted in significantly higher performance ratings than aggression against female targets (mean difference = .76). Follow up Tukey tests for acceptability of aggression showed no mean difference for aggression type, but target gender had a mean difference such that aggression against male targets was rated as significantly more acceptable than aggression against female targets (mean difference = .91). Follow up Tukey tests for the perceived aggressiveness of the act showed significant mean differences for both aggression type and target gender. For aggression type, physical aggression was perceived as significantly more aggressive than relational aggression (mean difference = 1.54). For target gender, aggression against females was perceived as significantly more aggressive than aggression against males (mean difference = 1.14). However, the significant main effects need to be examined in the context of the significant interaction, and the hypothesized effects in the study are interaction effects, so the interaction effects will be the main focus of analysis and interpretation.

**Follow Up Tests for Significant Interaction Effects.** In order to assess the nature of the univariate effect that the aggression type x aggressor gender interaction (the only interaction showing a significant multivariate effect) was having on the dependent variables, the study conditions were dummy coded to the four combinations of the levels of these two variables (i.e., physical aggression from a male, physical aggression from a female, relational aggression from a male, or relational aggression from a female). This dummy-coded variable was then used as the
independent variable in a one-way factorial ANOVA on each dependent variable (using the Bonferroni-adjusted alpha level), and follow up Tukey tests identified the conditions with means significantly different from one another. The one-way ANOVAs on performance rating \( (F(3, 548) = 1.57, p > .0125) \) and acceptability of aggression \( (F(3, 548) = 3.41, p > .0125) \) were not significant, so no follow up Tukey tests were conducted for these variables. However, the one-way ANOVAs on perceived aggressiveness of the act \( (F(3, 548) = 4.10, p < .0125) \) and perceived aggressiveness of the aggressor \( (F(3, 548) = 1.57, p < .0125) \) were significant. Follow up Tukey tests on the perceived aggressiveness of the act variable showed that physical aggression from males was perceived as significantly more aggressive than relational aggression from males \( \) (mean difference = 2.26), physical aggression from males was perceived as significantly more aggressive than relational aggression from females \( \) (mean difference = 1.76), and physical aggression from females was perceived as significantly more aggressive than relational aggression from males \( \) (mean difference = 1.30). The other mean comparisons were not significant \( \) (see Table 4). Follow up Tukey tests on the perceived aggressiveness of the aggressor variable showed that females who performed relational aggression were perceived as being significantly more aggressive than females who performed physical aggression \( \) (mean difference = 1.02). The other mean comparisons were not significant \( \) (see Table 5).

**Study Hypotheses H1-5 and RQ.** In terms of the study hypotheses, because the aggressor type x aggressor gender interaction did not have a significant effect on the performance rating variable, \( H1a \) and \( H1b \) were not supported. Because the participant gender x aggression type interaction did not have any significant effects among this set of dependent variables, \( H2a \) and \( H2b \) were not supported. The Tukey mean comparisons for the aggression type x aggressor gender interaction did not show mean differences in either acceptability of
aggression or the perceived aggressiveness variables between physical aggression from males and physical aggression from females, meaning that $H3a$ was not supported, or between relational aggression from males and relational aggression from females, meaning that $H3b$ was not supported. The aggression type $\times$ target gender interaction did not have any significant effects among this set of dependent variables, meaning that $H4a$ was not supported, although $H4b$ (the prediction of no effect) was supported. The aggressor gender $\times$ target gender interaction also did not have any significant effects among this set of dependent variables, meaning that $H5a$ was not supported. Furthermore, the three-way interaction of aggression type $\times$ aggressor gender $\times$ target gender did have any significant effects among this set of dependent variables, meaning that $H5b$ was not supported. Finally, there were no significant mean differences between male and female aggressors who performed either physical aggression or relational aggression, so no significant effect was found pertaining to the shifting standards research question.

**MANOVA for Remaining DVs.** A second MANOVA was conducted to test the effects of participant gender, aggression type, aggressor gender, target gender, and their interactions on the set of perceived masculinity, perceived femininity, and perceived gender ideal. The MANOVA showed significant main effects for all of the independent variables: participant gender ($\Lambda = 0.969, F(3, 534) = 6.98, p < .05$), aggression type ($\Lambda = 0.89, F(3, 534) = 20.97, p < .05$), aggressor gender ($\Lambda = 0.90, F(3, 534) = 18.81, p < .05$), and target gender ($\Lambda = 0.96, F(3, 534) = 7.79, p < .05$). Additionally, significant interaction effects were found for aggression type $\times$ aggressor gender ($\Lambda = 0.94, F(3, 534) = 12.32, p < .05$), aggression type $\times$ target gender ($\Lambda = 0.98, F(3, 534) = 3.13, p < .05$), and aggressor gender $\times$ target gender ($\Lambda = 0.96, F(3, 534) =
7.38, p < .05). All other interaction effects for this MANOVA were not significant. A full set of test statistics for this analysis can be found in Table 6).

**Follow Up Tests for Significant Main Effects.** In order to assess which of the dependent variables in the MANOVA were showing significant effects, a series of univariate ANOVAs and follow up Tukey tests were conducted, using a Bonferroni correction of the alpha levels of the tests to ensure that the experiment-wise error rate stayed at .05. Given that there were three dependent variables in this analysis, the alpha level for these ANOVAs and Tukey tests was set at .0167 (.05/3). In order to determine the nature of the univariate main effects on the dependent variables, a univariate ANOVA and follow up Tukey tests were conducted for each dependent variable using all four independent variables of aggression type and target gender, as all of the independent variables were identified as having significant multivariate main effects. The univariate ANOVAs of perceived masculinity ($F(4, 547) = 10.73, p < .0167$), perceived femininity ($F(4, 547) = 28.88, p < .0167$), and perceived gender ideal ($F(4, 547) = 5.01, p < .0167$) were all significant.

Follow up Tukey tests for perceived masculinity showed significant mean differences for all independent variables. For participant gender, male participants rated the employees as significantly more masculine than female participants (mean difference = 1.56). For aggression type, physical aggression was perceived as significantly more masculine than relational aggression (mean difference = 1.36). For aggressor gender, male aggressors were perceived as significantly more masculine than female aggressors (mean difference = .95). Finally, for target gender, aggression against male targets was perceived as significantly more masculine than aggression against female targets (mean difference = 1.12). Follow up Tukey tests for perceived femininity only showed significant mean differences for aggression type and aggressor gender.
For aggression type, relational aggression was perceived as significantly more feminine than physical aggression (mean difference = 2.87). For aggressor gender, female aggressors were perceived as significantly more feminine than male aggressors (mean difference = 2.590. Follow up Tukey tests for perceived gender ideal only showed a significant mean difference for target gender, such that aggression against male targets was rated as being more closely aligned with the gender of the aggressor than aggression against female targets (mean difference = 1.21). As for the first MANOVA, the effects of interest in relation to these dependent variables are the interaction effects, the univariate analyses of which are presented below.

**Follow Up Tests for Significant Interaction Effects.** In order to assess the pattern of univariate effects that the significant interactions of aggression type x aggressor gender, aggression type x target gender, and aggressor gender x target gender were having on the dependent variables, the study conditions were dummy coded to the four combinations of the levels of the two independent variables within each interaction. For each interaction, these dummy-coded variables were then used as the independent variable in a one-way factorial ANOVA on each dependent variable (using the Bonferroni-adjusted alpha level), and follow up Tukey tests identified the conditions with means significantly different from one another.

