

Observing Aggression at Work

by

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Abstract

Although an estimated 57% of aggression in the workplace occurs in the presence of others (Glomb, 2002), researchers have yet to consider how observers' attitudes and behaviours towards targets and perpetrators may be influenced. To address this gap, I draw on theories of priming (Bargh, 2006), relationships (i.e., power and liking), and perspective-taking (e.g., Batson, 1991; Davis, 1983; Parker, Atkins, & Axtell, 2008), to examine how observer attitudes and behaviours toward targets and perpetrators are affected by witnessed aggression. In Study 1, I use a lab-based experimental design, and find that observers develop more negative attitudes towards perpetrators than both non-perpetrators (between conditions) and targets (within condition), and engage in more deviance toward *both* targets and perpetrators of aggression (as compared to non-targets and non-perpetrators). In Study 2, using an email vignette design, I find that observers' liking of and power relative to the target and the perpetrator influence observer reactions, as observers are more likely to report positive attitudes and behavioural intentions toward a liked actor than a disliked actor, regardless of whether the actor was the target or the perpetrator of the aggression. In addition, observers report more positive attitudes toward a high power actor than a low powered actor. In Studies 3 and 4, using a video-vignette and an event-based diary design, respectively, I find that observer attitudes and behavioural intentions are also influenced by observer perspective-taking. Specifically, observers who take the perspective of the target perceive the aggression as less justified and thus report more negative attitudes toward the perpetrator (Studies 3 and 4), more positive attitudes toward the target (significant in Study 4 only), fewer helping intentions toward the perpetrator (Study 3), and fewer deviant intentions toward *both* the target and

the perpetrator (Study 3). In contrast, observers who take the perspective of the perpetrator perceive the aggression as more justified, and thus report more positive attitudes toward the perpetrator (Studies 3 and 4), more negative attitudes toward the target (significant in Study 4 only), greater helping intentions toward the perpetrator (Study 3), and greater deviant intentions toward *both* the target and the perpetrator (Study 3).

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Chapter I

Introduction and Overview

Neuman and Baron (2005) defined workplace aggression as efforts by individuals to harm others within their organization—or the organization itself—that the target is motivated to avoid. Neuman and Baron (1998) are generally credited as the first “workplace aggression” researchers (Fox & Spector, 2005); however, it was Spector (1975) who introduced work-related outcomes into the study of aggression in the mid-1970s. Since that time the literature has expanded exponentially, and has been synthesized in several recent meta-analyses (e.g., Berry, Ones, & Sackett, 2007; Bowling & Beehr, 2006; Hershcovis & Barling, 2010; Hershcovis et al., 2007; Lapierre, Spector, & Leck, 2005). Key findings from these analyses reveal that there are a number of individual (i.e., stable personality traits) and situational (i.e., social environment) characteristics that are associated with an increased likelihood that workplace aggression will occur. For example, perpetrators of aggression have been found to be generally higher in trait anger (Douglas & Martinko, 2001) and negative affectivity (Bowling & Beehr, 2006) than non-perpetrators. In addition, aggression is more likely to follow when an individual is frustrated due to interference in his or her goal attainment (Anderson & Bushman, 2002) and when perceptions of workplace injustice are high (Bies & Tripp, 2005; Skarlicki & Folger, 1997). In contrast, researchers have found that targets of workplace aggression are more likely to have lower organizational status, to employ a more obliging or integrating conflict management style (Aquino, 2000), to be more aggressive (Aquino & Bradfield, 2000), and be higher in negative affectivity (Aquino, Grover, Bradfield, & Allen, 1999) than non-targets.

Though these findings have offered significant advances to our understanding of workplace aggression, they also reveal the nearly exclusive focus of existing workplace aggression research on the target and the perpetrator of aggression (e.g., Fox & Spector, 2005). Virtually absent from this research is a consideration of the social context of aggression and, in particular, an understanding of how witnessing workplace aggression may influence *observers*.

Targets and perpetrators of workplace aggression do not exist in a social vacuum; they are both surrounded by and interact with other members of their workplace (i.e., with their supervisors, subordinates, and peers). According to Glomb (2002), 57% of aggression in the workplace occurs in the presence of others. Therefore, interactions between pairs of individuals in the workplace (i.e., between target-perpetrator dyads) occur within the social context of the co-workers (i.e., supervisors, subordinates, and peers) who surround and interact with them. These same co-workers may bear witness to (i.e., become “observers” of) workplace aggression and such observation may affect the attitudes—and ultimately the behaviours—of these observers towards targets and perpetrators.

Key Definitions

Before undertaking a discussion of how workplace aggression may influence observers, it is useful to review the definitions of *workplace aggression*, *observers*, *targets*, and *perpetrators* of aggression. I review each in turn below.

Workplace aggression

As noted above, workplace aggression is defined as efforts by individuals to harm others at work, or the organization itself (Neuman & Baron, 2005). Although both

interpersonal and organizational aggression are serious concerns for organizations, I will only focus on interpersonal aggression in this dissertation because I am interested in the effects of interpersonal aggression on others in the work environment. Further, several researchers (e.g., Bennett & Robinson, 2000; Hershcovis et al., 2007; Robinson & Bennett, 1995) have proposed that the interpersonal and organizational dimensions of aggression are best conceptualized separately because the antecedents and outcomes of each are distinct.

In their nationally representative survey of interpersonal aggression, Schat, Frone, and Kelloway (2006) report that 41% of workers have experienced some form of psychological aggression (e.g., gossiping, rumour spreading, ostracism, yelling), and 6% have experienced some form of physical aggression (e.g., hitting, punching) at work. According to Bowling and Beehr (2006), the outcomes of interpersonal workplace aggression for targets include decreased job satisfaction, increased intention to turnover, and negative physical and mental health outcomes.

Currently, the workplace aggression literature suffers from significant fragmentation; recent calls to synthesize the area have not yet been answered (Aquino & Thau, 2009; Hershcovis, 2011). Specifically, there exist a number of highly related constructs that describe workplace mistreatment; examples include *workplace incivility* (Andersson & Pearson, 1999; Cortina, Magley, Williams, & Langhout, 2001), *workplace bullying* (Einarsen, 1999, 2000), *victimization* (Aquino et al., 1999), *social undermining* (Duffy, Ganster, & Pagon, 2002), and *interpersonal deviance* (Bennett & Robinson, 2000). This list is by no means exhaustive of the labels used to categorize workplace mistreatment; succinct overviews of these and other labels—as well as the associated

behaviours—are available (Hershcovis & Barling, 2007, Table 1; Raver & Barling, 2007, Table 2). In general, these varying labels reflect a significant amount of conceptual and operational overlap with varying degrees of focus. For example, deviance is studied from the perspective of the perpetrator; however, workplace incivility, bullying, victimization, and social undermining are studied from the perspective of the target (workplace aggression is studied from the perspective of both the target and the perpetrator) (Hershcovis & Barling 2007). In addition, the definitions of workplace aggression, deviance, and social undermining require that the perpetrator has an intent to harm the target; however, perpetrator intent is not required for workplace incivility (workplace incivility assumes ambiguous intent) (Raver & Barling, 2007). According to Aquino and Thau (2009) and Hershcovis (2011), these variations likely do not warrant the separation that exists among these literatures. As such, the current review will use the umbrella term “workplace aggression” to refer to this broad set of constructs.

Observers

In recent years, researchers have begun to consider the observer’s perspective, and have defined the observer in different ways. For example, Schat and Kelloway (2000; 2003) examined vicarious aggression, and defined secondary victims (i.e., observers) as those who witness or hear about workplace aggression. In contrast, in their review of observer intervention in sexual harassment in the workplace, Bowes-Sperry and O’Leary-Kelly (2005) restricted their definition of observers to those individuals who actually witnessed an incident of sexual harassment. They argued that (a) witnessing an incident would be more impactful than hearing about the incident, and (b) observers who had actually witnessed the incident would have a wider range of possible responses. While I

adopt Bowes-Sperry and O’Leary-Kelly’s basic view (because of their reasoning above), witnessing workplace aggression does not necessarily parallel witnessing sexual harassment. According to Bowes-Sperry and O’Leary-Kelly’s definition, an observer of sexual harassment is an individual who witnesses a sexually harassing behaviour between a perpetrator and his or her target; that is, observers bear witness to the harassing dyadic interaction. In contrast, as I discuss in more detail below, aggressive behaviour may be perpetrated in the presence of an observer but in the target’s absence. For example, an individual who hears one colleague gossip about (i.e., make evaluative statements about; Eder & Enke, 1991) another colleague would be classified as an “observer,” regardless of whether the target of the berating was present. However, an individual who intentionally or unintentionally *participates* in the aggression—for example, by gossiping about the target themselves or by being the recipient of gossip about the target—would *not* be classified as an “observer” because of their direct participation in the aggressive incident. Therefore, I define an *observer* as an individual who witnesses a behaviour that the observer perceives to be aggressive that is perpetrated by one individual and directed toward another individual, regardless of whether that individual is present.

Targets

Neuman and Baron’s (2005) definition of interpersonal workplace aggression—efforts by individuals to harm others within their organization that the target is motivated to avoid—implies that a target of workplace aggression is an individual who has been intentionally harmed by another individual. Therefore, I define a *target* as any individual who is perceived by an observer to be the subject of the aggressive behaviour of another; this revision to Neuman and Baron’s definition is necessary, as the current review takes

the perspective of the observer. This definition does not require that the target perceive him- or herself as a victim of aggression.

Perpetrators

I define a *perpetrator* as any individual who observers *perceive* to have initiated an aggressive behaviour against another individual. As noted in the definition of *targets* above, this definition does not require actual intent on the part of the perpetrator.

Naturally, while the observer may infer or assume intent, he or she likely would not know the perpetrator's true intent; as such, observers may interpret innocent behaviours to be malicious and vice versa. Although it may seem inappropriate to label an individual as a perpetrator if his or her behaviour was not intended to be harmful, from the perspective of the observer, the true intention of the "perpetrator" may not matter. For example, when an individual tells a colleague about a negative experience they have had with a third party, the individual may simply be seeking informal social support (Cortina & Magley, 2009). However, an observer could perceive the actor's behaviour as an intentional effort to turn his or her colleague against the target, and it is the *perception*, and not the actor's actual intent, that will guide the observer's behaviour.

Why Study Observers?

The importance of considering how witnessing workplace aggression affects observers is four-fold. First, some forms of workplace aggression (i.e., social undermining, gossiping) assume that the aggression has negatively influenced observers' attitudes toward the target of the aggression. For example, social undermining is defined as the intentional interference in a target's reputation or his or her ability to develop and maintain social relationships at work (Duffy et al., 2002). As the definition implies, the

harm perpetrators inflict upon targets of social undermining is not only in its direct effect on the target, but also on the target's relationships with *others* at work. The assumption, then, is that witnessing social undermining behaviours negatively influences these "others'" perceptions of the target. However, social undermining researchers have not tested this assumption; that is, I am not aware of any research to date that has examined the extent to which social undermining adversely affects the reputation and relationships of targets (i.e., observer perceptions of and attitudes towards targets). As such, it remains to be determined whether this behaviour has its assumed negative effect on observers.

Second, if observers are influenced by witnessing workplace aggression as assumed in the social undermining research, it is possible that targets of aggression may be doubly victimized when observers are present, first by the perpetrator, and second by the observer who develops negative attitudes towards the target. That is, the negative outcomes associated with being the target of workplace aggression discussed above (i.e., decreased job satisfaction, increased intention to turnover, and negative physical and mental health outcomes; Bowling & Beehr, 2006) may be compounded by the presence and potential involvement of observers. As such, victim experiences may be qualitatively different when observers are present as compared to when they are not present.

Further, although previous research has suggested that only observer attitudes toward the target of aggression (e.g., social undermining) will be adversely affected (Duffy et al., 2002), it is possible that observer attitudes toward the *perpetrator* of the aggression may also be influenced by witnessed aggression. For example, individuals who behave aggressively at work may reveal themselves to be unprofessional or even malicious, which could result in negative attitudes toward the perpetrator. Such a finding

could have implications for workplace aggression interventions, as perpetrators may be deterred from behaving aggressively if they are aware of the potential social costs associated with their behaviour.

Finally, observed aggression may have implications for the wider climate of the organization in which it occurs. For example, if witnessing aggression influences observers, an observed incident may have the potential to spiral beyond the target-perpetrator dyad and affect observers as well as the overall group and organizational climate (Andersson & Pearson, 1999). When observers witness aggression in the workplace, the situation is changed for all involved parties. While an altercation within a dyadic interaction may be resolved with an apology between the direct participants, the target and perpetrator may not be able to control the wider impact of the incident (indeed, they may not even be aware of how their disagreement affects observers). An observed quarrel can therefore spiral beyond the target-perpetrator dyad and affect observers as well as the overall group and organizational climate. This eventuality would have obvious implications for both research and practice, as current intervention strategies focusing only on the target and the perpetrator of an aggressive interaction may fail to resolve the issue at the organizational climate level.

Existing Literature on Observers of Aggression

Few studies have explored the role of observers in workplace aggression; however, research in related areas can help inform this line of inquiry. For example, in the literature on sexual harassment, Bowes-Sperry and O'Leary-Kelly (2005) developed a model of observer intervention in workplace sexual harassment in which they considered the conditions under which an observer would be more or less likely to intervene in the

harassment. They proposed that observer interventions could be classified according to two dimensions: immediacy (i.e., the length of time between the observed incident and the observer's response) and involvement (i.e., the level of the observer's participation in [diffusing] the incident). Bowes-Sperry and O'Leary-Kelly's review examined the likelihood that an observer of sexual harassment will *report* the incident; reporting an incident of harassment is one possible behavioural response observers have. My dissertation focuses on observers' *attitudes* and *behavioural intentions* toward the target and the perpetrator, which may be an initial necessary condition for observer intervention (or exacerbation) to occur.

In addition, research on social networks has begun to explore the potential for triadic relationships to facilitate both friendly and unfriendly alliances (Aquino & Lamertz, 2004; Burt & Knez, 1995; Krackhardt, 1999). Indeed, some scholars have proposed that research on dyadic interaction—such as workplace aggression—would be more appropriately conceptualized as triangular interactions, because individuals have a tendency to draw third parties in to their interactions with others (Bowen, 1978). Based on his long-term case analysis of a public school system, Smith (1989) examined the processes of “triangulation” (i.e., the drawing in of a third-party) and “splitting” (i.e., the partitioning of individuals into two or more groups) as they pertained to the movement of conflict through organizations. Specifically, Smith noted that conflicts tend to be expressed by individuals and groups quite removed from their source because those involved in the original dispute tend to draw in others, thereby creating coalitions. Members of these coalitions may then adopt and spread the dispute of the original parties. These findings are relevant because they demonstrate that an incident of aggression can

influence those not originally involved in the dispute to the extent that they themselves come to participate.

There is limited research on how witnessing workplace mistreatment influences observers' attitudes and behaviours toward the target and the perpetrator; however, research on vicarious mistreatment has considered the effects of witnessing various forms of mistreatment among one's colleagues on observers' well-being. For example, Miner-Rubino and Cortina (2004, 2007) found that individuals who were not directly targeted by sexual harassing behaviours still experience negative attitudinal and job-related outcomes as a result of ambient sexual hostility in their work environment. Similarly, Lim, Cortina, and Magley (2008) found that exposure to incivility (a low intensity form of workplace aggression with ambiguous intent to harm; Andersson & Pearson, 1999) among the members of one's workgroup predicted negative outcomes over and above those predicted by personally experienced incivility alone. Finally, Rogers and Kelloway (1997) found that witnessing or hearing about an incident of violence at work (i.e., a physical and high intensity form of workplace aggression; Andersson & Pearson, 1999) predicted employees' negative emotional and physical well-being as well as their intentions to leave the organization via its effect on employees' fear of future violence. Two additional studies by Schat and Kelloway (2000, 2003) also support the finding that witnessing or hearing about aggression at work predicts stress and strain reactions for these observers. Although I am focusing on observer attitudes and behaviours, this research suggests a future need to also consider observer well-being.