In order to test the univariate effects of the aggression type x aggressor gender interaction, the study conditions were coded as physical aggression from a male, physical aggression from a female, relational aggression from a male, or relational aggression from a female. The one-way ANOVA for perceived masculinity was significant ($F(3, 548) = 9.31, p < .0167$). Follow up Tukey tests showed that females who performed relational aggression were perceived as significantly less masculine than females who performed physical aggression (mean difference = -2.58), males who performed physical aggression (mean difference = -2.45), and
males who performed relational aggression (mean difference = -2.17). The other mean comparisons were not significant (see Table 7). The one-way ANOVA for perceived femininity was also significant ($F(3, 548) = 36.42, p < .0167$). Follow up Tukey tests showed that females who performed relational aggression were perceived as significantly more feminine than males who performed relational aggression (mean difference = 2.75), females who performed physical aggression (mean difference = 3.01), and males who performed physical aggression (mean difference = 5.75). Additionally, males who performed relational aggression were perceived as significantly more feminine than males who performed physical aggression (mean difference = 3.00), and females who performed physical aggression were perceived as significantly more feminine than males who performed physical aggression (mean difference = 2.74). The remaining mean comparison was not significant (see Table 8). Finally, the one-way ANOVA for perceived gender ideal was significant ($F(3, 548) = 6.40, p < .0167$). Follow up Tukey tests showed that females who performed relational aggression were perceived as aligning significantly more with their gender ideal than either males who performed relational aggression (mean difference = 1.57) or females who performed physical aggression (mean difference = 1.94). The other mean comparisons were not significant (see Table 9).

In order to test the univariate effects of the aggression type x target gender interaction, the study conditions were coded as physical aggression towards a male, physical aggression towards a female, relational aggression towards a male, or relational aggression towards a female. The one-way ANOVA for perceived masculinity was significant ($F(3, 548) = 7.12, p < .0167$). Follow up Tukey tests showed that physical aggression against males was perceived as significantly more masculine than either relational aggression against males (mean difference = 1.75) or relational aggression against females (mean difference = 2.50). The other mean
comparisons were not significant (see Table 10). The one-way ANOVA for perceived femininity was also significant ($F(3, 548) = 18.83, p < .0167$). Follow up Tukey tests showed that relational aggression against females was perceived as significantly more feminine than either physical aggression against females (mean difference = 3.13) or males (mean difference = 3.61). Additionally, relational aggression against males was perceived as significantly more feminine than either physical aggression against males (mean difference = 2.59) or females (mean difference = 2.11). The other mean comparisons were not significant (see Table 11). Finally, the one-way ANOVA for perceived gender ideal was significant ($F(3, 548) = 8.59, p < .0167$). Follow up Tukey tests showed that physical aggression against females was perceived as aligning significantly less with the aggressor’s gender ideal than physical aggression against males (mean difference = -2.20), relational aggression against males (mean difference = -1.77), and relational aggression against females (mean difference = -1.57). The other mean comparisons were not significant (see Table 12).

In order to test the univariate effects of the aggressor gender x target gender interaction, the study conditions were coded as males aggressing towards males, males aggressing towards females, females aggressing towards males, and females aggressing towards females. These dummy-coded variables were then used as the independent variables in three sets of one-way factorial ANOVAs on each dependent variable (using the Bonferroni-adjusted alpha level), and follow up Tukey tests identified the conditions with means significantly different from one another. The one-way ANOVA for perceived masculinity was significant ($F(3, 548) = 6.53, p < .0167$). Follow up Tukey tests showed that male-on-male aggression was perceived as significantly more masculine than female-on-male aggression (mean difference = 1.90), male-on-female aggression (mean difference = 2.03), and female-on-female aggression (mean difference
The one-way ANOVA for perceived femininity was also significant ($F(3, 548) = 15.89, p < .0167$). Follow up Tukey tests showed that female-on-female aggression was perceived as significantly more feminine than either male-on-female aggression (mean difference = 1.99) or male-on-male aggression (mean difference = 3.28), and that female-on-male aggression was perceived as significantly more feminine than either male-on-male aggression (mean difference = 3.21) or male-on-female aggression (mean difference = 1.92). The other mean comparisons were not significant (see Table 14). Finally, the one-way ANOVA for perceived gender ideal was significant ($F(3, 548) = 8.69, p < .0167$). Follow up Tukey tests showed that male-on-female aggression was perceived as aligning significantly less with the aggressor’s gender ideal than male-on-male aggression (mean difference = -2.34), female-on-male aggression (mean difference = -1.41), and female-on-female aggression (mean difference = -1.37). The other mean comparisons were not significant (see Table 15).

**Study Hypothesis H6.** In terms of the last study hypotheses, because the Tukey mean comparisons between males who performed physical aggression and males who performed relational aggression in the aggression type x aggressor gender interaction did not show differences in perceived masculinity or perceived gender ideal, but did show differences in perceived femininity, such that males who performed physical aggression were perceived as significantly less feminine than males who performed relational aggression, $H6a$ was only partially supported. However, because the same comparisons showed that females who performed relational aggression were perceived as less masculine, more feminine, and more closely aligning with their gender ideal, $H6b$ was fully supported.
Table 1. *Descriptive Statistics and Intercorrelations.*

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*Note.* *p* < .05. **p** < .01. Values in parentheses on the diagonal are alpha coefficients of the dependent variable scales.
Table 2. Cell Means and Standard Deviations of Dependent Variables.

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Table 2 (Continued). **Cell Means and Standard Deviations of Dependent Variables.**

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Table 3. **MANOVA Results for Primary Dependent Variables**

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<td>533</td>
</tr>
<tr>
<td>AggType x TarGen</td>
<td>0.986</td>
<td>1.87</td>
<td>4</td>
<td>533</td>
</tr>
<tr>
<td>AggGen x TarGen</td>
<td>0.983</td>
<td>2.37</td>
<td>4</td>
<td>533</td>
</tr>
<tr>
<td>ParGen x AggType x AggGen</td>
<td>0.989</td>
<td>1.5</td>
<td>4</td>
<td>533</td>
</tr>
<tr>
<td>ParGen x AggType x TarGen</td>
<td>1.000</td>
<td>0.06</td>
<td>4</td>
<td>533</td>
</tr>
<tr>
<td>ParGen x AggGen x TarGen</td>
<td>0.996</td>
<td>0.5</td>
<td>4</td>
<td>533</td>
</tr>
<tr>
<td>AggType x AggGen x TarGen</td>
<td>0.995</td>
<td>0.62</td>
<td>4</td>
<td>533</td>
</tr>
<tr>
<td>ParGen x AggType x AggGen x TarGen</td>
<td>0.993</td>
<td>1.00</td>
<td>4</td>
<td>533</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .05. ParGen = participant gender, AggType = aggression type, AggGen = aggressor gender, TarGen = target gender.
### Table 4. Tukey Tests for Perceived Aggressiveness of the Act

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x AggGen</th>
<th>Mean Difference</th>
<th>98.75% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM-PF</td>
<td>0.96</td>
<td>-0.316 - 2.237</td>
</tr>
<tr>
<td>PM-RF</td>
<td>1.76*</td>
<td>0.455 - 3.075</td>
</tr>
<tr>
<td>PM-RM</td>
<td>2.26*</td>
<td>0.995 - 3.532</td>
</tr>
<tr>
<td>PF-RF</td>
<td>0.80</td>
<td>-0.483 - 2.091</td>
</tr>
<tr>
<td>PF-RM</td>
<td>1.30*</td>
<td>0.058 - 2.548</td>
</tr>
<tr>
<td>RF-RM</td>
<td>0.50</td>
<td>-0.780 - 1.777</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .0125. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, AggGen = aggressor gender.

### Table 5. Tukey Tests for Perceived Aggressiveness of the Aggressor

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x AggGen</th>
<th>Mean Difference</th>
<th>98.75% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF-PM</td>
<td>0.21</td>
<td>-0.831 - 1.243</td>
</tr>
<tr>
<td>RF-RM</td>
<td>0.76</td>
<td>-0.248 - 1.777</td>
</tr>
<tr>
<td>RF-PF</td>
<td>1.02*</td>
<td>0.002 - 2.040</td>
</tr>
<tr>
<td>PM-RM</td>
<td>0.56</td>
<td>-0.446 - 1.563</td>
</tr>
<tr>
<td>PM-PF</td>
<td>0.81</td>
<td>-0.196 - 1.836</td>
</tr>
<tr>
<td>RM-PF</td>
<td>0.26</td>
<td>-0.729 - 1.242</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .0125. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, AggGen = aggressor gender.

### Table 6. MANOVA Results for Other Dependent Variables

<table>
<thead>
<tr>
<th>IV</th>
<th>Wilk's Lambda</th>
<th>F</th>
<th>df</th>
<th>Error df</th>
</tr>
</thead>
<tbody>
<tr>
<td>ParGen</td>
<td>0.962*</td>
<td>6.98</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>AggType</td>
<td>0.895*</td>
<td>20.97</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>AggGen</td>
<td>0.904*</td>
<td>18.81</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>TarGen</td>
<td>0.958*</td>
<td>7.79</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x AggType</td>
<td>0.995</td>
<td>0.93</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x AggGen</td>
<td>0.987</td>
<td>2.38</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x TarGen</td>
<td>0.990</td>
<td>1.87</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>AggType x AggGen</td>
<td>0.935*</td>
<td>12.32</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>AggType x TarGen</td>
<td>0.983*</td>
<td>3.13</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>AggGen x TarGen</td>
<td>0.960*</td>
<td>7.38</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x AggType x AggGen</td>
<td>0.997</td>
<td>0.56</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x AggType x TarGen</td>
<td>0.995</td>
<td>0.85</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x AggGen x TarGen</td>
<td>0.989</td>
<td>2.03</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>AggType x AggGen x TarGen</td>
<td>0.998</td>
<td>0.37</td>
<td>3</td>
<td>534</td>
</tr>
<tr>
<td>ParGen x AggType x AggGen x TarGen</td>
<td>0.993</td>
<td>1.19</td>
<td>3</td>
<td>534</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .05. ParGen = participant gender, AggType = aggression type, AggGen = aggressor gender, TarGen = target gender.
Table 7. *Tukey Tests for Perceived Masculinity (AggType x AggGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x AggGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM-PF</td>
<td>-0.13</td>
<td>-1.756 to 1.497</td>
</tr>
<tr>
<td>RM-PF</td>
<td>-0.41</td>
<td>-1.999 to 1.177</td>
</tr>
<tr>
<td>RM-PM</td>
<td>-0.28</td>
<td>-1.898 to 1.338</td>
</tr>
<tr>
<td>RF-PF</td>
<td>-2.58*</td>
<td>-4.223 to -0.940</td>
</tr>
<tr>
<td>RF-PM</td>
<td>-2.45*</td>
<td>-4.121 to -0.780</td>
</tr>
<tr>
<td>RF-RM</td>
<td>-2.17*</td>
<td>-3.801 to -0.540</td>
</tr>
</tbody>
</table>

*Note.* Total $N = 552$. *p < .0167. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, AggGen = aggressor gender.

Table 8. *Tukey Tests for Perceived Femininity (AggType x AggGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x AggGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF-RM</td>
<td>2.75*</td>
<td>1.157 to 4.345</td>
</tr>
<tr>
<td>RF-PF</td>
<td>3.01*</td>
<td>1.406 to 4.614</td>
</tr>
<tr>
<td>RF-PM</td>
<td>5.75*</td>
<td>4.119 to 7.384</td>
</tr>
<tr>
<td>RM-PF</td>
<td>0.26</td>
<td>-1.293 to 1.811</td>
</tr>
<tr>
<td>RM-PM</td>
<td>3.00*</td>
<td>1.420 to 4.582</td>
</tr>
<tr>
<td>PF-PM</td>
<td>2.74*</td>
<td>1.150 to 4.333</td>
</tr>
</tbody>
</table>

*Note.* Total $N = 552$. *p < .0167. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, AggGen = aggressor gender.

Table 9. *Tukey Tests for Perceived Gender Ideal (AggType x AggGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x AggGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF-PM</td>
<td>0.92</td>
<td>-0.518 to 2.341</td>
</tr>
<tr>
<td>RF-RM</td>
<td>1.57*</td>
<td>0.172 to 2.964</td>
</tr>
<tr>
<td>RF-PF</td>
<td>1.94*</td>
<td>0.534 to 3.344</td>
</tr>
<tr>
<td>PM-RM</td>
<td>0.66</td>
<td>-0.728 to 2.041</td>
</tr>
<tr>
<td>PM-PF</td>
<td>1.03</td>
<td>-0.366 to 2.422</td>
</tr>
<tr>
<td>RM-PF</td>
<td>0.37</td>
<td>-0.988 to 1.730</td>
</tr>
</tbody>
</table>

*Note.* Total $N = 552$. *p < .0167. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, AggGen = aggressor gender.
Table 10. *Tukey Tests for Perceived Masculinity (AggType x TarGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x TarGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM-PF</td>
<td>1.49</td>
<td>-0.144 - 3.132</td>
</tr>
<tr>
<td>PM-RM</td>
<td>1.75*</td>
<td>0.083 - 3.411</td>
</tr>
<tr>
<td>PM-RF</td>
<td>2.50*</td>
<td>0.864 - 4.145</td>
</tr>
<tr>
<td>PF-RM</td>
<td>0.25</td>
<td>-1.382 - 1.887</td>
</tr>
<tr>
<td>PF-RF</td>
<td>1.01</td>
<td>-0.601 - 2.621</td>
</tr>
<tr>
<td>RM-RF</td>
<td>0.76</td>
<td>-0.880 - 2.395</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .0167. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, TarGen = target gender.

Table 11. *Tukey Tests for Perceived Femininity (AggType x TarGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x TarGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF-RM</td>
<td>1.02</td>
<td>-0.638 - 2.680</td>
</tr>
<tr>
<td>RF-PF</td>
<td>3.13*</td>
<td>1.499 - 4.763</td>
</tr>
<tr>
<td>RF-PM</td>
<td>3.61*</td>
<td>1.947 - 5.272</td>
</tr>
<tr>
<td>RM-PF</td>
<td>2.11*</td>
<td>0.454 - 3.767</td>
</tr>
<tr>
<td>RM-PM</td>
<td>2.59*</td>
<td>0.902 - 4.275</td>
</tr>
<tr>
<td>PF-PM</td>
<td>0.48</td>
<td>-1.182 - 2.138</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .0167. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, TarGen = target gender.