Research Questions

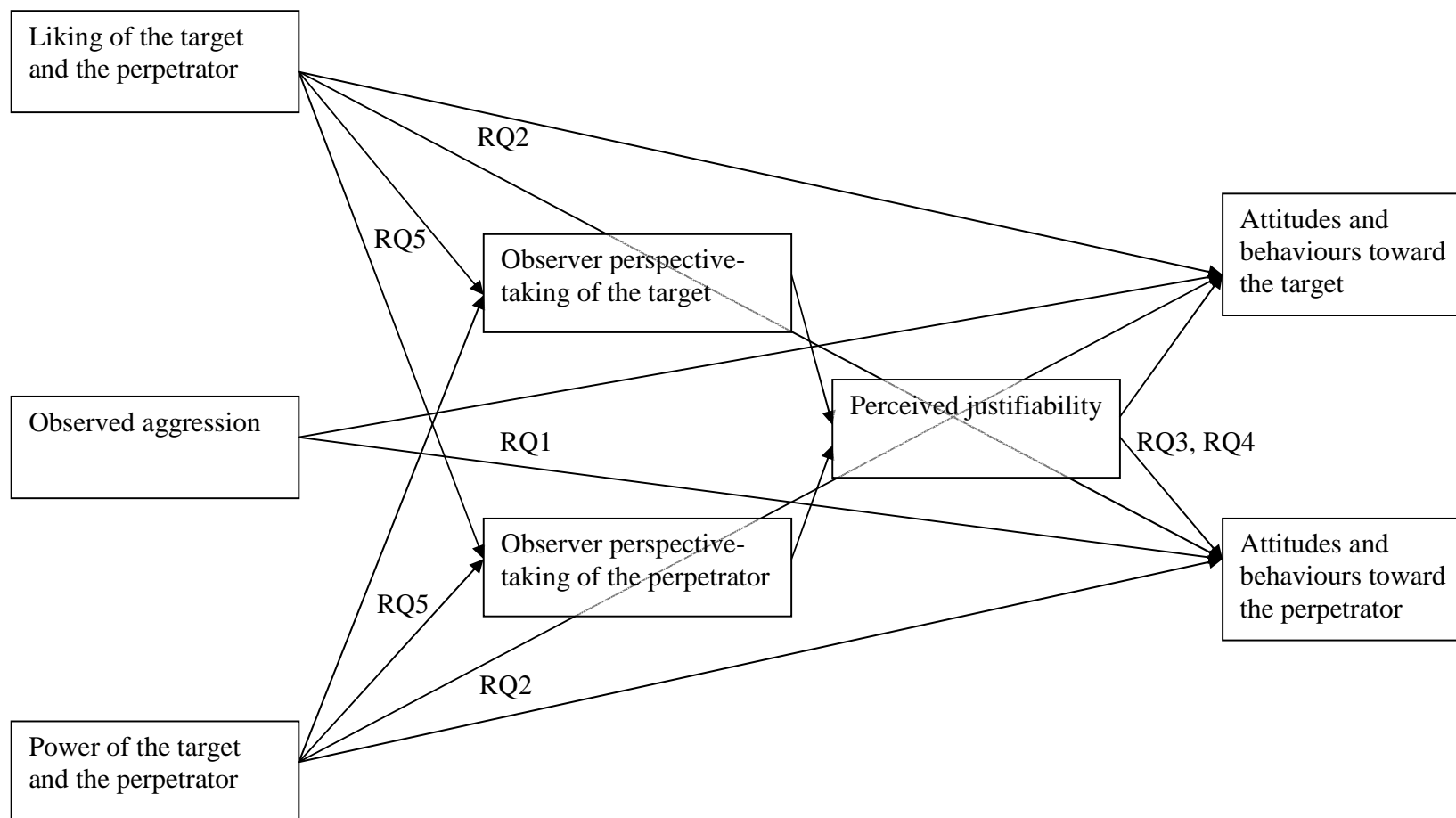
To advance our knowledge of workplace aggression, we need to investigate several important questions about observers. Specifically, my dissertation research proposes to answer the following five research questions: (1) How does witnessing aggression affect observer attitudes and behaviours towards targets and perpetrators of workplace aggression? (2) How does an observer's pre-existing relationship with the target and the perpetrator influence his or her attitudes and behaviours towards each actor? (3) How does observer perspective-taking influence (a) observer perceptions of justifiability, and (b) observer attitudes and behaviours toward the target and the perpetrator? (4) Whose perspective are observers more likely to take? (5) How is observer perspective-taking influenced by the observer's relationship with each of the target and the perpetrator? These research questions are presented graphically in Figure 1.

My dissertation will proceed as follows: in Chapter II, I will review my hypotheses regarding the effect of witnessing aggression on observer attitudes and behaviours toward the target and the perpetrator. I will also describe Study 1, a laboratory-based experiment which examines, when all else is equal, the impact of witnessed aggression on observer attitudes and behaviours toward the target and the perpetrator of a staged aggressive incident. In Chapter III, I will review my hypotheses regarding the anticipated effect of the observer's relationship with the target and the perpetrator on observer attitudes and behaviours. In this chapter, I will also describe Study 2, which uses a vignette design to examine individuals' attitudes and behavioural intentions toward a hypothetical target and perpetrator—manipulating the observer's ostensible relationship with each—after witnessing an incident of workplace aggression. In Chapter IV, I will introduce the concept of perspective-taking and my hypotheses

regarding its effects on observer perceptions of justifiability, and subsequent attitudes and behaviours towards targets and perpetrators. I will also describe Study 3, which uses a videotaped incident of workplace aggression to examine the effect of directed perspective-taking behaviour on individuals' perceptions of justifiability, and attitudes and behavioural intentions toward the target and the perpetrator of the aggression. In Chapter V, I will consider how the observer's relationship with the target and the perpetrator may influence his or her perspective-taking and perceptions of justifiability. I will also describe Study 4, a longitudinal event-based diary study which assesses the full model depicted in Figure 1, by having individuals report on their relationships with, perspective-taking of, and attitudes toward the target and the perpetrator after witnessing incidents of aggression among their colleagues in an actual workplace.

Figure 1

A graphical representation of the research questions of this dissertation.



Chapter II

Study 1

In Chapter I, I provided an overview of the research questions I plan to investigate in my dissertation. Specifically, I considered the relational and perceptual factors that may influence how witnessing aggression will affect observers' attitudes and behaviours. However, before I consider these potential factors, I first investigate the "all else equal" scenario in which I examine the effect of witnessing aggression on observers when the observer has no prior relationship with either the target or the perpetrator. That is, in Study 1, I examine my first research question: How does witnessing aggression affect observer attitudes and behaviours towards targets and perpetrators of workplace aggression?

Although research in a number of domains suggests that witnessing aggression will influence observers' attitudes and behaviours, the strongest support comes from research on priming. Priming is the "nonconscious activation of social knowledge structures" (Bargh, 2006, p. 147) and emerged as a challenge to the behaviourist ideology that behaviour was largely a function of the environment. According to Hebb (1949) and Lashley (1951)—the pioneers of priming theory—the human mind creates mental representations of information (e.g., objects, language), which influence the way subsequent information is processed. Research in this area has repeatedly underscored the ease with which prior information may influence people. For example, in one of the first priming experiments, Srull and Wyer (1979) found that exposing participants to descriptive words related to "kindness" in one part of an experiment resulted in their subsequent evaluation of a target person as more kind than did participants who were not

primed with kindness. In the organizational domain, Kay, Wheeler, Bargh, and Ross (2004) found that competitive behaviour was increased and perceptions of cooperation were decreased when a business-related object (e.g., a briefcase) was placed in their participants' immediate environment as compared to a non-business-related object (e.g., a backpack). Although these participants did not report any awareness of the placed objects, researchers have found that subtly is not necessary for priming to exert an influence. Studies have used both implicit (e.g., Chartrand & Bargh, 1996) and explicit priming techniques (e.g., Chen, Schechter, & Chaiken, 1996; Gollwitzer, Hackhausen, & Steller, 1990; Hamilton, Katz, & Leirer, 1980), and shown the same pattern of results. Extrapolating from these findings, it is likely that if an observer is presented with negative information about an individual in the form of aggression from a perpetrator towards a target, this negative information may 'prime' the observer to perceive the target negatively.

Related to the above argument, simply being a target of aggression may be sufficient to evoke in observers a negative perception of the target. Researchers have found that individuals have a tendency to perceive the world as just; that is, we like to think that people get what they deserve (Lerner, 1980; Lerner & Miller, 1978). This belief, however flawed (Lerner, 1980), is functional because it increases individuals' perception of outcome control (e.g., "If I am a good person, good things will happen to me"); a perception that meets a fundamental human need to control, or to predict, one's social environment (Adler, 1966; de Charms, 1968; Hendrick, 1943; Kelly, 1955; Maslow, 1970; McClelland, 1975; Sullivan, 1947; White, 1959). However, this belief is also predictive of victim blaming (e.g., "If people get what they deserve, he or she must

have deserved what he or she got"). As such, witnesses of aggression directed toward a target may perceive that the target somehow deserves the behaviour; this may then become the lens through which the observer views the target. That is, I expect that observers will develop negative attitudes toward targets of workplace aggression.

Although researchers have yet to test this hypothesis empirically, this assumption is consistent with definition of social undermining. Social undermining is defined as the intentional interference in a target's work-related success and reputation, as well as his or her ability to establish and maintain relationships in the workplace (Duffy, Ganster, & Pagon, 2002). Although researchers typically measure social undermining from the point of view of the target (see Duffy et al., 2002), implicit in its conceptualization is that a perpetrator who socially undermines his or her target has been able to negatively influence others in the target's work environment. That is, to interfere with the target's reputation and success, the social undermining would have to affect those who hold a target's reputation and influence a target's success. As such, the concept of social undermining is best investigated from the perspective of the observer.

The assumption that observers will develop negative attitudes towards targets is also consistent with Lind and Tyler's (1988; Tyler & Lind, 1992) group value model. This model proposes that group members infer their value, as well as the value of other members by the way they are treated by the group's leader (i.e., by powerful group members). If a group member is aggressed against (e.g., undermined in front of his or her peers), this treatment will signal his or her (low) value to other members. Although the group value model focuses on the behaviour of high powered group members in signaling belonging, the research on priming reviewed above suggests that the same message may

be conveyed by low power group members. Therefore, if an organizational member aggresses against another employee, this negative behaviour may signal to observers that the target is not a valued member of the group or organization. Observers who perceive the perpetrator's negative evaluation of the target (i.e., his or her low value) may be primed to perceive the target negatively. As such, all else equal, when a perpetrator aggresses against a target, I expect the observer to develop a greater negative attitude toward the target than they would have otherwise.

H1a: All else equal, observers will report greater negative attitudes toward an actor when he or she is the target of aggression than when he or she is not the target of aggression.

Although prior research assumes that witnessing aggression will adversely affect only observer attitudes toward targets (e.g., priming, social undermining, group value model), it fails to recognize that such behaviours can simultaneously affect observer attitudes towards perpetrators. That is, by behaving aggressively, the perpetrator may reveal him- or herself as an aggressive or even malicious person, which may prime observers to perceive the perpetrator in a negative light. Further, in the context of the workplace, employees may perceive aggressive behaviour as unprofessional and a violation of typical organizational norms of respectful interaction.

According to Andersson and Pearson (1999), workplaces have norms for the interactions among colleagues. Specifically, these norms dictate that employees treat each other with respect and civility; this norm of civility facilitates cooperation among organizational members. Workplace norms are the basic standards of behaviour that emerge within an organizational community, and consist of both its formal (i.e.,

organizationally prescribed) and informal (i.e., socially prescribed) rules and regulations (Feldman, 1984; Hartman, 1996). According to Goffman (1967), norm violations in a workplace disrupt the organization's social equilibrium; such disruptions are often perceived very negatively by others. This tendency is stated formally in the deontic model of justice (Cropanzano, Goldman, & Folger, 2003, 2005; Folger, 2001). According to this model, when moral or social norms are violated, individuals who are not involved in the transgression experience an evolutionary-based negative visceral response (Folger & Skarlicki, 2008), which tends to include strong negative emotions toward the norm violator (Skarlicki & Rupp, 2010).

Based on these arguments, I posit that observers of workplace aggression will perceive the initiator of a disruption—the perpetrator, in the case of workplace aggression—especially negatively. Therefore, all else equal, when a perpetrator aggresses against a target, the observer is likely to develop a negative attitude toward the perpetrator than they would have otherwise. In addition, because the perpetrator (and not the target) of aggression is the norm violator and thus the source of a disruption to the organization's social equilibrium, I expect the observer to develop a *greater* negative attitude toward the perpetrator than toward the target.

H1b: All else equal, observers will report greater negative attitudes toward an actor when he or she is the perpetrator of aggression than when he or she is not the perpetrator of aggression.

H1c: All else equal, observers will report greater negative attitudes toward a perpetrator than toward a target of aggression.

Duffy et al. (2002) argued that social undermining would negatively affect not only the reputation of targets (i.e., by causing observers to develop negative attitudes towards them as proposed in *H1a*), but also their career-related success and relationships. These arguments imply that observers of social undermining not only develop negative attitudes towards targets, but also may engage in behaviours that damage observer-target relationships and impede target success. Although they will likely be related, I consider observer attitudes and behaviours as distinct outcomes because the relationship between attitudes and behaviours is not perfect (Wicker, 1969). Further, the formal and informal rules and regulations of the workplace may constrain the range of behaviours an observer is able to display toward their co-workers (Bennett & Robinson, 2000; Mowday & Sutton, 1993). For example, Hollinger and Clark (1982) found employees' perceptions of their colleagues' informal sanctions on enacted property and production deviance—for example, discouragement and avoidance of the 'deviant'—were particularly strong deterrents to deviance. That is, although employees may have had a similar desire to enact deviance, they only enacted these behaviours when they perceived that it was acceptable to their peers.

Based on Duffy et al.'s (2002) arguments, and theories of cognitive consistency, I propose that observers will engage in negative behaviours towards targets. Individuals have a drive to maintain consonance between their related opinions, attitudes, and behaviours (Festinger, 1957). That is, research has shown that when individuals' behaviour does not match their attitudes or beliefs, they engage in some form of dissonance reduction. According to Festinger (1957), dissonance reduction can be accomplished in one of two ways; that is, one can either (1) change his or her actions or

(2) change his or her “knowledge” (i.e., by adding new information or coming to believe that one’s cognitions are not actually dissonant). For example, Dickerson, Thibodeau, Aronson, and Miller (1992) found that students who were asked to sign a poster advocating water conservation and were subsequently made aware of their previous water wasting habits took shorter showers than those who did not sign the poster or were not made aware of their water wasting. Therefore, observers who develop negative attitudes toward the target of aggression may also display negative behaviours toward targets.

I consider two such behaviours: interpersonal deviance and helping. These behaviours are of interest because they are colleague-directed (i.e., they may be directed at the target and/or the perpetrator) and because they both have the potential to significantly affect the work-related success and reputation of the colleague toward whom they are directed, outcomes that are consistent with the assumptions of social undermining (Duffy et al., 2002).

Robinson and Bennett (1995) define interpersonal deviance as voluntary behaviour that violates the norms of the organization and threatens the well-being of organizational members. Interpersonally deviant behaviours include acting rudely toward, making fun of, and publically embarrassing a colleague (Bennett & Robinson, 2000). Perpetrating deviant behaviours can both cause tension between colleagues and can hinder target’s work performance, two outcomes that are consistent with the assumptions of social undermining. Therefore, I hypothesize that all else equal:

H2a: All else equal, observers will enact more deviance toward an actor when he or she is the target of aggression than when he or she is not the target of aggression.