Table 12. *Tukey Tests for Perceived Gender Ideal (AggType x TarGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggType x TarGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM-PM</td>
<td>-0.42</td>
<td>-1.837 - 0.979</td>
</tr>
<tr>
<td>RF-PM</td>
<td>-0.63</td>
<td>-2.019 - 0.758</td>
</tr>
<tr>
<td>RF-RM</td>
<td>-0.20</td>
<td>-1.587 - 1.184</td>
</tr>
<tr>
<td>PF-PM</td>
<td>-2.20*</td>
<td>-3.589 - 0.817</td>
</tr>
<tr>
<td>PF-PM</td>
<td>-1.77*</td>
<td>-3.157 - 0.391</td>
</tr>
<tr>
<td>PF-RF</td>
<td>-1.57*</td>
<td>-2.936 - 0.210</td>
</tr>
</tbody>
</table>

*Note.* Total N = 552. *p < .0167. F=Female, M=Male, P=Physical Aggression, R=Relational Aggression, AggType = aggression type, TarGen = target gender.
Table 13. *Tukey Tests for Perceived Masculinity (AggGen x TarGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggGen x TarGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>MM-FM</td>
<td>1.90*</td>
<td>0.232</td>
</tr>
<tr>
<td>MM-MF</td>
<td>2.03*</td>
<td>0.404</td>
</tr>
<tr>
<td>MM-FF</td>
<td>2.05*</td>
<td>0.421</td>
</tr>
<tr>
<td>FM-MF</td>
<td>0.13</td>
<td>-1.524</td>
</tr>
<tr>
<td>FM-FF</td>
<td>0.15</td>
<td>-1.507</td>
</tr>
<tr>
<td>MF-MM</td>
<td>0.01</td>
<td>-1.599</td>
</tr>
</tbody>
</table>


Table 14. *Tukey Tests for Perceived Femininity (AggGen x TarGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggGen x TarGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>FF-FM</td>
<td>0.07</td>
<td>-1.614</td>
</tr>
<tr>
<td>FF-MF</td>
<td>1.99*</td>
<td>0.347</td>
</tr>
<tr>
<td>FF-MM</td>
<td>3.28*</td>
<td>1.627</td>
</tr>
<tr>
<td>FM-MF</td>
<td>1.92*</td>
<td>0.232</td>
</tr>
<tr>
<td>FM-MM</td>
<td>3.21*</td>
<td>1.511</td>
</tr>
<tr>
<td>MF-MM</td>
<td>1.29</td>
<td>-0.368</td>
</tr>
</tbody>
</table>


Table 15. *Tukey Tests for Perceived Gender Ideal (AggGen x TarGen)*

<table>
<thead>
<tr>
<th>Cell Comparison for AggGen x TarGen</th>
<th>Mean Difference</th>
<th>98.33% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>FM-MM</td>
<td>-0.93</td>
<td>-2.342</td>
</tr>
<tr>
<td>FF-MM</td>
<td>-0.97</td>
<td>-2.342</td>
</tr>
<tr>
<td>FF-FM</td>
<td>-0.04</td>
<td>-1.434</td>
</tr>
<tr>
<td>MF-MM</td>
<td>-2.34*</td>
<td>-3.720</td>
</tr>
<tr>
<td>MF-FM</td>
<td>-1.41*</td>
<td>-2.811</td>
</tr>
<tr>
<td>MF-MM</td>
<td>-1.37*</td>
<td>-2.738</td>
</tr>
</tbody>
</table>

Chapter Four

Discussion

The purpose of this study was to examine how different portrayals of aggressive behavior by hypothetical employees might affect their performance ratings and the perceptions of the behavior and of the employees by the participants providing the ratings. To this end, a number of hypotheses were proposed regarding the effects of the type of aggression and the gender of the participant, the aggressor, and the target of the aggression would have on these rating and perception dependent variables. With only a few exceptions, the study hypotheses were not supported, although a number of other interesting significant effects were found. These significant effects will be discussed after addressing the results pertaining to the study hypotheses.

Gender and Performance Hypotheses

Hypothesis 1 was an attempt to extend the findings of Heilman and Chen (2005) to the realm of counterproductive work behavior, specifically focusing on aggressive behavior. They found that participants’ performance ratings of the citizenship behaviors (e.g., helping others) of hypothetical employees depended on the gender of the employee, such that men were rated higher as a result of performing these behaviors than women were. This was interpreted to be because helpfulness is part of the stereotype for female behavior, and so female employees were rewarded less for performing this behavior than male employees because they were simply complying with the stereotype and the norms for female behavior. It was therefore hypothesized
that men would receive better performance ratings than women in instances where the employees were exhibiting physical aggression (H1a), and that women would receive better performance ratings than men in instances where the employees were exhibiting relational aggression (H1b), because these behaviors were in line with the male and female stereotype, respectively, and thus the employees were less likely to be penalized for exhibiting them. This should have resulted in a significant interactive effect of aggressor gender and aggression type on the performance ratings variable, but this effect was not significant, meaning that employees of different genders are not rated differently in terms of their performance, regardless of the type of aggression they are exhibiting. This is similar to the results of a previous iteration of this study (Way, 2011), where the results at that time showed that the performance of male and female employees was not rated differently when they were performing aggressive behavior. Thus, in terms of rating aggressive forms of counterproductive work behaviors, it appears that stereotypes of gender-appropriate forms of aggression are not related to performance ratings of these behaviors, and that male and female employees are rated equally when performing equivalent examples of aggressive behavior.

**Gender and Perceptions of Aggression Hypotheses**

Hypotheses 2 through 5 were proposed in an attempt to replicate previous findings of the effects of gender and types of aggression on how the aggression is perceived in terms of its acceptability and the aggressiveness of both the aggressor and of the act itself (e.g., Basow et al., 2007; Felson & Feld, 2009; Harris & Knight-Bohnhoff, 1996). In contrast to previous findings, most of these hypothesized effects were not supported (the sole exception being the hypothesis for no effect in H4b). Hypothesis 2 proposed effects such that female participants would perceive physical (H2a) and relational (H2b) aggression as being less acceptable and more
aggressive (both the aggressor and the act itself) as compared to male participants. However, because the participant gender x aggression type interaction was not significant for these dependent variables, these hypotheses were not supported. In other words, there were no differences in the perceptions of the aggressive behavior (for either type of aggression) between male and female participants. Thus, unlike the research cited above, the gender of the person observing the aggressive act does not appear to make a difference in how that person perceives either the aggressor or the act itself.

Hypothesis 3 proposed effects such that physical aggression from male aggressors would be rated as less acceptable and more aggressive than physical aggression from female aggressors (H3a), and relational aggression from female aggressors would be rated as less acceptable and more aggressive than relational aggression from male aggressors (H3b). In relation to these hypotheses, the aggression type x aggressor gender interaction was not significant for the acceptability of aggression variable, but it was significant for the perceived aggressiveness of the aggressor and of the act variables. However, the Tukey mean comparisons did not show differences in either variable between physical aggression from males and physical aggression from females or between relational aggression from males and relational aggression from females, meaning that these hypotheses were not supported. In other words, both the aggressors and the aggressive act itself were perceived as equally aggressive and acceptable, regardless of the type of aggression or whether a male or female employee was the aggressor. Several other Tukey mean comparisons within this interaction were significant, but those are discussed in a later section.

Hypothesis 4 proposed effects such that physical aggression against female targets would be rated as less acceptable and more aggressive than physical aggression against male
targets ($H4a$), but that there would be no differences between male and female targets in terms of these dependent variables for relational aggression ($H4b$). Because the aggression type interaction x target gender was not significant, $H4a$ was not supported, while $H4b$ was supported. In other words, there were no differences in the perceptions of acceptability or aggressiveness for either type of aggression based on the gender of the person towards whom the aggression was directed. While there was no expected effect in the relational aggression conditions based on the Basow et al. (2007) study, the lack of support for finding different reactions to physical aggression based on the gender of the target is surprising, given that this has been a fairly consistent finding in the gender and aggression literature (cf. Basow et al., 2007; Felson & Feld, 2009; Harris, 1991; Harris & Knight-Bohnhoff, 1996). These results seem to suggest that, at least in this study, aggressive behavior was seen as equally acceptable (or unacceptable) and aggressive regardless of the target of the aggression. Possible reasons for these different findings are discussed below.

Hypothesis 5a proposed effects such that male-on-female aggression would be seen as less acceptable and more aggressive than any other aggressor/target gender combination (i.e., female-on-male, male-on-male, female-on-female). However, because the aggressor gender x target gender interaction was not significant for these dependent variables, this hypothesis was not supported. Additionally, hypothesis 5b proposed effects such that male-on-female physical aggression would be seen as less acceptable and more aggressive than male-on-female relational aggression. However, because the three-way interaction of aggression type x aggressor gender x target gender was not significant for these (or any) dependent variables, this hypothesis was not supported. Thus, neither the acceptability of the aggression nor the perceived aggressiveness of the aggressor or the act differed between the different gender combinations of the aggressors and
targets depicted in the study vignettes, even taking the type of aggression into account. This is also surprising given that previous research on gender and aggression consistently finds that male-on-female aggression is considered to be worse than other aggressor/target gender combinations (see those cited above).