As I hypothesized in *H1b*, I expect observers to develop negative attitudes toward perpetrators of aggression because it is the perpetrator who violates the norm of civility (Andersson & Person, 1999) and thus is the source of the disruption to the social equilibrium of the workplace (Goffman, 1967). Further, according to the deontic model of justice discussed above, norm violations against others can evoke negative visceral reactions in third-parties that motivate them toward retributive behaviour toward the norm violator (Cropanzano et al., 2003, 2005; Folger, 2001).

A number of studies have found that third-parties who learn of an injustice or mistreatment (i.e., a norm violation) perpetrated against employees will engage in retributive action directed toward the organization (i.e., the perpetrator) (e.g., Bies & Greenberg, 2002; Skarlicki, Ellard, & Kelln, 1998). This tendency has also been found for individual perpetrators. For example, Skarlicki and Rupp (2010) examined third-parties' responses to scenarios in which an ostensible coworker was provided with a fair or an unfair justification for an injustice perpetrated by the coworker's supervisor. Skarlicki and Rupp found third-parties reported that they would engage in higher levels of retributive action against the perpetrator (i.e., disseminating negative information about the supervisor, filing a formal complaint against the supervisor; Jones & Skarlicki, 2005) in the unfair, as compared to the fair condition. The operational definition of retributive action in this study closely parallels that of interpersonal deviance, discussed above.

Indeed, the tendency for third-parties to engage in negative behaviour against norm violators has been demonstrated even when the third-party does not know or identify with the target or the original norm violation and when their action comes at an

economic cost to themselves (Turillo, Folger, Lavelle, Umphress, & Gee, 2002). As such, I expect that observers will engage in more interpersonal deviance toward a perpetrator of aggression than a non-perpetrator. In addition, because the perpetrator is the norm violator, I expect the observer to engage in *more* interpersonal deviance toward a perpetrator than toward the target.

H2b: All else equal, observers will enact more deviance toward an actor when he or she is the perpetrator of aggression than when he or she is not the perpetrator of aggression.

H2c: All else equal, observers will enact more deviance toward a perpetrator than toward a target of aggression.

In addition to interpersonal deviance, witnessing workplace aggression may also influence observers' helping behaviour. Helping is a dimension of organizational citizenship behaviour (Podsakoff & Mackenzie, 1994), which is defined as an extra-role behaviour that benefits the organization or individual; helping does not fall within the purview of the actor's job description (Organ, 1988). Helping behaviours include a willingness to give up one's time to aid a colleague with work-related problems, showing courtesy to a colleague by consulting them before making a decision that may impact them, and encouraging a colleague when he or she is down (Podsakoff & Mackenzie, 1994). Typically, helping implies an investment of the actor's resources (e.g., time, skill) into another individual; an investment which is not formally compensated by the organization. Further, helping a colleague may increase that colleague's work-related success, whereas withdrawing such behaviours may impede success. Consistent with Duffy et al.'s (2002) definition of social undermining, observers may be less inclined to

promote the work-related success of (i.e., to refrain from enacting helping behaviours toward) the target of aggression.

I also expect observers' perpetrator-directed helping behaviour to be influenced by witnessed aggression. As noted above, helping involves willingly giving up one's time and resources without formal compensation from the organization; it is a behaviour that often results in positive outcomes for the receiver. Given that third-parties (e.g., observers) often engage in retributive action against the perpetrator of a norm violation as an expression of deontic justice (Cropanzano et al., 2003, 2005; Folger, 2001), it seems that helping such a perpetrator would be inconsistent with this model of justice. As such, observers should be less likely to engage in perpetrator-directed helping following a witnessed incident of aggression.

H3: All else equal, observers will enact less helping toward the perpetrator than toward the target of aggression.

See Figure 2 for an overview of the hypotheses of the current study.

To investigate these hypotheses, I conducted a lab-based experiment to compare participants' evaluation of two confederates. One group of participants witnessed one confederate undermining (a low intensity form of aggression) the ideas of the other confederate in the context of a research study; the second group of participants worked with the same confederates but did not witness any undermining.

Method

Participants

I recruited 56 participants; however, I excluded four participants from my analysis because they were suspicious of the study's true purpose. Therefore, the final sample

consisted of 52 individuals (32 women, 20 men, $M_{\text{age}} = 23.08$, $SD = 5.59$, age range: 17 to 51). My sample self-identified mainly as Asian ($n = 19$) and Caucasian ($n = 15$), with the remaining participants being of East Indian ($n = 5$), African ($n = 6$), Middle Eastern ($n = 1$), or multiple ethnicities ($n = 4$); two participants self-identified as 'Other'.

I recruited participants for two ostensibly unrelated studies using an online sign-up website by posting advertisements at the University of Manitoba (Appendix A); I told potential participants that one study was being conducted by the Department of Business Administration and the other by the Department of Marketing. I encouraged participation in this 50 minute (25 minutes for each study) study by offering \$15 to those who participated. On the sign-up website, I asked participants to indicate their gender (to match them on gender to the study confederates) as well as their age and ethnicity (for demographic purposes).

Materials and Procedure

I recruited participants for two supposedly unrelated studies; the first was ostensibly conducted by the Department of Business Administration and claimed to examine the effect of lighting on mood, creativity, and productivity (the 'Lighting' study); the second was ostensibly conducted by the Department of Marketing and claimed to examine the relationship between personality and taste preferences (the 'Sauce' study). For both studies, I ostensibly ran participants in groups of three; however, in actuality two of the participants were study confederates. As such, I actually ran participants one at a time.

When the true participant and two study confederates arrived at the location of Study 1, I explained that the study was interested in the influence of lighting on mood,

creativity, and productivity. I told them that their participation would involve completing a mood questionnaire at two time points (mood), working in a group to brainstorm ideas to foster greater inter-faculty communication at the University of Manitoba (creativity), and stuffing envelopes (productivity). In addition, I told participants that half of the groups would be asked to work in bright lights and the other half would be asked to work in low lights. I asked all of the participants to read over and sign a consent form (see Appendix B) and to complete Watson, Clark, and Tellegen's (1988) Positive and Negative Affect Scale (PANAS) (see Appendix C). While the participants completed these, I created name placards for each participant; these placards were intended to help the true participant distinguish between the study confederates. I then asked one of the group members to draw one of two slips of paper to assign them to one of the two lighting conditions; this lighting manipulation was merely a distracter aimed to disguise the true purpose of the study. In actuality, all groups were assigned to the 'Bright lights' condition (both slips of paper said 'Bright lights'). Once the lighting condition had been drawn, I then gave the group 10 minutes to brainstorm ideas for increasing inter-departmental communication. I was not present for the brainstorming task; only the true participant and the two confederates were in the room.

In each group of three, I 'randomly' assigned two group members to be the 'Idea generators,' a role that involved the generation of ideas for increasing inter-faculty communication at the University of Manitoba, and one group member to be the 'Recorder', presumably to keep track of the ideas generated by the 'Idea generators'. The true participant was always assigned the role of 'Recorder' (roles were assigned by having all three group members pick a role title from three slips of paper to be read aloud

to the rest of the group; all three pieces of paper were labeled 'Recorder' but the confederates each stated that they had chosen an 'Idea generator' slip). In addition, I seated participants such that the true participant was seated in the single seat across from the confederates.

Before they arrived at the lab, I randomly assigned participants to either the Aggression ($N = 26$) or No Aggression ($N = 26$) condition, and the study confederates were matched to the participant with respect to gender to help mitigate confounds associated with gender biases. The study confederates were not aware of the study condition until the brainstorming task began, because the condition was written on the first page of the notebook I provided to the 'Idea generators' to jot down their ideas. In both conditions, the 'Idea generators' took turns making suggestions for fostering inter-faculty communication at the University of Manitoba; each 'Idea generator' suggested seven ideas. A separate group of undergraduate students ($N = 55$) evaluated the overall quality of a number of ideas (1 = *extremely low quality* to 7 = *extremely high quality*) in exchange for partial course credit; I chose fourteen ideas that were matched based on quality and divided between confederates (see Table 1 for the p - and t -values of the idea pairs) (see Appendix D for the confederates' script). These ideas were pretested for quality to exclude the possibility that results are driven by the quality of the ideas.

In the Aggression condition, I instructed one confederate ("the perpetrator") to display negative non-verbal behaviours toward the other confederate ("the target") in response to the target's ideas (i.e., eye rolling, lack of eye contact, tone of voice). Over the course of the idea generation task, the perpetrator was instructed to appear to become more aggravated by the target. Consistent with the hypothesis of social undermining,

these behaviours were intended to influence the true participant's perception of the target, priming the participant (i.e., the observer) to evaluate the target negatively. I chose these behaviours because they are consistent with three items on Duffy et al.'s (2002) co-worker undermining scale (i.e., "Belittled you or your ideas"; "Insulted you"; "Let you know they did not like you or something about you"; p. 340). In contrast, in the No Aggression condition, the confederates proposed the same ideas; however, the confederates were instructed not to engage in any undermining behaviour and to display neutral interpersonal behaviour (i.e., moderate eye contact, periodic nodding).

Once the confederates suggested their final idea, I re-entered the study room and retrieved the 'Recorder's' idea evaluation sheet, and gave each participant a survey booklet. This booklet contained a second copy of the PANAS (ostensibly to determine whether the participant's mood had changed since he or she had been assigned to work in one of the two lighting conditions). I also asked the participant to indicate their attitude toward each of his or her group members on a number of Greenwald, McGhee, and Schwartz's (1998) semantic differential pairs (see Appendix E). I also asked the participant to rate their ability to concentrate on the task and their perception of the creativity of the ideas proposed in the group brainstorming session to maintain the cover story of the experiment.

I collected the survey booklets once all of the group members had completed them; I instructed the confederates to finish their booklets at approximately the same time as the true participant. I then instructed participants to stand at one of three envelope stuffing stations that I had set up along the back of the study room (facing forward); I always instructed the true participant to stand at the middle station, which was

premeasured to be equidistant from the other two stations (i.e., from each confederate). I explained to the participants that, in addition to being the productivity measure of the lighting study, the envelope stuffing task would also be an opportunity for each participant to make additional money. Specifically, I explained to the participants that they would have five minutes to stuff each envelope they had in front of them with one of each of four different coloured papers (i.e., each envelope should end up with four pieces of paper, each a different colour). I told the participants that if they stuffed all of their envelopes in the allotted five minutes, each would receive \$3.00 in addition to the \$15.00 he or she was already receiving for participating in the studies. Further, I told the participants that if any of them finished before the five minute deadline, each could help one other participant finish his or her envelopes if they so desired; in addition, I told the participants that if they helped another finish his or her pile, both the participant and the individual he or she helped would receive \$5.00 instead of \$3.00 for finishing their envelopes.

The true participant was given fewer envelopes than the confederates (i.e., 15:25) to ensure that he or she always finished his or her envelopes before the confederates. I also instructed the confederates to watch the pace of the true participant and to ensure that each would have six envelopes left when the true participant finished his or her envelopes. I also watched the pace of the true participant so that I could tell the group that they had one minute remaining to finish stuffing their envelopes when the true participant had only one envelope left to stuff. All of these instructions were intended to motivate the true participant to help one of the two confederates. I measured helping dichotomously,

as the role of the actor (target or perpetrator) the participant chose to help make an extra \$5.00.

After the envelope stuffing task was completed, a second experimenter ostensibly from the Department of Marketing (also a study confederate) arrived to escort the true participant and confederates to a second experimental room; this room was located one floor above the first study. The experimenter asked the participants to bring their name placards with them.

In the second study room, the experimenter introduced the second ostensible study, the 'Sauce' study. Specifically, the second experimenter explained to the group that the study was interested in the relationship between personality and taste preferences. For two of the participants (the 'Sauce tasters'), the experimenter explained that the study would involve completing a personality questionnaire and eating and rating a series of sauces. Meanwhile, the third participant (the 'Sauce pourer') would be asked to pour the sauces for the other two participants in another room. The true participant was always 'randomly' assigned to be the sauce pourer (note: this cover story and method was adapted from Lieberman, Solomon, Greenberg, and McGregor's (1999) hot sauce paradigm).

Before assigning the participants to be a 'Sauce taster' or the 'Sauce pourer', the experimenter asked each of the participants to complete a Taste Preferences Inventory (Appendix F), which is a short questionnaire asking participants to indicate preferences for four different tastes (i.e., sweet, salty, spicy, sour), each on a 21-point scale (1 = *no liking at all* to 21 = *extreme liking*). Roles were then assigned by having all three group members pick a role title from three slips of paper to be read aloud to the rest of the

group; all three pieces of paper were labeled 'Sauce pourer' but the confederates each stated that they had chosen a 'Sauce taster' slip. The experimenter asked the true participant, in his or her role as the 'Sauce pourer', to accompany him to the sauce pouring room, a room that was about 10 feet down the hall from the second study room. The experimenter always took all of the completed taste preferences inventories, as well as the name placards of the 'Sauce tasters' with him. Before he left with the true participant, the experimenter asked the remaining 'participants' to complete a short personality questionnaire; this scale was intended to support the cover story that the study was investigating how personality relates to taste preferences.

The experimenter escorted the true participant to the sauce pouring room, where two sauces—labeled 'A' and 'B'—and two stacks of bowls—red and blue—were laid out. There was also a highly sensitive weigh scale to measure the quantity of sauce poured by the participant. In addition, there were two trays laid out; the experimenter placed each of the 'Sauce tasters' name placards onto each of the trays (i.e., each tray was labeled with the name of one of the 'Sauce tasters'). The experimenter explained that the 'Sauce pourer' was to proceed as follows: The participant was to pour sauce A (labeled with "Caution: Very spicy") into two red bowls and to record the amount of each, then to place one bowl onto each of the trays and bring them in to the 'Sauce tasters', who would be required to eat all the sauce given to them. Though the participant was instructed to then repeat the trial with Sauce B, the experiment was terminated and participants debriefed after the delivery of Sauce A.

When explaining the instructions to the true participant, the confederate experimenter was instructed to casually glance at the Taste Preferences Inventories of the

‘Sauce tasters’—who were instructed to each rate their liking of ‘spicy’ as a ‘3’ on a 21-point scale—and to mention that it was too bad that neither participant liked spicy, since one of the sauces (sauce A) was very spicy. The second experimenter’s script is included in Appendix G.

After reviewing these instructions with the participant to ensure comprehension, the experimenter returned to the other participants and the ostensible study proceeded through the first trial, with the confederates rating the sauces on a rating sheet. Once the true participant had brought in the trays with the bowls for the first trial, I entered the sauce pouring room to stop the study. At this point, I fully debriefed the participant and reviewed the study’s deception (Appendix H). I then paid the participant \$20.00 (\$15.00 as advertised, plus \$5.00 for the envelope stuffing task), and asked the participant to keep the true purpose of the study to him or herself in order to maintain the cover story for subsequent participants. To encourage adherence to this request, I asked each participant to sign a form stating that they would keep the true purpose of the study to themselves until September 30, 2010 (i.e., when data collection was finished). Each participant was given the opportunity to ask questions and to request a copy of the study results, both at the conclusion of the study and via e-mail any time thereafter. I ensured that each participant was not dismissed until I was satisfied that they did not feel ill at ease regarding their participation.

Measures

Attitudes toward confederates. I asked participants to evaluate each of the confederates on a series of six semantic differential pairs. These questions were embedded in the mood questionnaire to help disguise their purpose. This scale uses polar-

opposite adjective pairs to measure individuals' attitudes toward objects, events, or individuals. The current study used the adjective pairs used in Greenwald et al.'s (1998) study of implicit attitudes (i.e., pleasant-unpleasant, active-passive, good-bad, honest-dishonest, strong-weak, valuable-worthless). Participants were asked to rate each of the confederates on a 7-point scale anchored by these adjective pairs, with higher scores indicating more negative attitudes.

Helping. I measured helping dichotomously by recording which confederate the participant helped make an additional \$5.00 in the envelope stuffing task.

Deviance. I measured deviance as the total amount of sauce A that the participant gave to each confederate. As noted above, this procedure is similar to one developed by Lieberman et al. (1999), who used the amount of hot sauce participants allocated to a target person they knew did not like spicy food as an index of aggression. I weighed the amount of sauce given to each confederate following the experiment.

Positive and negative affect. I measured participants' positive and negative affect using the state version of the 20 item Positive and Negative Affect Scale (PANAS; Watson et al., 1988) to determine whether their affect was influenced by the interaction between the target and the perpetrator (Lim et al., 2008; Miner-Rubino & Cortina, 2004, 2007; Schat & Kelloway, 2000, 2003). This scale asked participants to indicate the extent to which they felt, in the moment that they completed the scale, a number of feelings on a five-point scale (1 = *very slightly or not at all* to 5 = *extremely*). I collected this positive and negative affect information to maintain the cover story of the first ostensible study (i.e., the effect of lighting on mood). Participants completed this scale twice, once at the

beginning of the study, and again after they had completed the brainstorming task as part of the questionnaire booklet.

Demographics. I asked all potential participants to indicate their gender, age, and ethnicity when they signed up online for the study. I collected participants' gender so that they could be matched to confederates that were of the same gender. I collected age and ethnicity information for descriptive purposes.

Results

Manipulation checks

Aggression manipulation. To ensure that participants perceived the aggression manipulation correctly, I checked the manipulation with a separate group of participants (62 women, 65 men) in exchange for partial course credit. I asked participants to watch a video of the actors generating the scripted ideas, either in a neutral tone (No Aggression) or with one actor undermining the other (Aggression). Note that I counterbalanced the identity of the target and the perpetrator (i.e., the actors took turns playing each role); as such, each participants watched one of three possible videos (No Aggression, Aggression: Actor A as the perpetrator, or Aggression: Actor B as the perpetrator). In addition, I matched participants by gender to each video such that female participants watched the female actors interacting and male participants watched the male actors interacting. Participants rated their perception of the aggressiveness of each actor on a seven-point scale (1 = *very aggressive/hostile* to 7 = *not aggressive/hostile at all*).

I conducted a multivariate analysis of variance (MANOVA) to compare participants' perceptions of the aggressiveness of each actor pair (i.e., one male and one female actor) in each of the three video conditions. I found a significant main effect of

condition for participants' perceptions of both actors; $F(2, 121) = 8.99, p < .001, \eta^2 = .13$ and $F(2, 121) = 7.25, p = .001, \eta^2 = .11$, respectively. Post hoc Bonferroni comparisons revealed that observers did indeed perceive the actor portraying the "perpetrator" in the Aggression condition as significantly more aggressive than the same actor in either the "target" role in the Aggression condition or in the No Aggression condition (see Table 2). I also ran a series of *t*-tests, one for each video condition, to investigate observers' perception of the aggressiveness of each actor in comparison with the other. Consistent with my expectations, I found that observers perceived the "perpetrator" as significantly more aggressive than the "target" in both Aggression conditions (i.e., Aggression: Actor A as the perpetrator and Aggression: Actor B as the perpetrator); however, as expected, there was no significant difference in their ratings in the No Aggression condition (see Table 3). As such, the manipulation was effective.

Mood. To examine whether participants' mood was influenced by witnessing aggression, I conducted a series of paired-sample *t*-tests to compare participants' positive and negative affect before and after they witnessed the aggressive or the neutral interaction (means and standard deviations are presented in Table 4). Across both conditions, I did not find any significant change in participants' positive affect before as compared to after the witnessed incident; Aggression: $t(25) = 0.86, p = .399$, No Aggression: $t(25) = 0.19, p = .849$. In contrast, participants in both conditions reported lower negative affect (i.e., their mood became less negative) following the interaction; Aggression: $t(25) = 2.61, p = .015$, No Aggression: $t(25) = 4.29, p < .001$ (see Table 4). As such, I did not find evidence that participants' mood was significantly affected by the witnessed aggression.

Tests of hypotheses

Means, standard deviations, Cronbach alphas, and inter-correlations among each of the study variables are presented in Table 5. The lack of any significant correlations between the attitudinal and behavioural variables supports my decision to treat these outcomes as independent.

To investigate whether there was a difference in participants' attitudes (*H1a* and *H1b*) and deviant behaviour (*H2a* and *H2b*) toward the target and the perpetrator depending on whether they witnessed an aggressive or a neutral interaction, I conducted a multivariate analysis of variance (MANOVA) using condition (Aggression or No Aggression) as the independent variable and observer attitudes and amount of spicy sauce allocated in the second trial to the target and perpetrator as the dependent variables.

I found a significant effect of condition for participants' attitudes toward the perpetrator as well as their deviant behaviour toward both the target and the perpetrator; $F(1, 48) = 11.66, p = .001, \eta^2 = 0.20$, $F(1, 48) = 4.68, p = .035, \eta^2 = 0.09$, and $F(1, 48) = 8.18, p = .006, \eta^2 = 0.15$, respectively (note, the direction and significance of these findings hold when the suspicious participants were included in the analysis).

Specifically, participants who witnessed one confederate behaving aggressively toward the other during the brainstorming task reported significantly more negative attitudes toward the perpetrator (Aggression: $M = 2.92, SD = 1.14$; No Aggression: $M = 1.95, SD = 0.85$), and engaged in significantly more deviance toward both the target (Aggression: $M = 32.24, SD = 20.32$; No Aggression: $M = 22.20, SD = 11.20$) and the perpetrator (Aggression: $M = 32.88, SD = 16.95$; No Aggression: $M = 21.32, SD = 11.00$) than did

participants in the No Aggression condition. As such, *H1b*, *H2a*, and *H2b* were supported.

To investigate whether observers reported greater negative attitudes and engaged in more deviance toward the perpetrator as compared to the target following an incident of aggression, I split the data file by condition and conducted a series of paired-sample *t*-tests, using a Bonferroni adjustment to account for the inflated *p*-values. There was no significant difference in observer attitudes toward the perpetrator ($M = 1.95$, $SD = 0.84$) or the target ($M = 1.97$, $SD = 0.76$) for those in the No Aggression condition; $t(25) = -0.18$, $p = .860$. In contrast, participants in the Aggression condition reported significantly more negative attitudes toward the perpetrator ($M = 2.85$, $SD = 1.18$) than toward the target ($M = 2.15$, $SD = 0.71$); $t(25) = 3.86$, $p = .001$. As such, *H1c* was supported (see Figure 3).

There was also no significant difference in observer deviance toward the perpetrator ($M = 21.32$, $SD = 11.00$) or the target ($M = 22.20$, $SD = 11.20$) for those in the No Aggression condition; $t(24) = 0.52$, $p = .611$. Further, in contrast to *H2c*, there was also no significant difference in observer deviance toward the perpetrator ($M = 32.88$, $SD = 16.95$) or the target ($M = 32.24$, $SD = 20.32$) for those in the Aggression condition; $t(24) = -0.33$, $p = .745$. As such, *H2c* was not supported. See Figure 4 for a graphic representation of these findings.

Finally, to investigate whether observers were more likely to help the target than the perpetrator, I conducted a Chi-squared analysis using the crosstab function. I found a significant difference between observer helping by condition; Pearson $\chi^2(1) = 5.37$, $p = .020$. To investigate the significant Chi-square, I again split the file by condition and

conducted two Chi-square analyses. Observers were as likely to help the target ($n = 9$) as they were to help the perpetrator ($n = 15$) in the No Aggression condition ($\chi^2(1) = 1.50, p = .221$); however, consistent with $H3$, participants in the Aggression condition helped the target ($n = 17$) significantly more often than they helped the perpetrator ($n = 7$); $\chi^2(1) = 4.17, p = .041$.

Discussion

In this study, I examined how observers' attitudes and behaviours toward targets and perpetrators are affected following a witnessed incident of aggression when all else is equal (i.e., when there was no preexisting relationships among the observer, target, and perpetrator of an aggressive event). In comparison to those who witnessed a neutral interaction, I found that observers engaged in more deviance toward targets of aggression as compared to *non-targets*. In addition, in comparison to those who witnessed a neutral interaction, I found that observers reported more negative attitudes and engaged in more deviance toward perpetrators of aggression as compared to *non-perpetrators*. Finally, although there was no difference in observers' deviant behaviour toward perpetrators or targets, observers reported more negative attitudes and engaged in less helping toward perpetrators as compared to *targets*.

Inconsistent with my prediction, and with the assumptions of social undermining, I found that observers' attitudes toward targets of aggression did not differ between the aggressive and neutral conditions. As I discussed at the outset of this chapter, one of the assumptions that guided this expectation was the just world hypothesis (Lerner, 1980; Lerner & Miller, 1978); that is, the tendency for individuals to believe that people get what they deserve (and deserve what they get). It is possible that this belief was not

activated in the current study because I presented the target and the perpetrator as having no preexisting relationship. As such, observers may have been less inclined to believe that the target was deserving of the perpetrator's undermining behaviour because they could not imagine a plausible reason for the mistreatment (based on a prior relationship). Instead, observers may have felt sympathy for the target of aggression, which mitigated the effect of the perpetrator's undermining of the target on observers' target-directed attitudes.

I also did not find support for my prediction that observers would engage in more deviance toward the perpetrator as compared to the target, as observers engaged in a similar level of deviance toward both the target and the perpetrator. Given that observers' privately reported attitudes toward the target were significantly more positive than their attitudes toward the perpetrator, it is possible that observers attempted to conceal their public deviance toward one confederate (i.e., the perpetrator) by being deviant to both. Future research is needed to investigate this potential explanation.

Practical and theoretical contributions

Overall, the results of this study support the expectation that observers' attitudes and behaviours toward targets and perpetrators are affected following a witnessed incident of aggression. These findings suggest that observers are important to the study of workplace aggression. The results of this study also suggest that there is a backlash effect against perpetrators, as observers' attitudes and behaviours toward perpetrators were negatively affected following a witnessed incident of aggression. From a practical perspective, this finding may have implications for the deterrence of workplace aggression. Specifically, it appears that perpetrators' own reputation and relationships

may suffer when they behave aggressively in the presence of others. Future research will be needed to examine how this backlash effect may affect the well-being and work-related success of perpetrators. For instance, if an observer holds a high status position at work, the observer may negatively influence important perpetrator outcomes (e.g., wage increases, promotion opportunities, and performance evaluations). Evidence to this end may help bolster efforts to reduce the incidence of mistreatment using preventative messages that highlight the negative outcomes for perpetrators of aggression.

From a theoretical perspective, this study contributes to both social undermining research as well as the group value model. First, as noted at the outset of this chapter, social undermining is the intentional interference in a target's work-related success and reputation, as well as his or her ability to establish and maintain relationships in the workplace, and is a construct that is typically measured from the perspective of the victim (Duffy et al., 2002). Although target perceptions of their victimization are important in terms of predicting target outcomes, it appears that perpetrators may not be as successful in influencing observer attitudes toward targets as targets may think. Relying on target perceptions of their own mistreatment may not accurately portray the perceptions of observers, who appear to be the focus on the social undermining construct. Indeed, this study suggests that observers may in fact help targets. This speaks to the prominent self-report methodology in this literature, and suggests that there may exist both a subjective (target) and an objective (observer) dimension to the social undermining construct. This possibility will need to be explored as research in this area continues to develop.

My findings also suggest an interesting refinement to the group value model. As discussed above, this model suggests that how someone is treated affects that person's

value in the eyes of the group. However, my findings suggest that it is not only the target of mistreatment that suffers in the eyes of the group. Rather, those who witness mistreatment also evaluate the perpetrator of that mistreatment in a negative light. Given the finding that observers developed stronger negative attitudes towards perpetrators than targets, the present study suggests that how one behaves in a group setting may be even more important than how one is treated in a group setting.

Limitations and Future directions

There are a number of limitations to the current study that should be addressed. Specifically, the artificial situation I created in the lab to investigate my hypotheses, as well as the student nature of the sample, preclude me from generalizing my model to the general population of observers of aggression. However, because this study lays the foundation for future work on observed aggression, I decided to compromise the external validity (i.e., generalizability) in favour of internal validity (i.e., determining whether observers are influenced by witnessed aggression).

In addition, I exposed observers to a relatively low intensity form of aggression (i.e., social undermining) in this study. Indeed, in contrast to findings that witnessed aggression predicts stress and strain reactions in those who witness or even hear about the aggression (Lim et al., 2008; Miner-Rubino & Cortina, 2004, 2007; Schat & Kelloway, 2000, 2003), I did not find any difference in observer mood following the witnessed aggression as compared to the neutral interaction. I decided to keep the intensity of the aggression low because the ambiguity of the aggressive situation would allow observers a wider range of interpretation of the behaviour (e.g., aggression, humour, annoyance). If the aggression had been too obvious, observers may have felt pressure to respond in a

socially desirable way (e.g., helping the target; see Latané & Darley, 1970) or may have been suspicious. By keeping the intensity of the aggression low, observers should have felt less pressure to react in a particular way.

Finally, although I believe it was necessary to establish a baseline of observer attitudinal and behavioural responses to witnessed aggression, the ‘all else equal’ nature of this study is unlikely to mirror observed aggression in the workplace. That is, observer, targets, and perpetrators will likely have some form of preexisting relationship. Indeed, as noted earlier, a preexisting relationship between the target and the perpetrator may be necessary to evoke a belief in a just world (Lerner, 1980). I address this limitation in Studies 2 and 4, as I experimentally manipulate the relationships between the observer and each of the target and the perpetrator (Study 2) and examine the actual relationships between the observer and each of the target and the perpetrator (Study 4).

Conclusion

Targets and perpetrators of workplace aggression are both surrounded by and interact with other members of their workplace who, in the context of the rich work environment, are likely to bear witness to the interactions between them. Indeed, some scholars have proposed that research on dyadic interaction—such as social undermining—would be more appropriately conceptualized as triangular interactions, because individuals have a tendency to draw third parties in to their interactions with others (Bowen, 1978; Smith, 1989).

This study reveals that observers’ attitudes and behaviours are indeed influenced by the negative interactions between targets and perpetrators. As research on workplace

aggression continues to advance, observers will be important players to consider and may become powerful tools of intervention once their role is more fully understood.

Table 1

Equivalence of target and perpetrator ideas for brainstorming task.

Target idea	Perpetrator idea	<i>t</i>	<i>p</i>
Faculty speaker night	Fundraiser	0.33	.746
Faculty tours	Pool tournament	0.94	.354
Reality show-themed talent night	Karaoke	-1.15	.256
Team ice-breakers	Wine and cheese	-1.18	.245
Interfaculty mixer	Interfaculty sports team	0.63	.532
Treasure hunt	Twenty-questions game	-0.55	.588
Monthly movie night	(Nintendo) Wii tournament	-0.09	.930

Table 2

Manipulation check 1 of the 'Aggression' and 'No Aggression' conditions.

	Actor pair A	Actor pair B
No Aggression	4.43 ^a (0.25)	4.66 ^a (0.27)
Aggression: Actor A as the perpetrator	3.28 ^b (0.26)	4.97 ^a (0.28)
No Aggression: Actor B as the perpetrator	4.78 ^a (0.26)	3.56 ^b (0.27)

Note: *M* (*SD*); Values within the same column with the same superscript are not significantly different.

Table 3

Manipulation check 2 of the 'Aggression' and 'No Aggression' conditions.

	Actor pair A	Actor pair B	
No Aggression	4.66 (1.67)	4.43 (1.61)	$t(43) = -0.85, p = .401$
Aggression: Actor A as the perpetrator	3.56 (1.64)	4.78 (1.86)	$t(40) = 2.52, p = .016$
Aggression: Actor B as the perpetrator	4.97 (1.95)	3.28 (1.45)	$t(38) = -4.09, p < .001$

Note: *M (SD)*.