In sum, the results of this study for the dependent variables of acceptability of the aggression and the perceived aggressiveness of the aggressor and the act differed substantially (with the exception of $H4b$) from those results found in previous studies (see those cited above). There are several possible reasons for the differing results in the current study. First, the aggression depicted in the vignettes of this study took place in a work context between coworkers who were not depicted as having any kind of personal relationship. In contrast, the instances of aggression depicted in other studies examining gender and aggression typically take place between friends or romantic partners. It could be that the lack of a personal relationship between the aggressor and the target blunted the perceived severity of the aggressive acts described in the vignettes. Violence and aggression in romantic relationships is typically perceived to be quite severe, especially in cases of male-on-female aggression (e.g., Felson & Feld, 2009).

Another factor that could have had the same effect on how severe the aggression was interpreted to be by the participants is that the aggressive acts (i.e., punch in the arm, spreading rumors about the other employee stealing) were not as intense as those portrayed in other studies. For example, the vignettes in Basow et al., 2007 depict aggressors throwing a beer bottle at a friend or shoving a friend over into a table, which are more severe acts of aggression than a punch to the arm. Additionally, the escalation of argument in which both the aggressor and target participated in the vignettes could have given a justification for the aggressive acts. This
would remove some of the personal responsibility on the part of the aggressors for their aggressive behavior, and the effects that the stereotypes of gender-appropriate aggression might have on how that aggression is perceived may not have been as relevant. Finally, the consequences of the aggressive behavior for the target employees were not depicted to be very severe. The study vignettes do not describe what the target does after the aggressive act or how he/she reacts to it, which implies that either the target was not substantially harmed by the aggression, or merely leaves the consequences unclear. If the target employee was shown to be substantially affected by the aggression, it would serve as indicator that the aggression was more severe, and could have elicited greater reactions on the part of the participants due to gender stereotypes. However, there were other significant effects that were found in relation to these dependent variables that are discussed in a later section.

**Aggression and Gender Perception Hypotheses**

The remaining formal hypotheses made in this study had to do with the second set of dependent variables, which had to do with how the aggressive employees were perceived in relation to gender stereotypes. Hypothesis 6 proposed effects related to how male and female employees who were physically and relationally aggressive were perceived in relation to gender stereotypes, such that male employees who were physically aggressive would be perceived as more masculine, less feminine, and better fitting their gender ideal compared to male employees who were relationally aggressive (\(H6a\)), and female employees who were relationally aggressive would be perceived as less masculine, more feminine, and better fitting their gender ideal compared to female employees who were physically aggressive (\(H6b\)). The aggression type x aggressor gender interaction was significant for these dependent variables, so follow up Tukey mean comparisons were conducted to see exactly where, in terms of the dependent variables, the
differences lay. For male employees, there were no differences between physical and relational aggression in terms of perceived masculinity or perceived gender ideal, but males who were physically aggressive were perceived to be less feminine than males who were relationally aggressive. Thus, $H6a$ was only partially supported. For female employees, $H6b$ was fully supported, as all of the hypothesized differences among the three dependent variables were significant between the physical and relational aggression conditions. This suggests that relational aggression is more strongly and saliently related to the idea of femininity than physical aggression is to the idea of masculinity, at least in terms of the physical aggression and relational aggression depicted in this study.

**Shifting Standards Research Question**

Finally, because of conflicting predictions from the shifting standards hypothesis and the other hypotheses in the study, the potential shifting standards effect was posed as a research question rather than a formal hypothesis. Shifting standards would suggest that gender stereotypes would influence perceptions of aggressive behavior, such that instances of male aggression would be perceived as less aggressive as equivalent examples of female aggression. In contrast, research shows that male aggression is typically seen as more severe than female aggression (e.g., Felson & Feld, 2009), and this research was used to predict the opposite of the shifting standards effect (see Hypothesis 3). However, because there were no significant differences in how physical or relational aggression from male and female employees was perceived in terms of aggressiveness, neither of the two conflicting predictions was borne out of the results. Thus, the shifting standards hypothesis did not turn out to be relevant for viewing these examples of aggressive behavior in relation to gender stereotypes surrounding the aggression.
Other Significant Effects

There were a number of other significant results found in this study that were not explicitly hypothesized, mostly in relation to the second set of dependent variables of perceived masculinity, femininity, and gender ideal. However, the few instances of significant effects pertaining to the main dependent variables of performance rating, acceptability of aggression, perceived aggressiveness of the aggressor, and perceived aggressiveness of the act will be discussed first.

Of the four independent variables in the study, only aggression type and target gender had significant main effects in the MANOVA on the set of primary dependent variables. Participant gender and aggressor gender had no effect on these variables. This is in contrast to previous research (e.g., Basow et al., 2007; Harris & Knight-Bohnhoff, 1996), where these variables were related to the acceptability of the aggression and its perceived aggressiveness, as noted previously. For aggression type, follow up Tukey tests showed that physical aggression was perceived to be more aggressive of an act than relational aggression. It had no effect on any of the other dependent variables. For target gender, aggression against female targets was rated lower on performance and the aggression was perceived as less acceptable and more aggressive than aggression against male targets. Target gender had no effect on the perceived aggressiveness of the act. Thus, all else being equal, physical aggression was perceived as worse than relational aggression in terms of aggressiveness, and aggression against females was perceived as worse than aggression against males. These main effects are in line with the research cited above and in the introduction section.

However, when multiple independent variables are present in a study, it is more important to examine the interaction effects among the independent variables than the simple
main effects. In terms of the MANOVA on the main set of dependent variables, only the aggression type x aggressor gender interaction was significant. All of the other interactions, including three-way and four-way interactions, were not significant. Follow up Tukey tests showed no significant differences for this interaction on the performance rating or the acceptability of aggression variables. However, in terms of the perceived aggressiveness of the act variable, physical aggression from male employees was perceived as more aggressive than relational aggression from male or from female employees, and physical aggression from female employees was perceived as more aggressive than relational aggression from male employees. These results seem to be mostly reflecting the main effect of aggression type on perceived aggressiveness of the act, such that physical aggression was perceived to be more aggressive than relational aggression. The sole exception was comparing instances where female employees were either performing physical or relational aggression: in these instances, there was no difference in how aggressive these acts were perceived. In terms of the perceived aggressiveness of the aggressor variable, the only significant follow up mean comparison was that female employees who were relationally aggressive were perceived as more aggressive than female employees who were physically aggressive. Both patterns of significant interaction results suggest that female relational aggression was perceived to be particularly aggressive, because it was perceived to be just as aggressive of an act as female physical aggression, and relationally aggressive female employees were perceived as even more aggressive than physically aggressive female employees.

Turning to the second set of dependent variables in the study (i.e., perceived masculinity, perceived femininity, perceived gender ideal), all four independent variables had significant main effects in that MANOVA. In terms of participant gender, male participants
rated all of the aggressive employees as more masculine regardless of any of the type of aggression or the gender of the employees in the vignettes. It did not have an effect on perceived femininity or perceived gender ideal. Given that this was the only significant effect of participant gender (including its interactive effects) in this study, participant gender was not very relevant to the dependent variables in this study. In terms of aggression type, physical aggression was rated as more masculine than relational aggression, and relational aggression was rated as more feminine than physical aggression. These results seem primarily to reflect the gender stereotypes associated with these forms of aggression. In terms of the gender of the aggressor, male aggressors were perceived as more masculine than female aggressors, and female aggressors were perceived as more feminine than male aggressors, which likely is just reflecting the simple truth that males are generally seen to be more masculine and females are generally seen to be more feminine. Finally, in terms of the gender of the target of the aggression, aggression against male targets is perceived to be more masculine, as well as having a higher gender ideal than aggression against female targets. Aggression against males is likely seen as a greater risk due to the fact that males are often seen as a greater threat or as having a greater chance of retaliating with physical aggression, which could explain the result for the perceived masculinity dependent variable. The result for the perceived gender ideal variable could be due to the fact that aggression against females is seen as less acceptable compared to aggression against males (per the results mentioned above), and thus is less ideal for anyone regardless of his or her gender.

As before, it is difficult to interpret significant main effects when significant interactions are present, as the interactive effects take precedence. In the MANOVA on the second set of dependent variables, there were only three significant interactions: the aggression
type x aggressor gender interaction, the aggression type x target gender interaction, and the aggressor gender x target gender interaction. All of the other interactions, including the three-way and the four-way interactions, were not significant. The first significant interaction, the aggression type x aggressor gender interaction, showed a number of significant mean comparisons on the three dependent variables as a result of the follow up Tukey tests. In terms of perceived masculinity, females who performed relational aggression were perceived as less masculine than all other aggressor gender/aggression type combinations (i.e., physically aggressive males and females and relationally aggressive males). They were also perceived to be more feminine than all other aggressor gender/aggression type combinations. Other significant comparisons for the perceived femininity variable were that relationally aggressive males were perceived as more feminine than physically aggressive males, and physically aggressive females were perceived as more feminine than physically aggressive males. Finally, relationally aggressive females were perceived as fitting better with their gender ideal than either relationally aggressive males or physically aggressive females. This last result makes sense, as relationally aggressive males and physically aggressive females are both exhibiting forms of aggression that are stereotyped for the opposite gender.

Taken together, these results again suggest a strong connection between the female stereotype and relational aggression, as these were the results relevant to Hypothesis 6. Female relational aggression had more significant differences among this set of dependent variables than any other aggressor gender/aggression type combination, whereas male physical aggression only showed differences in terms of perceived masculinity. Also, males who performed aggression stereotyped for being associated with females (i.e., relational aggression), were seen as more feminine than males performing a male-stereotyped form of aggression (i.e., physical
aggression). Thus, as noted in the discussion of Hypothesis 6, the connection between physical aggression and masculinity does not seem to be as strong as expected in this study, or as strong as the connection between femininity and relational aggression. This could be due to the fact that the example of physical aggression that was included in the vignettes of this study was not as severe as is typically described in other studies examining gender and aggression, as described previously.

The second significant interaction in the MANOVA was the aggression type x target gender interaction, which also showed a number of significant differences among the perceived gender dependent variables. In terms of the perceived masculinity variable, physical aggression against males was perceived to be more masculine than relational aggression against males or females. As noted in the discussion above of the main effect of target gender on perceived masculinity, physical aggression against males may be seen as more masculine because males are a more dangerous target against which to aggress than females. In terms of the perceived femininity variable, the results simply reflect the main effect of aggression type on perceived femininity, such that relational aggression was generally perceived as more feminine than physical aggression, regardless of the gender of the target. These results again emphasize the connection between relational aggression and perceived femininity, as target gender did not influence the aggression type main effect on this dependent variable. Finally, in terms of the perceived gender ideal variable, physical aggression against females was perceived to be less fitting with the aggressor’s gender ideal than all other aggression type/target gender combinations (i.e., relational aggression against males and females and physical aggression against males). Although physical aggression against females was not found to be less acceptable or more aggressive than other aggression type/target gender combinations, the
significant difference in perceived gender ideal suggests that, on some level, participants in this study considered physical aggression against females to be a worse form of aggression (at least in terms of not being up to the standard of the ideal behavior for the aggressor’s gender) than the other examples of aggression in the study.

The last significant interaction in the MANOVA was the aggressor gender x target gender interaction, which showed significant effects at some level on all three of the dependent variables. In terms of the perceived masculinity variable, male-on-male aggression was perceived as more masculine than all other gender combinations, which is likely due to the same stereotyped risk of engaging males in aggression discussed previously. In terms of the perceived femininity variable, the results simply reflect the main effect of aggressor gender on femininity, such that female aggressors were perceived to be more feminine than male aggressors, regardless of the gender of the target. Finally, in terms of the perceived gender ideal variable, male-on-female aggression was perceived to be the least ideal in terms of adhering to the ideal for the aggressor’s gender compared to all other gender combinations. Similar to the gender ideal result for physical aggression against females, it is interesting that although male-on-female aggression was not found to be less acceptable or aggressive than other gender combinations, it was found to be less up to the ideal of the aggressor’s (i.e., male’s) gender. This could reflect some form of a chivalric cultural standard, in which males are prescribed to not physically strike females, even if it was not enough to warrant a difference in how the act itself (or the aggressiveness of the aggressor) was perceived.

**Theoretical Implications**

In contrast to previous research on gender stereotypes and their effect on evaluations of positive workplace behavior (e.g., Heilman & Chen, 2005), these stereotypes do not appear to
influence performance ratings of aggressive forms of counterproductive work behavior. Although there are ways that these effects could be teased out given some changes to the design of the study (see below), it could be that the negative aspect of aggressive behavior at work is substantial enough to override any effect that stereotypes would have on such performance ratings. Given that this is the second iteration of a study examining the relationship between gender stereotypes and performance ratings to show null results (the first being Way, 2011), it may be that these effects are simply not present in work contexts. It is also interesting that the gender and aggression type effects on the acceptability and perceived aggressiveness variables were not replicated, even though they have been found in several previous studies (e.g., Basow et al., 2007; Felson & Feld, 2009; Harris, 1991; Harris & Knight-Bohnhoff, et al., 1996). This is most likely due to the different context and less severe aggressive behavior that was described in the current study’s vignettes as opposed to those used in previous research.

There were a number of interesting patterns of effects in the gender perception variables of this study. The most consistent theme in the pattern of results was that femininity and relational aggression seemed to be strongly related. Instances of relational aggression resulted in the aggressors being perceived as more feminine, while this was not true to the same extent of physical aggression and masculinity, in spite of the almost universal cultural stereotype tying them together. Another interesting finding was that even though they were not found to be less acceptable or more aggressive, physical aggression against females and male-on-female aggression was considered to be the least fitting with the aggressor’s gender ideal. Thus, it seems that even in instances where the aggression was not strong enough to be considered highly unacceptable, or the context provided enough justification for these types of aggressive behavior, there was still some judgment on the part of the participants that the aggressors should not be
acting this way when measured against the ideal for how members of their gender should behave. Because both were instances in which the female was the target of aggression, this suggests some sort of cultural ideal for aggression against females being worse than other forms of aggression, and perhaps suggests a cultural ideal of chivalry coming into play in the case of male-on-female aggression. Finally, aggression against males, especially in instances of male-on-male aggression were perceived to be more masculine than other forms of aggression. As noted previously, this suggests that aggression against males may be seen as a more risky behavior due to the fact that males typically present a more dangerous target for physical attack, and that risk-taking behavior is sometimes associated with the idea of masculinity in the form of the “hot-headed male”.