Table 4

Participants' positive and negative affect before and after the witnessed interaction.

Condition	No aggression		Aggression	
	Positive affect	Negative affect	Positive affect	Negative affect
Time 1	2.88 (0.66)	1.42 (0.32)	3.09 (0.83)	1.59 (0.56)
Time 2	2.86 (0.87)	1.26 (0.33)	2.97 (0.92)	1.36 (0.36)

Note: *M (SD)*.

Table 5

Means, standard deviations, and inter-correlations.

	<i>M(SD)</i>	1	2	3	4
1. Attitude toward the target	2.06 (0.73)	.79			
2. Attitude toward the perpetrator	2.40 (1.11)	.66***	.82		
3. Amount of spicy sauce given to the target	27.22 (17.01)	.01	.16	-	
4. Amount of spicy sauce given to the perpetrator	27.10 (15.30)	.01	.19	.85***	-

Note: Cronbach alpha's along the diagonal, where applicable.

† $p < .10$. *** $p < .001$.

Figure 2

A graphical representation of the hypotheses of Study 1.

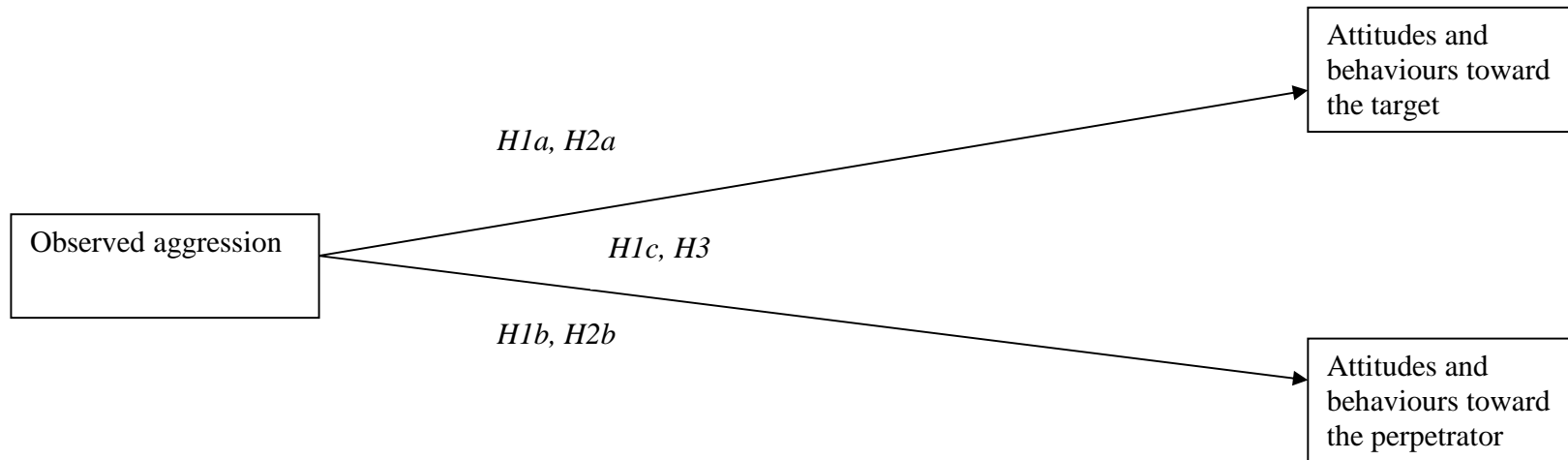
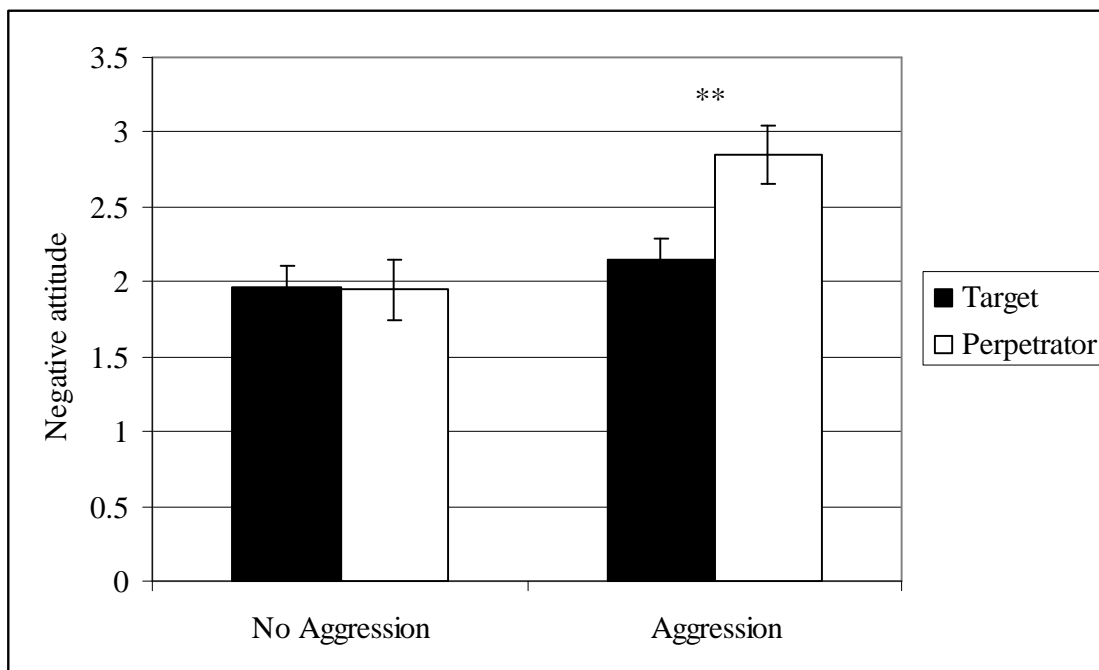


Figure 3

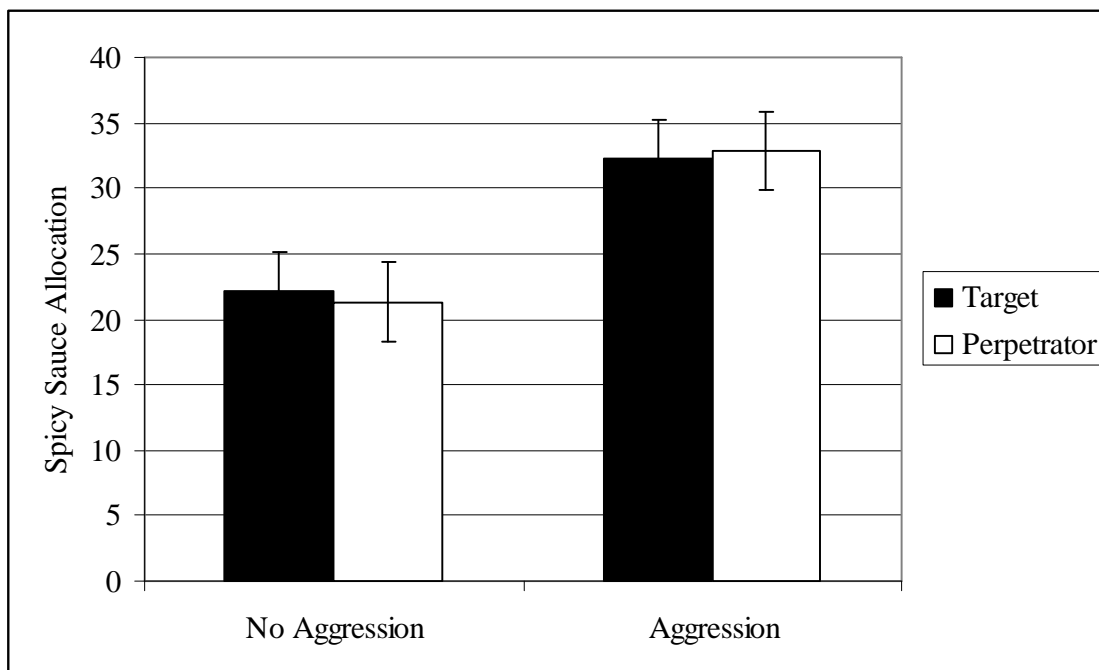
Observer attitudes toward the target and the perpetrator in the Aggression and No Aggression conditions.



Note: ** $p < .01$.

Figure 4

Participant spicy sauce allocation for the target and the perpetrator in the Aggression and No Aggression conditions.



Chapter III

Study 2

Study 1 addressed observers' attitudes and behaviours toward the target and the perpetrator of aggression when all else in the interrelationships among these actors was *equal*. In Study 1, I found that observers' attitudes and behaviours are indeed influenced by witnessed aggression. Specifically, I found that observers reported more negative attitudes toward the perpetrator and engaged in more deviant behaviour toward both the target and the perpetrator as compared to those who were not involved in an incident of aggression. In addition, I found that following a witnessed incident of aggression, observers develop more negative attitudes toward and are less likely to help the perpetrator than the target.

Although establishing a baseline of observer reactions to witnessed aggression is an important first step, Study 1 is limited because the observer did not know either the target or the perpetrator of the aggression they witnessed. However, workplace aggression almost always occurs in the context of on-going relationships. As such, observers' pre-existing relationships with both the target and the perpetrator of the aggression may affect the manner in which witnessing the aggressive event influences their attitudes and behaviours. That is, although I expected that observing aggression would affect the observer's attitudes and behaviours toward the target and the perpetrator, the relationship between the observer and the target and between the observer and the perpetrator will likely affect how the observer's attitudes and behaviours are influenced. Therefore, in Study 2, I consider the impact of these relationships to address my second

research question: How does an observer's pre-existing relationship with the target and the perpetrator influence his or her attitudes and behaviours towards each actor?

Conceptualizing Workplace Relationships

In organizations, employee relationships can often be conceptualized in both a formal and an informal way. That is, at work most employees have both a work-life characterized by hierarchical stratification, duty assignment, and performance evaluation, and a social life characterized by social relationships and workplace friendships. Social relationships are emergent in the sense that they evolve without the formal direction of the organization; individuals working closely together (e.g., Festinger, Schachter, & Back, 1950; Nahemow & Lawton, 1975) or who find things in common (e.g., Byrne, 1971; Byrne, Clore, & Smeaton, 1986) are often attracted to—or come to like—one another, and this attraction may lead to the formation of workplace friendships.

In addition to these informal relationships, employees invariably relate to one another in the context of their formal organizational roles. These roles reflect differences in formal (i.e., organizationally sanctioned) power, which manifest in patterns of monitoring and evaluation, as well as the division of labour (i.e., task assignment) in the organization (e.g., Aquino, 2000; Pfeffer, 1992a, 1992b).

Observers' informal and formal relationships with the target and the perpetrator of aggression may influence the effects of witnessing aggression on observers' attitudes and behaviours investigated in Study 1. I review the anticipated effect of these informal (i.e., liking) and formal (i.e., power) relationship variables in the subsections that follow.

Liking

Liking is an immediate, preconscious, affective response to a stimulus (e.g., another individual) (Frantz & Janoff-Bulman, 2000; Zajonc, 1980), which influences the perceiver's subsequent information processing and judgment (Cardy & Dobbins, 1986). Researchers have frequently observed that individuals tend to exhibit a "halo effect" when making judgments about others (see, for example, Nunnally & Bernstein, 1994). The halo effect refers to the tendency for individuals' global evaluation of a target person to influence their evaluations of the specific attributes of that individual (Nisbett & Wilson, 1977). For example, Nisbett and Wilson (1977) found that college students evaluated the specific attributes of a target male person (i.e., his appearance, mannerisms, and accent) as appealing when he behaved in a generally positive way (i.e., when he was warm and friendly), but as irritating when he behaved in a generally negative way (i.e., when he was cold and distant). That is, the students rated the same attributes as positive or negative depending on whether they liked the target person. As such, individuals are likely to have more positive attitudes (and display more positive behaviours) toward individuals they like.

Liking has been found to have a powerful effect on individuals' side-taking preferences (Frantz & Janoff-Bulman, 2000). Frantz and Janoff-Bulman (2000) found that third-parties to conflicts often have little difficulty in deciding which disputant to support; observers will nearly always side with the disputant they like more. Supporting this finding, Yang, Van de Vliert, and Shi (2007) found that both Dutch and Chinese observers of a conflict tended to side with the individual with whom they had a closer relationship; these authors stated that "interpersonal relationships may be one of the universal dimensions taken into account by lay third parties in a conflict" (p. 453). Based

on these arguments and empirical findings, I expect that observers will be more likely to 'side with' the actor (i.e., target or perpetrator) they like, by reporting more positive attitudes and behavioural intentions toward him or her.

H4a: Observers will report greater positive attitudes toward the target when the observer liked the target before they witnessed the aggression than when the observer disliked the target.

H4b: Observers will report greater positive attitudes toward the perpetrator when the observer liked the perpetrator before they witnessed the aggression than when the observer disliked the perpetrator.

H5a: Observers will report fewer deviant intentions toward the target when the observer liked the target before they witnessed the aggression than when the observer disliked the target.

H5b: Observers will report fewer deviant intentions toward the perpetrator when the observer liked the perpetrator before they witnessed the aggression than when the observer disliked the perpetrator.

H6a: Observers will report more helping intentions toward the target when the observer liked the target before they witnessed the aggression than when the observer disliked the target.

H6b: Observers will report more helping intentions toward the perpetrator when the observer liked the perpetrator before they witnessed the aggression than when the observer disliked the perpetrator.

In addition, observers' liking of each actor may have an impact on their attitudinal and behavioural responses toward the *other* actor. Specifically, when a liked other is in

conflict (e.g., is engaging in an aggressive interaction with another individual), the positive relationship between the observer and the liked other should increase the likelihood that the observer will dislike the other individual. According to Newcomb's (1956, 1968) symmetry, or A-B-X, model of attraction, individuals seek to attain symmetry in their relationships. In this model, A and B represent two individuals and X represents an attitudinal object (i.e., a thing, an issue, or another person). Symmetry is attained when the product of the valences of the three relationships among A, B, and X is positive.

For example, if an individual (A) has a positive relationship with two other individuals (B and X), and B and X have a positive relationship with each other, the model has attained symmetry (the product of three positives is positive). If A has a negative relationship with either B or X and a positive relationship with X or B, and B and X have a negative relationship, the model has also attained symmetry (the product of two negatives and a positive is positive). However, if A has a positive relationship with both B and X, and B and X have a *negative* relationship, the model is asymmetrical (the product of two positives and a negative is negative).

Aggression in the workplace implies a negative relationship between the target and the perpetrator (i.e., B and X). Therefore, according to Newcomb's theory (1956, 1968), the model will be asymmetrical when the observer has a positive relationship with both the target and the perpetrator. In this case, the observer should experience a strain toward symmetry. Because observers of aggression often do not have control over the valence of the relationship between the target and the perpetrator, when the observer has a positive relationship with either the target or the perpetrator, the strain is likely to result

in the observer developing a negative attitude toward the other actor (i.e., the perpetrator or the target). Further, as I discussed in Chapter II, I expect observer attitudes to be related to observer behaviours (Festinger, 1957). Therefore, I propose that the observer's liking of each actor will impact their attitudes and behavioural intentions toward the other actor.

H7: When one actor is liked more than the other actor, observers will report greater positive attitudes (H7a), fewer deviant intentions (H7b), and more helping intentions (H7c) toward the actor they liked as compared to the actor they disliked.

Power

In the *Liking* section above, there is an implied negative relationship between the target and the perpetrator of aggression. However, I cannot infer any particular relationship between the target and the perpetrator with respect to power. That is, both the target and the perpetrator may have a higher, lower, or an equal level of power with respect to the observer and each other. I expect these three relative power levels (i.e., observer-target, observer-perpetrator, and target-perpetrator) to differentially influence how target and perpetrator power influence observers' attitudes and behaviours toward each actor. After reviewing the general concept of power, I consider the observer's relative power with respect to the target and the perpetrator as well as the target's relative power with respect to the perpetrator in turn below.