**Practical Implications**

The lack of significant results in terms of the performance ratings of the aggressive behavior actually have several positive practical implications for performance appraisal situations, as it appears that gender stereotypes of aggression do not influence appraisals of aggressive behavior. Indeed, aggressive behavior is seen as equally undesirable regardless of the gender of the aggressor or the type of aggression. If these results hold true, it would mean there are fewer chances that a manager would discriminate based on gender when rating the performance of employees who have exhibited aggression at work. Also, the lack of significant effects of participant gender on performance rating means that the gender of the manager or the rater would not make a difference or have an effect on the ratings, so that, all else being equal, managers are more likely to rate such behavior the same regardless of their gender.
Limitations

Like any study, this one had several limitations that could have impacted the results. The tests of statistical assumptions showed several violations of normality and homogeneity of variance. Although these did not likely have substantial effects on the results due to the large sample size and roughly equal cell sizes in the study, any violations in these assumptions are a warrant for caution in interpreting the results. Additionally, a wider variety of examples of physical and relational aggression, as in the Basow et al. (2007) study, could have elicited a greater range of differences among the primary dependent variables, leading to more significant results for the performance, acceptability, and perceived aggressiveness variables. Portraying the aggressive behavior as being more severe and having more of an impact on the target of the aggression in terms of the consequences of the aggressive behavior could also have resulted in greater significant effects on these variables. Another limitation is that the reliabilities of some of the dependent variable scales (perceived aggressiveness of the aggressor in particular) were somewhat low. As reliability places an upper bound on validity, any significant effects of these dependent variables would have been harder to detect given the low reliability of these scales. Finally, using a sample that has work and supervisory experience may have blunted the effects of the independent variable manipulations on the performance variable, because these participants may have been trained or know to avoid potential biases such as gender stereotypes in rating employees (even though neither demographic variable was correlated with the performance rating variable). Using a sample of participants with little work and supervisory experience so that any stereotype effects may be more salient could result in greater significant results in terms of performance ratings of aggressive behavior. However, it should be noted that the previous
iteration of this study (Way, 2011) used a college student sample with no supervisory experience and also did not find significant effects.

**Future Research**

Future research should attempt to address some of the limitations of this study in order to have a greater chance of eliciting the hypothesized effects. For example, including more examples of physical and relational aggression as well as portraying more severe consequences of the aggression for the target may get a stronger reaction out of the participants to the aggressive behavior described in the vignettes. Also, the vignettes in this study provided some justification for the aggression in terms of an escalating argument over a mistake made by the target. This may have taken some of the responsibility for the aggressive behavior off the aggressor and placed it onto the target in the minds of the participants, so future studies could include this as an additional variable to determine if it made a difference in the results. Additionally, it would be interesting to conduct a priming study where participants are primed with either manager training videos for rating employees or videos showing stereotyped depictions of physical and relational aggression in order to see if these two conditions resulted in different levels of ratings based on the aggressive behavior.

**Conclusions**

Overall, the independent variables of aggression type, aggressor gender, and target gender seem to have the most effects on the study dependent variables, whereas participant gender had very few. Additionally, aggressive behavior seemed to have more of an effect on how the employees were perceived in terms of gender stereotypes than on how acceptable or aggressive the behavior was perceived to be. Relational aggression seems to be strongly linked to the female stereotype, whereas the lack of differential effects between aggressor gender and
performance suggest that stereotypes of aggressive behavior do not play a large role in influencing performance appraisals of aggressive behavior. Given that the connection between masculinity and physical aggression is common, and that male aggression is typically seen as more negative than was found in this study, future research examining these effects may want to place more emphasis on the severity and consequences of the aggressive behavior in order to elicit the intended effects, or to better understand the contexts in which these effects arise, or those in which they do not.
References Cited


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Appendix A:

IRB Exemption Letter

October 16, 2014

Jason Way
Psychology
4202 E. Fowler Ave
PCD 4118G
Tampa, FL 33620

RE: Exempt Certification
IRB#: Pro00011489
Title: Differential Effects of Aggressive Behavior on Performance Appraisals

Study Approval Period: 10/16/2014 to 10/14/2019

Dear Mr. Way:

On 10/16/2014, the Institutional Review Board (IRB) determined that your research meets USF requirements and Federal Exemption criteria as outlined in the federal regulations at 45 CFR.46.101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Approved Items:

Way Dissertation proposal
Consent Form

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45 CFR.46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent
document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

As the principal investigator for this study, it is your responsibility to ensure that this research is conducted as outlined in your application and consistent with the ethical principles outlined in the Belmont Report and with USF IRB policies and procedures. Please note that changes to this protocol may disqualify it from exempt status. Please note that you are responsible for notifying the IRB prior to implementing any changes to the currently approved protocol.

The Institutional Review Board will maintain your exemption application for a period of five years from the date of approval or for three years after a Final Progress Report is received, whichever is longer. If you wish to continue this protocol beyond five years, you will need to submit a new application at least 60 days prior to the end of your exemption approval period. Should you complete this study prior to the end of the five-year period, you must submit a request to close the study.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

[Signature]

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board
Appendix B:

Study Materials for Physical Aggression Conditions

Instructions:

In this session, you will be reviewing an employee’s work history and information from the supervisor regarding their performance. Please review the employee information and the information in the supervisor reports included in this packet, then answer the questions on the last two pages. Thank you for your participation in this study.
**Employee Information**

Employee name: Sarah Smith

Job title: Server

Business: Antonio’s Italian Ristorante

Length of employment with company: 5 years

Tenure in current position: 4 years

Supervisor: A. Brown

Supervisor comments regarding performance: (dated 8/15/2014)

Sarah is a server who exhibits good rapport with his customers. She makes sure to get orders right the first time and has a history of getting food to the tables quickly. Sarah also usually stays to help clean the dining room after closing, and is quick to offer to take over shifts for other servers who call in sick. Her only problem seems to be she has been late to work in the past although she has recently improved quite a bit in this area. Finally, she is good at getting customers through the meal so that more overall customers can be served throughout the night. See additional documentation for more information.
EMPLOYEE WARNING LETTER

Date: 3/21/2014

Sarah Smith,

This letter is to advise you that your performance has fallen short, and your work is currently unsatisfactory for the reasons described below:

Repeatedly showing up late for your serving shift without an excuse or calling the restaurant ahead of time.

You must take immediate corrective action and resolve this problem if you wish to continue to be employed by this company. If you do not do so, we will have no choice but to seriously consider terminating your job.

Please let your immediate supervisor know if you have any questions about this letter, or if you believe company leadership can be of any help to you as you work to improve your performance and correct the situation.

Sincerely,

A. Brown

Assistant Manager

Antonio’s Italian Ristorante
Employee Incident Report

Date 9/17/14

Employee
Name Sarah Smith
Title/position Server

Manager
Name A. Brown
Title/position Asst. Manager

Incident
Date 9/16/14
Time 6:23 pm
Location Kitchen

Description of incident
Sarah was in the kitchen waiting to pick up the last dinner for a table of four guests. The chef finished the dish and put it on the counter for Sarah to pick up. Another waiter, Amanda, came in to pick up dinners for one of her tables, and grabbed the meal for Sarah’s table off the counter. Sarah and Amanda began to argue about whose table the meal belonged to. Before long, they were shouting at each other. Finally, Sarah punched Amanda hard in the arm, picked up her meals, and left the kitchen.

Employee explanation
The meals were already late, and the chef had finally finished the last one when Amanda came in out of nowhere and grabbed it for one of her tables. I tried to tell her that I had been waiting for that plate and that it was mine, but she just wouldn’t listen to me. I finally got so mad that I punched her in the arm and left the kitchen.

Action to be taken
- Verbal warning
- Written warning
- Probation
- Suspension
- Dismissal
- Other

Explain This incident report serves as your written warning. If another incident of this nature occurs, your employment will be terminated by the company.