Pfeffer (1992a, 1992b) defines power as the ability to influence the behaviour of another while resisting the influence oneself. Similarly, Fiske and colleagues (Deprét & Fiske, 1993; Fiske, 1993; Fiske & Morling, 1996) define power as an index of the

nonreciprocal control one member of a dyad has over the outcomes of the other. As these definitions suggest, power is a characteristic of the *relationship* between interaction partners rather than a characteristic of a particular individual (Emerson, 1962). One actor may be able to exert influence over one individual but not another; for example, an individual may have control over the behaviour of his or her subordinate, but have no control over the behaviour of his or her colleague's subordinate. In addition, the actor's influence over his or her subordinate is domain-specific; for example, an individual may be able to control the behaviour of his or her subordinate at work, but has little influence on the subordinate's non-work behaviour.

In their seminal review of power, French and Raven (1959) describe five bases from which power derives: reward (i.e., one's ability to reward another), coercive (i.e., one's ability to punish another), expert (i.e., one's experience or special knowledge), referent (i.e., one's likeability and identification with another), and legitimate (i.e., one's role or formal position). These bases of power are by no means mutually exclusive; however, in an organization, forms of power tend to cluster in predictable ways. Specifically, individuals with organizationally sanctioned positions of power (i.e., supervisory or managerial roles) have power that derives from their formal position (i.e., high legitimate power), and their position tends to include control over their employees' work-related rewards (i.e., high reward power) and punishments (i.e., high coercive power). Therefore, the formal position of an actor relative to others in an organization may be considered an appropriate indicator of his or her power.

Observer-target and observer-perpetrator relative power. According to the Power-as-Control (PAC) model of power, when dyadic relationships are imbalanced with

respect to power, the relatively powerless individual experiences a loss of control (Dépret & Fiske, 1993; Eberhardt & Fiske, 1996; Fiske & Morling, 1996; Georgesen & Harris, 2000), which he or she is motivated to regain (Fiske & Dépret, 1996). Employees may regain control through biased information processing (Stevens & Fiske, 2000).

Specifically Stevens and Fiske (2000) argued that when employees depend on a high-power person for work-related evaluations and outcomes, they are motivated to perceive the power holder positively, because positive perceptions allow employees to feel protected. Since negative perceptions of a power holder imply incompetence and unfair treatment that may lead to potentially poor evaluations, employees are better off perceiving their evaluators as positive and therefore benevolent. In support of their argument, Stevens and Fiske found that individuals who were evaluation-dependent on another individual were more likely to engage in motivated misperception by rating the power holder more positively than when they were not evaluation-dependent.

In addition to developing positive attitudes toward power holders, I also expect these attitudes to influence (i.e., mediate) observers' behaviour such that they will enact more positive behaviours (i.e., fewer deviant behaviours and more helping behaviours) toward power holders as compared to powerless individuals. By definition, power holders control access to resources desired by relatively powerless individuals (Fiske, 1993). In order to attain these desired resources, it is prudent for the relatively powerless individual to behave in a positive manner toward the power holder. As such, I expect that observers will enact more positive behaviours toward the actor (i.e., the target or the perpetrator) with higher power.

H8a: Observers of aggression will develop greater positive attitudes toward the target when the target has high power than when the target has low power.

H8b: Observers of aggression will develop greater positive attitudes toward the perpetrator when the perpetrator has high power than when the perpetrator has low power.

H9a: Observers of aggression will report fewer deviant intentions toward the target when the target has high power than when the target has low power.

H9b: Observers of aggression will report fewer deviant intentions toward the perpetrator when the perpetrator has high power than when the perpetrator has low power.

H10a: Observers of aggression will report more helping intentions toward the target when the target has high power than when the target has low power.

H10b: Observers of aggression will report more helping intentions toward the perpetrator when the perpetrator has high power than when the perpetrator has low power.

Target-perpetrator relative power. Although I hypothesize that observers will develop more positive attitudes (*H8b*) and report fewer deviant (*H9b*) and more helping (*H10b*) intentions toward the perpetrator when the perpetrator has high power, this may not be the case when the target has lower relative power than the perpetrator.

Specifically, when the perpetrator has high power, observers' perceptions of their psychological contracts with their organization may complicate this effect.

According to Rousseau (1995), employees form psychological contracts with their organization which reflect a set of subjective expectations concerning each employee's

exchange relationship with his or her organization. These contracts fall into two general categories: transactional and relational (Rousseau, 1995; see also Restubog & Bordia, 2006; Robinson & Rousseau, 1994; Turnley, Bolino, Lester, & Bloodgood, 2003).

Transactional contracts are short-term and generally fixed, and include expectations about fair wages and organizational benefits. Relational contracts, on the other hand, are more long-term and flexible, and include expectations about supervisor support and career growth opportunities (Robinson & Rousseau, 1994). When employees perceive that one member of the exchange (i.e., the organization) has not met the expectations of the psychological contract, their affective response to the violation is often feelings of betrayal and anger (Morrison & Robinson, 1997; Robinson & Morrison, 2000). Further, researchers have found that the cognitive appraisal of a psychological contract breach is associated with a number of negative outcomes, including weakened trust in the organization (Robinson, 1996), as well as anticitizenship (Kickul, Neuman, Parker, & Finkl, 2001) and deviant behaviours (Bordia, Restubog, & Tang, 2008).

Although psychological contracts are subjective, one expectation employees may have is that they will not come to harm (psychological or otherwise) at the hands of organizational members. Individuals often perceive those in supervisory roles as representatives of the organization (Postmes, Tanis, & de Wit, 2001); as such, when the perpetrator of aggression has high power, observers may perceive his or her aggressive behaviour toward a colleague as a violation of their psychological contract with the organization. This violation may result in the development of negative attitudes and behaviours toward the perpetrator of the aggression.

Kanekar, Mazumdar, Bulsara, and Kolsawalla (1979) found that when there is a power imbalance between the target and the perpetrator of aggression, witnesses tend to view the aggression as more acceptable when it is perpetrated by someone with low power than when it is perpetrated by someone with high power. The authors reasoned that this was because in the former condition, more positive attributions (i.e., bravery, idealism) could be made for the perpetrator than in the latter. Similarly, Fragale, Rosen, Xu, and Merideth (2009) found that observers were more likely to perceive a perpetrator's wrongdoing as intentional (as opposed to accidental) when the perpetrator had a high level of status (a common proxy for power; Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002). Therefore, I offer alternative hypotheses to *H8b*, *H9b*, and *H10b*; specifically, I expect that observers will develop more negative attitudes and will enact more deviant and fewer helping behaviours when the perpetrator has relatively high power (with respect to the target) than when the perpetrator has relatively low power.

H11: When the perpetrator has more power than the target, observers will report greater positive attitudes (H11a), fewer deviant intentions (H11b), and more helping intentions (H11c) toward the (low powered) target as compared to the (high powered) perpetrator.

See Figure 5 for an overview of the hypotheses of the current study.

Method

Participants

I recruited 459 participants ($M = 21.28$ years old, $SD = 2.77$ years) from 14 undergraduate classes in the Asper School of Business (227 males, 209 females, 23 did

not report gender). Participating professors encouraged participation by offering a 1% bonus mark to those who decided to participate; however, those that chose not to participate had the option of writing a short paper for the same 1% bonus. I asked students interested in participating to provide their e-mail address and e-mailed survey links to these students. I collected all data online.

Materials and Procedure

After obtaining informed consent (see Appendix I), I introduced participants to the cover story of the study; that is, that I was interested in their ability to respond to both work-and non-work-related e-mails under time pressure. I told participants that some respondents received many e-mails while others received only a few. In actuality, all participants received the same number of e-mails. These instructions were intended to distract participants from the true purpose of the study.

I asked participants to assume the role of an employee of “Collins Furniture and Design” (CFD), a fictional organization in which each participant has ostensibly worked as a design technician for five years. I then informed each participant about their relationship to three of their ostensible colleagues, Robin (the target), Jaime (the perpetrator), and Casey (the uninvolved other). I selected these androgynous names to avoid potential gender confounds. I told participants that they either liked or disliked Robin/Jaime and that Robin/Jaime was either a vice president (high power relative to the observer) or a subordinate (low power relative to the observer). I also included a control condition, in which I did not provide participants with any information about their liking of or the power of their colleagues. See Appendix J for a copy of these instructions.

Following this relational information, I presented participants with five e-mails from their ostensible colleagues; three of the e-mails (one from each colleague) asked the participant to comment on a series of photos of furniture designs (“Design e-mails”; see Appendices K, L, and M), one was a company-wide invitation to a company barbeque from Jaime (“BBQ e-mail”; see Appendix N), and one was a request from Jaime to comment on the aggressive tone of an e-mail Jaime was planning to send to Robin (“Aggressive e-mail”; see Appendix O). Consistent with the hypothesis of social undermining, Jaime’s “Aggressive email” was consistent with three items on Duffy, Ganster, and Pagon’s (2002) co-worker undermining scale (i.e., “Insulted [Robin]”; “Talked bad about [Robin] behind [Robin’s] back”; “Criticized the way [Robin] handled things on the job in a way that was not helpful”; p. 340).

The order of these e-mails was as follows: (1) a “Design e-mail” from Casey, (2) the “BBQ e-mail” from Jaime, (3) a “Design e-mail” from Jaime, (4) the “Aggressive e-mail” from Jaime, and (5) a “Design e-mail” from Robin. Following these e-mails, I asked participants to indicate their attitude toward each of their colleagues (Greenwald, McGhee, & Schwartz, 1998; see Appendix P). I assessed participants’ behavioural intentions by asking them the extent to which they would engage in a number of helping (Lee & Allen, 2002; see Appendix Q) and interpersonal deviance (Bennett & Robinson, 2000; see Appendix R) behaviours toward each of their colleagues. Finally, I included two manipulation checks (see Appendix S) and asked participants to provide some demographic information (see Appendix T). I discuss each of these scales in more detail below.

Attitudes. I asked participants to evaluate each of their colleagues on a series of six semantic differential pairs. This scale uses polar-opposite adjective pairs to measure individuals' attitudes toward objects, events, or individuals. The current study included adjective pairs used in Greenwald et al.'s (1998) study of implicit attitudes (i.e., pleasant-unpleasant, active-passive, good-bad, honest-dishonest, strong-weak, valuable-worthless). Participants were asked to rate each of their colleagues on a 7-point scale anchored by these adjective pairs. Cronbach $\alpha = .81, .74,$ and $.88$ for the target, the perpetrator, and the uninvolved other, respectively.

Helping intentions. I asked participants to indicate the extent to which they would engage in each of six helping behaviour toward each of their colleagues (Lee and Allen's, 2002). These items are a subscale of Lee and Allen's (2002) organizational citizenship behaviour (OCB) scale, which measures OCBs on a 7-point scale (1 = *very unlikely* to 7 = *very likely*). Cronbach $\alpha = .94, .94,$ and $.90$ for the target, the perpetrator, and the uninvolved other, respectively.

Deviant intentions. I asked participants to indicate the extent to which they would engage in each of seven interpersonally deviant behaviours toward each of their colleagues on the interpersonal deviance subscale of Bennett and Robinson's (2000) Interpersonal and Organizational Deviance Scale. The original scale measures previously committed deviant behaviours on a 7-point scale, with values ranging from 1 (*never*) to 7 (*daily*). However, given that the current study was interested in participants' projected behaviour about hypothetical others, I revised the items and the rating scale to the future tense (1 = *very unlikely* to 7 = *very likely*). Cronbach $\alpha = .96, .95,$ and $.95$ for the target, the perpetrator, and the uninvolved other, respectively.

Manipulation checks. To ensure that participants were aware of their relationship with both the target and perpetrator with respect to liking and power, I asked participants to indicate the extent to which they liked each of their colleagues as well as the level of power of each of their colleagues at two points over the course of the study. Specifically, I assessed participants' perceptions of their liking and perceptions of the power of each of their colleagues after the relational information was provided (i.e., at the outset of the study)—to ensure that participants had understood their relationships with their ostensible colleagues—and again at the conclusion of the study—to examine how participants' perception of their relationships with their ostensible colleagues may have been altered after witnessing the incident of aggression.

In addition, to probe for suspicion, I asked participants to describe (in writing) what they thought the study was about at its conclusion. Many participants indicated their perception that the study had something to do with the effect of other people's behaviour toward a colleague on their impressions of that colleague, and several noted the influence of the power and or liking of their colleagues. Representative examples of these responses include “How your personal perceptions of people are effected [sic] by what others say of them” and “I think this survey have [sic] been about finding out how peoples [sic] feelings interact in their written messages as much as multitasking. It could be about the impact gossip or discriptions [sic] of people have on the value of the work. Especially considering online distance work where you talk alot [sic] over e-mail.” Although participants clearly were not blind to the purpose of the study, none indicated a full understanding of the study's hypotheses; as such, I retained all responses for analysis.

Demographics. I asked participants to indicate their gender, age, and ethnicity. I collected this information for descriptive purposes.

Results

Manipulation checks

Target liking. I conducted a multivariate analysis of variance (MANOVA) to check whether participants ('observers') correctly identified their liking condition, using target liking condition (liked, disliked, or no liking information) as the fixed factor and observers' liking of the target, the perpetrator, and the uninvolved other as the dependent variables. This analysis revealed that the target liking manipulation was successful, as observers indicated that they liked the target significantly more in the "liked target" condition than either the "disliked target" or "control" conditions, and that they liked the target significantly more in the "control" condition than the "disliked target" condition, both before and after the e-mails; $F(2, 429) = 504.11, p < .001$ and $F(2, 429) = 191.96, p < .001$, respectively. See Table 6 for the means and standard deviations of observers' ratings of their liking of the target, the perpetrator, and the uninvolved other for the first and second manipulation checks.

Perpetrator liking. The perpetrator liking manipulation was also successful, as observers indicated that they liked the perpetrator significantly more in the "liked perpetrator" condition than either the "disliked perpetrator" or "control" conditions, and that they liked the perpetrator significantly more in the "control" condition than the "disliked perpetrator" condition, both before and after, the e-mails; $F(2, 429) = 483.36, p < .001, \eta^2 = .69$ and $F(2, 429) = 192.29, p < .001, \eta^2 = .47$, respectively. See Table 7 for

the means and standard deviations of observers' ratings of their liking of the target, the perpetrator, and the uninvolved other for the first and second manipulation checks.

Pre- and post-aggression liking perceptions. To examine whether observers' liking of the target and the perpetrator changed after the aggression manipulation, I created a file in which I paired observers' liking of the target (perpetrator) before witnessing the aggression (manipulation check 1) with their liking of the target (perpetrator) after witnessing the aggression (manipulation check 2). I dummy coded the evaluations as being of the perpetrator ('0') or the target ('1'). I then conducted a repeated measures analysis of variance (ANOVA), using time (i.e., pre- or post-aggression) as the within subjects variable and the dummy coded actor identification (i.e., target or perpetrator) as the between subjects factor. I found a significant interaction between time and actor; $F(1, 869) = 10.03, p = .002$. To investigate this interaction, I conducted a paired-samples t -test for observers' liking of each of the target and the perpetrator before and after witnessing the aggression. I used a Bonferonni adjustment (i.e., dividing the required significance level by the number of tests conducted) to correct for the inflated p -value; as such, p -values were required to be less than .025 to be considered significant at the .050 level. I found that observers' liking of the target became significantly more positive from manipulation check 1 ($M = 3.95, SD = 2.34$) to manipulation check 2 ($M = 4.18, SD = 1.95$); $t(435) = -2.67, p = .008$. However, observers' liking of the perpetrator did not change from manipulation check 1 ($M = 3.89, SD = 2.35$) to manipulation check 2 ($M = 3.73, SD = 2.03$); $t(434) = 1.84, p = .066$.

Target power. I conducted a MANOVA to check whether observers correctly identified their power condition, using target power condition (high, low, or no power

information) as the fixed factor and observers' perception of the power of the target, the perpetrator, and the uninvolved other as the dependent variables. This analysis revealed that the target power manipulation was successful, as observers rated the target as significantly more powerful in the "high power target" condition than either the "low power target" or the "control" conditions, both before and after the e-mails; $F(2, 435) = 138.88, p < .001$ and $F(2, 435) = 120.45, p < .001$, respectively. The target was rated as significantly more powerful in the "control" condition than the "low power target" condition at manipulation check 1; however, there was no difference between observers' rating of the target's power in the "control" condition and the "low power target" condition at manipulation check 2. Target power also influenced observers' ratings of their own, the perpetrator's, and the uninvolved other's power; specifically, observers rated each of these actors as significantly more powerful when the target had low power than when the target had high power. Observers' evaluations of the perpetrator and the uninvolved other did not differ from their ratings in the "control" condition; however, observers in the "control" condition rated themselves as significantly more powerful than did observers in either the "high power target" or the "low power target" condition at manipulation check 2. See Table 8 for the means and standard deviations of observers' ratings of their own, the target's, the perpetrator's, and the uninvolved other's power for the first and second manipulation checks.

Perpetrator power. The perpetrator power manipulation was also successful, as observers rated the perpetrator as significantly more powerful in the "high power perpetrator" condition than either the "low power perpetrator" or the "control" conditions, and the perpetrator as significantly more powerful in the "control" condition

that the “low power perpetrator” condition, both before and after the e-mails; $F(2, 435) = 156.32, p < .001$ and $F(2, 435) = 175.20, p < .001$, respectively. Interestingly, the effect of perpetrator power also influenced observers’ ratings of their own, the target’s, and the uninvolved other’s power; specifically, observers rated each of these actors as significantly more powerful when the perpetrator had low power than when the perpetrator had high power (neither of these evaluations differed from the control, with one exception; observers rated themselves as significantly more powerful at manipulation check 2). See Table 9 for the means and standard deviations of observers’ ratings of their own, the target’s, the perpetrator’s, and the uninvolved other’s power for the first and second manipulation checks.

Pre- and post-aggression power perceptions. To examine whether observers’ perception of the target’s, the perpetrator’s, and their own power changed significantly after the aggression manipulation, I created a file in which I paired observers’ perception of the target’s (perpetrator’s/own) power before witnessing the aggression (manipulation check 1) with their perception of the target’s (perpetrator’s/own) power after witnessing the aggression (manipulation check 2). I dummy coded the evaluations as being of the perpetrator (‘0’), target (‘1’), or themselves (‘2’). I then conducted a repeated measures ANOVA, using time (i.e., pre- or post-aggression) as the within subjects variable and the dummy coded actor identification (i.e., perpetrator, target, and self) as the between subjects factor. I found a significant interaction between time and actor; $F(2, 1311) = 8.78, p < .001$. To investigate this interaction, I conducted a series of paired-samples t-test for observers’ perception of each of the target’s, the perpetrator’s, and their own power, before and after witnessing the aggression. I used a Bonferonni adjustment to

correct for the inflated p -value; as such, p -values were required to be less than .017 to be considered significant at the .050 level. I found that observers' perception of the target's power did not change significantly from manipulation check 1 ($M = 2.67$, $SD = 1.05$) to manipulation check 2 ($M = 2.58$, $SD = 1.08$); $t(437) = 2.09$, $p = .037$. However, observers' perception of the perpetrator's power increased from manipulation check 1 ($M = 2.66$, $SD = 1.08$) to manipulation check 2 ($M = 2.76$, $SD = 1.07$); $t(437) = -2.59$, $p = .010$. Similarly, observers' perception of their own power increased from manipulation check 1 ($M = 2.68$, $SD = 0.72$) to manipulation check 2 ($M = 2.78$, $SD = 0.72$); $t(437) = -3.67$, $p < .001$.

Liking

Hypotheses *H4a*, *H5a*, and *H6a* predicted that observers would report greater positive attitudes (*H4a*), fewer deviant intentions (*H5a*) and more helping intentions (*H6a*) toward the target when the observer liked the target than when the observer disliked the target. To investigate these hypotheses, I conducted a MANOVA selecting only the cases in which target and perpetrator liking were manipulated (i.e., excluding the control condition). I used target liking condition (liked or disliked) as the fixed factor and observer attitudes, deviant intentions, and helping intentions toward the target as the outcome variables. I found main effects of target liking on observers' attitudes toward the target, $F(1, 408) = 90.70$, $p < .001$, $\eta^2 = 0.18$, as well as their target-directed deviance intentions, $F(1, 408) = 27.50$, $p < .001$, $\eta^2 = 0.06$ and their target-directed helping intentions, $F(1, 408) = 172.33$, $p < .001$, $\eta^2 = 0.30$. Specifically, in support of *H4a*, observers reported significantly more positive attitudes toward the target when the observer liked the target ($M = 5.25$, $SD = 1.06$) than when the observer disliked the target

($M = 4.25$, $SD = 1.05$). In addition, in support of *H5a*, observers reported significantly fewer deviant intentions toward the target when the observer liked the target ($M = 1.74$, $SD = 1.17$) than when the observer disliked the target ($M = 2.41$, $SD = 1.43$). Finally, in support of *H6a*, observers reported significantly more helping intentions toward the target when the observer liked the target ($M = 5.37$, $SD = 1.06$) than when the observer disliked the target ($M = 3.83$, $SD = 1.30$). Therefore, *H4a*, *H5a*, and *H6a* were supported.

Hypotheses *H4b*, *H5b*, and *H6b* predicted that observers would report greater positive attitudes (*H4b*), fewer deviant intentions (*H5b*), and more helping intentions (*H6b*) toward the perpetrator when the observer liked the perpetrator than when the observer disliked the perpetrator. To investigate these hypotheses, I conducted a MANOVA, selecting only the cases in which target and perpetrator liking were manipulated (i.e., excluding the control condition). I used perpetrator liking condition (liked or disliked) as the fixed factor and observers' attitudes, deviant intentions, and helping intentions toward the perpetrator as the outcome variables. I found main effects of perpetrator liking on observers' attitudes toward the perpetrator, $F(1, 407) = 115.54$, $p < .001$, $\eta^2 = 0.22$, as well as their perpetrator-directed deviance intentions, $F(1, 407) = 46.58$, $p < .001$, $\eta^2 = 0.10$ and their perpetrator-directed helping intentions, $F(1, 407) = 213.05$, $p < .001$, $\eta^2 = 0.34$. In support of *H4b*, observers reported significantly more positive attitudes toward the perpetrator when the observer liked the perpetrator (i.e., when observers were told they liked the perpetrator) ($M = 5.23$, $SD = 0.93$) than when the observer disliked the perpetrator ($M = 4.16$, $SD = 1.08$). In addition, in support of *H5b*, observers reported significantly fewer deviant intentions toward the perpetrator when the observer liked the perpetrator ($M = 1.72$, $SD = 1.11$) than when the observer

disliked the perpetrator ($M = 2.60$, $SD = 1.46$). Finally, in support of $H6b$, observers reported significantly more helping intentions toward the perpetrator when the observer liked the perpetrator ($M = 5.24$, $SD = 1.17$) than when the observer disliked the perpetrator ($M = 3.51$, $SD = 1.23$). Therefore, $H4b$, $H5b$, and $H6b$ were supported.

Finally, recall that $H7a$, $H7b$, and $H7c$ predicted that when the observer liked one actor (i.e., the target or the perpetrator) and disliked the other actor, observers would report greater positive attitudes ($H7a$), fewer deviant intentions ($H7b$) and more helping intentions ($H7c$) toward the actor they liked as compared to the actor they disliked. To investigate these hypotheses, I conducted three separate MANOVAs (one for each category of outcome variables), selecting only the cases in which target and perpetrator liking were manipulated (i.e., excluding the control condition). In the first analysis, I examined the effect of target and perpetrator liking on observers' attitudes toward each of the target and the perpetrator. I found a significant interaction between target liking and perpetrator liking on observers' attitudes toward the target, $F(1, 435) = 5.55$, $p = .019$, $\eta^2 = 0.01$; however, there was no significant interaction for observers' attitudes toward the perpetrator, $F(1, 435) = 3.15$, $p = .077$, $\eta^2 = 0.01$. To investigate the interaction, I plotted the means of observers' attitudes toward the target and the perpetrator at each level of target and perpetrator liking (see Figure 6) and conducted a series of paired-samples t -tests to determine which target-perpetrator attitude pairs were significantly different. I applied the Bonferonni adjustment to correct for the inflated p -value; as such, p -values were required to be less than .013 to be considered significant at the .050 level. Consistent with my expectations, I found no significant difference between observers' attitudes toward the target and the perpetrator when both the target and the perpetrator

were liked or when both the target and the perpetrator were disliked; $t(99) = -0.29, p = .773$ and $t(111) = 0.48, p = .629$, respectively. However, in support of *H7a*, when the target was *liked* and the perpetrator was *disliked*, observers reported significantly more positive attitudes toward the target than toward the perpetrator, $t(103) = 8.13, p < .001$. In addition, when the target was *disliked* and the perpetrator was *liked*, observers reported significantly more positive attitudes toward the perpetrator than toward the target; $t(96) = -6.56, p < .001$.

I next examined the effect of perpetrator and target liking on observers' deviant intentions toward each of the target and the perpetrator. However, there was no significant interaction between target liking and perpetrator liking on observers' deviant intentions toward either the target or the perpetrator; $F(1, 432) = 0.03, p = .870, \eta^2 = 0.00$ and $F(1, 432) = 0.12, p = .724, \eta^2 = 0.00$, respectively. As such, *H7b* was not supported.

Finally, I examined the effect of target and perpetrator liking on observers' helping intentions toward each of the target and the perpetrator. I found a significant interaction between target liking and perpetrator liking on observers' helping intentions toward both the target, $F(1, 434) = 28.55, p < .001, \eta^2 = 0.05$, and the perpetrator; $F(1, 434) = 4.93, p = .027, \eta^2 = 0.01$, respectively. To investigate this interaction, I plotted the means of observers' helping intentions at each level of target and perpetrator liking (see Figure 7) and conducted a series of paired-samples *t*-tests to determine which target-perpetrator attitude pairs were significantly different, once again applying the Bonferonni adjustment to control for the inflated *p*-value. Consistent with my expectations, there was no significant difference between observers' helping intentions toward the target and the perpetrator when both the target and the perpetrator were liked or when both the target

and the perpetrator were disliked; $t(99) = 0.99, p = .325$ and $t(110) = 1.06, p = .291$, respectively. However, in support of *H7c*, when the target was *liked* and the perpetrator was *disliked*, observers reported significantly more helping intentions toward the target than toward the perpetrator; $t(102) = 13.34, p < .001$. In addition, when the target was *disliked* and the perpetrator was *liked*, observers reported significantly more helping intentions toward the perpetrator than toward the target; $t(97) = -8.11, p < .001$. As such, although *H7b* was not supported, *H7a* and *H7c* were supported.

Power

Hypotheses *H8a*, *H9a*, and *H10a* predicted that observers would report greater positive attitudes (*H8a*), fewer deviant intentions (*H9a*) and more helping intentions (*H10a*) toward the target when the target had high power than when the target had low power. To investigate these hypotheses, I conducted a MANOVA selecting only the cases in which target and perpetrator power were manipulated (i.e., excluding the control condition). I used target power condition (high or low) as the fixed factor and observers' attitudes, deviant intentions, and helping intentions toward the target as the outcome variables. I found main effects of target power on observers' attitudes toward the target, $F(1, 408) = 8.10, p = .005, \eta^2 = 0.02$, as well as their target-directed deviance intentions, $F(1, 408) = 7.21, p = .008, \eta^2 = 0.02$ and their target-directed helping intentions, $F(1, 408) = 9.81, p = .002, \eta^2 = 0.02$. In support of *H8a*, observers reported significantly more positive attitudes toward the target when the target had high power ($M = 4.93, SD = 1.18$) than when the target had low power ($M = 4.60, SD = 1.14$). In addition, in support of *H9a*, observers reported significantly fewer deviant intentions toward the target when the target had high power ($M = 1.88, SD = 1.24$) than when the target had low power ($M =$

2.24, $SD = 1.41$). Finally, in support of *H10a*, observers reported significantly more helping intentions toward the target when the target had high power ($M = 4.83$, $SD = 1.41$) than when the target had low power ($M = 4.40$, $SD = 1.39$). Therefore, *H8a*, *H9a*, and *H10a* were supported.

Hypotheses *H8b*, *H9b*, and *H10b* predicted that observers would report greater positive attitudes (*H8b*), fewer deviant intentions (*H9b*), and more helping intentions (*H10b*) toward the perpetrator when the perpetrator had high power than when the perpetrator had low power. To investigate these hypotheses, I conducted a MANOVA selecting only the cases in which target and perpetrator power were manipulated (i.e., excluding the control condition). I used perpetrator power condition (high or low) as the fixed factor and observers' attitudes, deviant intentions, and helping intentions toward the perpetrator as the dependent variables. I found a main effect of perpetrator power on observers' perpetrator-directed deviance intentions, $F(1, 407) = 4.15$, $p = .042$, $\eta^2 = 0.01$. Specifically, in support of *H9b*, observers reported significantly fewer deviant intentions toward the perpetrator when the perpetrator had high power ($M = 2.05$, $SD = 1.32$) than when the perpetrator had low power ($M = 2.32$, $SD = 1.42$). However, I did not find support for *H8b* or *H10b*, as I did not find a significant main effect of perpetrator power on observers' attitudes toward the perpetrator, $F(1, 407) = 0.11$, $p = .740$, $\eta^2 = 0.00$, or observers' perpetrator-directed helping intentions, $F(1, 407) = 2.43$, $p = .120$, $\eta^2 = 0.01$.

Finally, hypotheses *H11a*, *H11b*, and *H11c* predicted that when one actor (i.e., the target or the perpetrator) had high power and the other actor had low power, observers would report greater positive attitudes (*H11a*), fewer deviant intentions (*H11b*), and more helping intentions (*H11c*) toward the target as compared to the perpetrator. To investigate

these hypotheses, I again selected only the cases in which target and perpetrator power was manipulated (i.e., not the control condition) and conducted three separate MANOVAs (one for each category of outcome variable). In the first analysis, I examined the effect of target and perpetrator power on observers' attitudes toward each of the target and the perpetrator. I did not find a significant interaction between target power and perpetrator power on observers' attitudes toward either the target or the perpetrator; $F(1, 435) = 0.27, p = .607, \eta^2 = 0.00$ and $F(1, 435) = 3.39, p = .066, \eta^2 = 0.01$, respectively. As such, *H11a* was not supported.