By signing this document, you acknowledge that you have read and understood the information contained herein

James Smith
Employee
9/17/14

A. Brown
Manager
9/17/14

Date

Date
These questions relate to the information you just read:

Was there an argument in the incident report?  
____ Yes  ____ No  ____ Don’t Know

Did the employee hit someone?  
____ Yes  ____ No  ____ Don’t Know

Did the employee spread rumors about someone?  
____ Yes  ____ No  ____ Don’t Know

Are these employee interactions possible in this context?  
____ Yes  ____ No  ____ Don’t Know

Is it conceivable that someone in this situation could act this way?  
____ Yes  ____ No  ____ Don’t Know

Overall, how would you rate this employee’s performance over the past year? ________
1  2  3  4  5  6  7  
Poor  Average  Excellent

Please answer the following questions, using the following scale:

1  2  3  4  5  6  7
Very  Unlikely  Very  Likely

In your opinion, how likely is it that this employee will advance to a higher position, such as head waiter or assistant manager? ________

Give your assessment of the individual’s likelihood of success. ________

Please answer the following questions, using the following scale:

1  2  3  4  5  6  7
To a small extent  To a large extent

____ 1. How acceptable do you consider Sarah’s behavior toward Amanda?
____ 2. How aggressive do you consider Sarah’s behavior toward Amanda?
____ 3. How harmful do you consider Sarah’s behavior toward Amanda?
____ 4. How distressed do you think Amanda is by Sarah’s behavior?
____ 5. How much do you think Sarah wants to hurt Amanda?
____ 6. How aggressive does Sarah seem as a person?
____ 7. Was Sarah’s behavior reasonable?
____ 8. Would you expect this sort of reaction from Sarah given the situation?

Please answer the following questions about the employee, using the following scale:
1. How masculine did Sarah seem to you?
2. How “manly” did Sarah behave?
3. To what extent did Sarah’s behavior align with your ideas of masculinity?

1. How feminine did Sarah seem to you?
2. How “womanly” did Sarah behave?
3. To what extent did Sarah’s behavior align with your ideas of femininity?

1. To what extent did Sarah’s behavior conform to the cultural ideals of her gender?
2. To what extent would other men feel that Sarah was a good representative of her gender?
3. To what extent did Sarah come across as “a real woman”?

**Your Demographic Information:**

1. Gender:  ____ Female  ____ Male  ____ Other/DNA
2. Age:  
   I am ____ years old.
3. Ethnicity:  ____ White / Caucasian  ____ Black / African American  ____ Hispanic / Latino(a)  ____ Asian / Pacific Islander  ____ Native American  ____ Other
4. In what region of the country do you live?  ____ Northeast  ____ Midwest  ____ South  ____ West
5. How much work experience do you have?  _______ years
6. How many years have you supervised other employees (including being responsible for rating their performance)?  _______ years
Appendix C:

Study Materials for Relational Aggression Conditions

Instructions:

In this session, you will be reviewing an employee’s work history and information from the supervisor regarding their performance. Please review the employee information and the information in the supervisor reports included in this packet, then answer the questions on the last two pages. Thank you for your participation in this study.
Employee Information

Employee name: James Smith
Job title: Server
Business: Antonio’s Italian Ristorante
Length of employment with company: 5 years
Tenure in current position: 4 years
Supervisor: A. Brown

Supervisor comments regarding performance: (dated 8/15/2014)

James is a server who exhibits good rapport with his customers. He makes sure to get orders right the first time and has a history of getting food to the tables quickly. James also usually stays to help clean the dining room after closing, and is quick to offer to take over shifts for other servers who call in sick. His only problem seems to be he has been late to work in the past although he has recently improved quite a bit in this area. Finally, he is good at getting customers through the meal so that more overall customers can be served throughout the night. See additional documentation for more information.
EMPLOYEE WARNING LETTER

Date: 3/21/2014

James Smith__,

This letter is to advise you that your performance has fallen short, and your work is currently unsatisfactory for the reasons described below:

Repeatedly showing up late for your serving shift without an excuse or calling the restaurant ahead of time.

You must take immediate corrective action and resolve this problem if you wish to continue to be employed by this company. If you do not do so, we will have no choice but to seriously consider terminating your job.

Please let your immediate supervisor know if you have any questions about this letter, or if you believe company leadership can be of any help to you as you work to improve your performance and correct the situation.

Sincerely,

A. Brown
Assistant Manager
Antonio’s Italian Ristorante
Employee Incident Report

Date 9/17/14

Employee
Name James Smith
Title/position Server

Manager
Name A. Brown
Title/position Asst. Manager

Incident
Date 9/16/14
Time 6:23 pm
Location Kitchen

Description of incident
James was in the kitchen waiting to pick up the last dinner for a table of four guests. The chef finished the dish and put it on the counter for James to pick up. Another waiter, Mike, came in to pick up dinners for one of his tables, and grabbed the meal for James’ table off the counter. James and Mike began to argue about whose table the meal belonged to. Before long, they were shouting at each other. Finally, James picked up his meals, and left the kitchen. James then began spreading a rumor that Mike was stealing from the cash register.

Employee explanation
The meals were already late, and the chef had finally finished the last one when Mike came in out of nowhere and grabbed it for one of his tables. I tried to tell him that I had been waiting for that plate and that it was mine, but he just wouldn’t listen to me. I finally got so mad that I left the kitchen and started gossiping about Mike stealing money from the cash register.

Action to be taken
- Verbal warning
- Written warning
- Probation
- Suspension
- Dismissal
- Other

Explain This incident report serves as your written warning. If another incident of this nature occurs, your employment will be terminated by the company.

By signing this document, you acknowledge that you have read and understood the information contained herein

James Smith
Employee
9/17/14

A. Brown
Manager
9/17/14

Date

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These questions relate to the information you just read:

Was there an argument in the incident report?  ____ Yes  ____ No  ____ Don’t Know
Did the employee hit someone?  ____ Yes  ____ No  ____ Don’t Know
Did the employee spread rumors about someone?  ____ Yes  ____ No  ____ Don’t Know

Are these employee interactions possible in this context?  ____ Yes  ____ No  ____ Don’t Know
Is it conceivable that someone in this situation could act this way?  ____ Yes  ____ No  ____ Don’t Know

Overall, how would you rate this employee’s performance over the past year? ________

1  2  3  4  5  6  7
Poor Average Excellent

Please answer the following questions, using the following scale:

1  2  3  4  5  6  7
Very Unlikely Very Likely

In your opinion, how likely is it that this employee will advance to a higher position, such as head waiter or assistant manager? ________

Give your assessment of the individual’s likelihood of success. ________

Please answer the following questions, using the following scale:

1  2  3  4  5  6  7
To a small extent To a large extent

1. How acceptable do you consider James’ behavior toward Mike?
2. How aggressive do you consider James’ behavior toward Mike?
3. How harmful do you consider James’ behavior toward Mike?
4. How distressed do you think Mike is by James’ behavior?
5. How much do you think James wants to hurt Mike?
6. How aggressive does James seem as a person?
7. Was James’ behavior reasonable?
8. Would you expect this sort of reaction from James given the situation?

Please answer the following questions about the employee, using the following scale:
1. How masculine did James seem to you?
2. How “manly” did James behave?
3. To what extent did James’ behavior align with your ideas of masculinity?

1. How feminine did James seem to you?
2. How “womanly” did James behave?
3. To what extent did James’ behavior align with your ideas of femininity?

1. To what extent did James’ behavior conform to the cultural ideals of his gender?
2. To what extent would other men feel that James was a good representative of his gender?
3. To what extent did James come across as “a real man”?

Your Demographic Information:

1. Gender: _____ Female _____ Male _____ Other/DNA
2. Age: I am ____ years old.
3. Ethnicity: _____ White / Caucasian _____ Black / African American _____ Hispanic / Latino(a) _____ Asian / Pacific Islander _____ Native American _____ Other
4. In what region of the country do you live? _____ Northeast _____ Midwest _____ South _____ West
5. How much work experience do you have? ________ years
6. How many years have you supervised other employees (including being responsible for rating their performance)? ________ years