I next examined the effect of target and perpetrator power on observers' deviant intentions toward each of the target and the perpetrator. Although there was no significant interaction for observers' deviant intentions toward the target, $F(1, 432) = 0.56, p = .456, \eta^2 = 0.00$, I found a significant interaction between target power and perpetrator power on observers' deviant intentions toward the perpetrator, $F(1, 432) = 3.89, p = .049, \eta^2 = 0.01$. Once again, I plotted the means of observers' deviant intentions toward the target and the perpetrator at each level of target and perpetrator power (see Figure 8) and conducted a series of paired-samples *t*-tests to determine which target-perpetrator attitude pairs were significantly different, once again applying the Bonferonni adjustment. Consistent with my expectations, I found when the target had high power, observers reported fewer deviant intentions toward the target regardless of whether the perpetrator had high or low power; $t(82) = 3.80, p < .001$ and $t(96) = 3.79, p < .001$, respectively. Further, when both the perpetrator and the target had low power, there was no significant difference between observers' deviant intentions toward the target and the perpetrator; $t(94) = -0.46, p = .649$. However, in contrast to *H11b*, when the target had low power and the perpetrator

had high power, observers reported significantly fewer deviant intentions toward the perpetrator; $t(134) = 3.13, p = .002$. As such, *H11b* was not supported

Finally, I examined the effect of target and perpetrator power on observers' helping intentions toward each of the target and the perpetrator. Although there was no significant interaction for observers' helping intentions toward the target, $F(1, 434) = 1.85, p = .175, \eta^2 = 0.00$, I found a significant interaction between target power and perpetrator power on observers' helping intentions toward the perpetrator, $F(1, 434) = 9.87, p = .002, \eta^2 = 0.02$. Once again, I plotted the means of observers' helping intentions toward the target and the perpetrator at each level of target and perpetrator power (see Figure 9) and conducted a series of paired-samples *t*-tests to determine which target-perpetrator attitude pairs were significantly different, once again applying the Bonferonni adjustment. Consistent with my expectations, I found when the target had high power, observers reported more helping intentions toward the target regardless of whether the perpetrator had high or low power; $t(83) = 5.24, p < .001$ and $t(96) = 3.90, p = .001$, respectively. However, when the target had low power, there was no significant difference between observers' helping intentions toward the target and the perpetrator, regardless of whether the perpetrator had high or low power; $t(135) = -2.34, p = .020$ and $t(94) = 0.65, p = .519$, respectively. As such, *H11c* was not supported.

Discussion

In Study 2, I examined the influence of the observer's relationship with the target and the perpetrator of aggression on observer attitudes and behavioural intentions toward each actor. Specifically, to reflect both the informal and formal relationships employees develop in the workplace, I examined the influence of the observer's liking of and power

relative to the target and the perpetrator. In support of *H4a*, *H5a*, and *H6a*, I found that observers reported significantly more positive attitudes, fewer deviant intentions, and more helping intentions toward the target when they liked the target than when they disliked the target. Similarly, in support of *H4b*, *H5b*, and *H6b*, I found that observers reported significantly more positive attitudes, fewer deviant intentions, and more helping intentions toward the perpetrator of aggression when they liked the perpetrator than when they disliked the perpetrator. I did not find support for *H7b*, as there was no difference in observers' deviant intentions toward the target or the perpetrator when one actor was liked and the other was disliked. However, I did find support for *H7a* and *H7c*, because when one actor (i.e., the target or the perpetrator) was liked and the other actor (i.e., the perpetrator or the target) was disliked, observers reported significantly more positive attitudes and helping intentions toward the actor they liked than toward the actor they did not like. This effect appeared to be strongest when the target was liked and the perpetrator was disliked.

In addition, I found support for *H8a*, *H9a*, and *H10a*, as observers reported significantly more positive attitudes, fewer deviant intentions, and more helping intentions toward the target when the target had high power than when the target had low power. I also found support for *H9b*, as observers reported significantly fewer deviant intentions toward the perpetrator when the perpetrator had high power than when the perpetrator had low power. However, I did not find support for *H8b* or *H10b*, as observers' attitudes and helping intentions toward the perpetrator were not influenced by the perpetrator's power. Finally, I also did not find support for *H11a*, *H11b*, or *H11c*; in contrast to my expectations, observers actually reported more positive attitudes and fewer

deviant intentions toward the perpetrator when the perpetrator had high power and the target had low power; there was no difference in observers' helping intentions toward the target and the perpetrator when the perpetrator had high power and the target had low power.

The lack of support for my hypotheses that observers would report more positive attitudes and more helping intentions toward the perpetrator when the perpetrator had high power may have been due to contamination of the aggression on the power manipulation. Specifically, although my manipulation checks indicated that observers correctly perceived the perpetrator power manipulation, and observers did indeed report fewer deviant intentions toward the high powered perpetrator than the low powered perpetrator, it is possible that the perpetrator power manipulation may have been somewhat confounded by the aggressive interaction. According to LaVan and Martin (2008), if the target-perpetrator relationship doesn't start with a power imbalance, it often results in one. Indeed, some researchers restrict their definition of workplace mistreatment to include only those instances in which there is a power imbalance between the target and the perpetrator (i.e., "bullying"; Einarsen & Stogstad, 1996; Vartia, 1996). Therefore, independent of the power manipulation, the perpetrator's aggressive act may have been perceived by observers as an exercise of power. I discuss the implications and limitations of this possibility in more detail in the subsections below; however, this finding is interesting in and of itself because it suggests that aggressive behaviour may make perpetrators more powerful in the eyes of observers. Given the positive benefits bestowed on those deemed to have power, this finding is especially concerning, as perpetrators may be less likely to experience negative repercussions

following an aggressive interaction than targets, especially targets who have low power. As such, the presence of observers may be less successful at deterring perpetrators from continuing to engage in aggression.

Theoretical and practical implications

In Study 1, I found that following a witnessed incident of aggression, observers were more likely to report negative attitudes and engaged in less helping toward the perpetrator than the target. These findings were encouraging because they suggest that observers punish perpetrators of aggression, which may reduce the likelihood that the perpetrator will continue to engage in aggression. However, my findings in Study 2 suggest that the *relationship* between the observer and each of the target and the perpetrator are likely to influence how the observer responds to a witnessed incident of aggression. Specifically, it appears that, regardless of their role in an aggressive interaction (i.e., as a target or a perpetrator), observers are more likely to ‘side’ with the actor they like more, reporting more positive attitudes and behavioural intentions toward the liked actor. This is significant because it suggests that observers may be more influenced by their preexisting relationships with these actors than by each actor’s role as a target or a perpetrator of aggression. That is, rather than feeling empathy for the target or anger at the perpetrator for violating the norm of civility, observers may allow their relationships to take precedence in influencing their reactions.

This study highlights the importance of considering observers’ relationships with both the target and the perpetrator of workplace aggression. Although research on observers of aggression is relatively new, continued research in this area will likely benefit from a consideration of observers’ liking of and power relative to the target and

the perpetrator. Further, as noted in Chapter I, some forms of workplace aggression assume that observer attitudes and behaviours toward the target of aggression will be negatively influenced. For example, the definition of social undermining (i.e., the intentional interference in a target's work-related success as well as his or her reputation or ability to develop and maintain social relationships at work; Duffy et al., 2002) implies that perpetrators influence the target's reputation as held by, as well as their relationships with others (i.e., observers). However, the findings of the current study suggest that the perpetrator's ability to influence observer attitudes and behaviours toward the target will largely depend on the observer's preexisting relationship with the target. Observers who liked the target, and observers who perceived that the target had high power, reported significantly more positive attitudes toward the target than those who disliked the target or who perceived the target as low powered.

In addition, although previous research has only considered the perpetrator's ability to influence observers' reaction to the target of aggression, my findings suggest that observer's relationships with the perpetrator also influence their reaction to the *perpetrator* of the aggression. Observers who disliked the perpetrator reported significantly less positive attitudes and behaviours toward the perpetrator than observers who liked the perpetrator. In addition, observers reported significantly more deviant intentions toward the perpetrator when the perpetrator had low power than when the perpetrator had high power. This suggests that perpetrators who are not well-liked and who do not hold a position of power are susceptible to negative repercussions from observers. From a practical perspective, if this potential 'backlash' against perpetrators

could be emphasized in workplace aggression interventions messages, these findings may deter potential perpetrators from behaving aggressively.

In addition, my findings for target power highlight a need for managers to be aware of how their own status relative to a target may exacerbate the negative effects of the aggression for the target. Specifically, the significant effect of target power on observers' attitudes and behaviours toward the target suggests that low-powered targets are at significant risk of having their work-related outcomes affected. That is, targets that had lower power than the observer were rated more negatively than were targets with higher power. This suggests that when aggression occurs in the presence of a supervisor, the supervisor may be more likely to develop a negative attitude and to enact negative behaviours toward the low-powered target. Negative attitudes and behaviours from a supervisor may be especially detrimental for targets of aggression. This potential extension of my findings will be important to consider in future research. I consider this possibility further in Study 4 (Chapter V), in which I examine the actual relationships between the observer and the target and perpetrator of aggression and observer attitudinal outcomes.

Limitations and future directions

Although Study 2 found support for the importance of the relational variables of liking and power on observers' attitudinal and behavioural responses to witnessed aggression, there are a number of limitations that need to be addressed. The most significant of these are design-related. Specifically, I did not include any No Aggression control groups; that is, I did not include a series of conditions in which liking and power were manipulated but observers did not witness aggression between the target and the

perpetrator. I chose not to include the No Aggression control groups because of the high number of conditions already required to investigate my hypotheses ($n = 17$); however, the omission of these groups significantly limits the inferences I can make from the data. For example, although my aggression manipulation was consistent with three items from Duffy et al.'s (2002) social undermining scale, I am not able to determine whether observers were actually influenced by the aggression (or even if they realized that they had witnessed aggression), or if the results were driven entirely by the relational manipulation.

Related to this issue, because power and aggression are related concepts (LaVan & Martin, 2008), it is possible that observers may have perceived that the perpetrator had high power even in the low perpetrator power condition. In support of this possibility, my manipulation checks revealed that observers perceived the perpetrator as significantly more powerful following the witnessed aggression (i.e., after reading the "Aggressive email") as compared to before. Unfortunately, without the No Aggression control conditions, I was not able to compare observer attitudes and behavioural intentions toward perpetrators and *non-perpetrators*. Without these control conditions, I cannot determine whether the change in observers' perception of the perpetrator's power was due to the aggression or whether it was an artifact of the data.

In addition, due to logistical restrictions, I only included two levels of target and perpetrator liking (i.e., liked/disliked) and power (i.e., high/low) in the current study. Because of this limitation, I was not able to test a number of relational permutations among the target, perpetrator, and observer. For example, observers may have neutral feelings about the target and or the perpetrator; the target and perpetrator may have equal

power relative to an observer, or may both have more (or less) power than an observer but unequal power relative to one another. I will also address this issue in Study 4, where observers' actual relationships—with respect to liking and power—will be measured rather than manipulated.

Another limitation concerns the ecological validity of the study. Specifically, in contrast to a field experiment or quasi-experiment, the vignette design used in the current study has relatively low level of external and ecological validity due to artificiality (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990). Further, I used a student sample to investigate my hypotheses; the restricted age range and limited work experience of this sample may reduce the generalizability of my findings. Although I believe the strength of the findings given the low realism of the experiment suggests that the effects may be stronger in situ, these design limitations are two issues I address in Study 4, when I examine the influence of working adults' actual relationships with targets and perpetrators of aggression in their workplace.

Finally, I was not able to examine any *process* by which observers' attitudes and behavioural intentions are influenced by their relationship with each of the target and the perpetrator. That is, the design of this study could not uncover *why* the observer's liking of and power relative to each actor had the effect they did. One possible process variable may be observer perspective-taking; perspective-taking is defined as an effortful, goal-directed process, in which an individual attempts to understand the thoughts, feelings, and/or motives of another individual (Parker, Atkins, & Axtell, 2008; see also Batson, 1991; Davis, 1983). Researchers have found this process to be associated with more positive attitudes and behaviours toward the target of one's perspective-taking, in both

the short- and long-term (e.g., Coke, Batson, & McDavis, 1978; Falk & Johnson, 1977; Richardson, Hammock, Smith, Gardner, & Singo, 1994; Schober, 1998; Williams, 2007). Observers' propensity to take the perspective of the target and/or the perpetrator of aggression may be influenced by their relationship with each actor, which may in turn influence observer attitudes and behaviours. I will further consider the impact of observer perspective-taking on observer attitudes and behaviours, as well as the impact of the observer's relationship with the target and the perpetrator—with respect to liking and power—on observer perspective-taking in Studies 3 and 4, respectively.

Conclusion

The current study suggests that observer attitudes and behaviours toward the target and the perpetrator are indeed influenced by the observers' preexisting relationship with each of the actors. As such, these relationships will be important to consider as research on observers of aggression develops.

Table 6

Target liking manipulation checks.

	Liked target (N = 198)	Disliked target (N = 207)	Control (N = 27)
Time 1			
Target	5.91 (1.16) ^a	1.91 (1.42) ^b	5.15 (1.03) ^c
Perpetrator	3.89 (2.27) ^a	3.77 (2.50) ^a	4.93 (1.04) ^b
Uninvolved other	4.72 (1.11) ^a	4.48 (1.34) ^a	4.93 (1.11) ^a
Time 2			
Target	5.54 (1.31) ^a	2.78 (1.50) ^b	4.59 (1.50) ^c
Perpetrator	3.62 (1.89) ^a	3.83 (2.18) ^a	3.81 (1.82) ^a
Uninvolved other	4.95 (1.22) ^a	4.97 (1.43) ^a	5.48 (1.22) ^a

(SD); NOTE: within the same column, values with the same superscript are not significantly different.

Table 7

Perpetrator liking manipulation checks.

	Liked perpetrator (N = 195)	Disliked perpetrator (N = 210)	Control (N = 27)
Time 1			
Target	3.85 (2.31) ^a	3.88 (2.46) ^a	5.15 (1.03) ^b
Perpetrator	5.90 (1.26) ^a	1.91 (1.37) ^b	4.93 (1.04) ^c
Uninvolved other	4.69 (1.17) ^a	4.51 (1.30) ^a	4.93 (1.11) ^a
Time 2			
Target	4.14 (1.87) ^a	4.11 (2.07) ^a	4.59 (1.50) ^a
Perpetrator	5.22 (1.51) ^a	2.34 (1.40) ^b	3.81 (1.82) ^c
Uninvolved other	4.92 (1.32) ^a	5.00 (1.35) ^{ab}	5.48 (1.22) ^b

(SD); NOTE: within the same column, values with the same superscript are not significantly different.

Table 8

Target power manipulation checks.

	High power target (N = 180)	Low power target (N = 231)	Control (N = 27)
Time 1			
Observer	2.48 (0.70) ^a	2.83 (0.71) ^b	2.70 (0.67) ^{ab}
Target	3.43 (0.75) ^a	2.08 (0.88) ^b	2.59 (0.69) ^c
Perpetrator	2.37 (1.09) ^a	2.88 (1.05) ^b	2.70 (0.67) ^{ab}
Uninvolved other	2.52 (0.71) ^a	2.72 (0.72) ^b	2.63 (0.63) ^{ab}
Time 2			
Observer	2.53 (0.69) ^a	2.92 (0.68) ^b	3.26 (0.66) ^c
Target	3.36 (0.82) ^a	2.03 (0.90) ^b	2.22 (0.89) ^b
Perpetrator	2.49 (1.11) ^a	2.97 (1.04) ^b	2.81 (0.68) ^{ab}
Uninvolved other	2.37 (0.80) ^a	2.72 (0.67) ^b	2.44 (0.64) ^{ab}

(SD); NOTE: within the same column, values with the same superscript are not significantly different.

Table 9

Perpetrator power manipulation checks.

	High power perpetrator (N = 219)	Low power perpetrator (N = 192)	Control (N = 27)
Time 1			
Observer	2.50 (0.67) ^a	2.88 (0.73) ^b	2.70 (0.67) ^{ab}
Target	2.52 (1.08) ^a	2.85 (1.02) ^b	2.59 (0.69) ^{ab}
Perpetrator	3.33 (0.88) ^a	1.90 (0.77) ^b	2.70 (0.67) ^c
Uninvolved other	2.48 (0.71) ^a	2.80 (0.70) ^b	2.63 (0.63) ^{ab}
Time 2			
Observer	2.58 (0.69) ^a	2.95 (0.68) ^b	3.26 (0.66) ^c
Target	2.37 (1.07) ^a	2.88 (1.05) ^b	2.22 (0.89) ^{ab}
Perpetrator	3.46 (0.81) ^a	1.97 (0.81) ^b	2.81 (0.68) ^c
Uninvolved other	2.43 (0.74) ^a	2.71 (0.74) ^b	2.44 (0.64) ^{ab}

(SD); NOTE: within the same column, values with the same superscript are not significantly different.

Figure 5

A graphical representation of the hypotheses of Study 2.

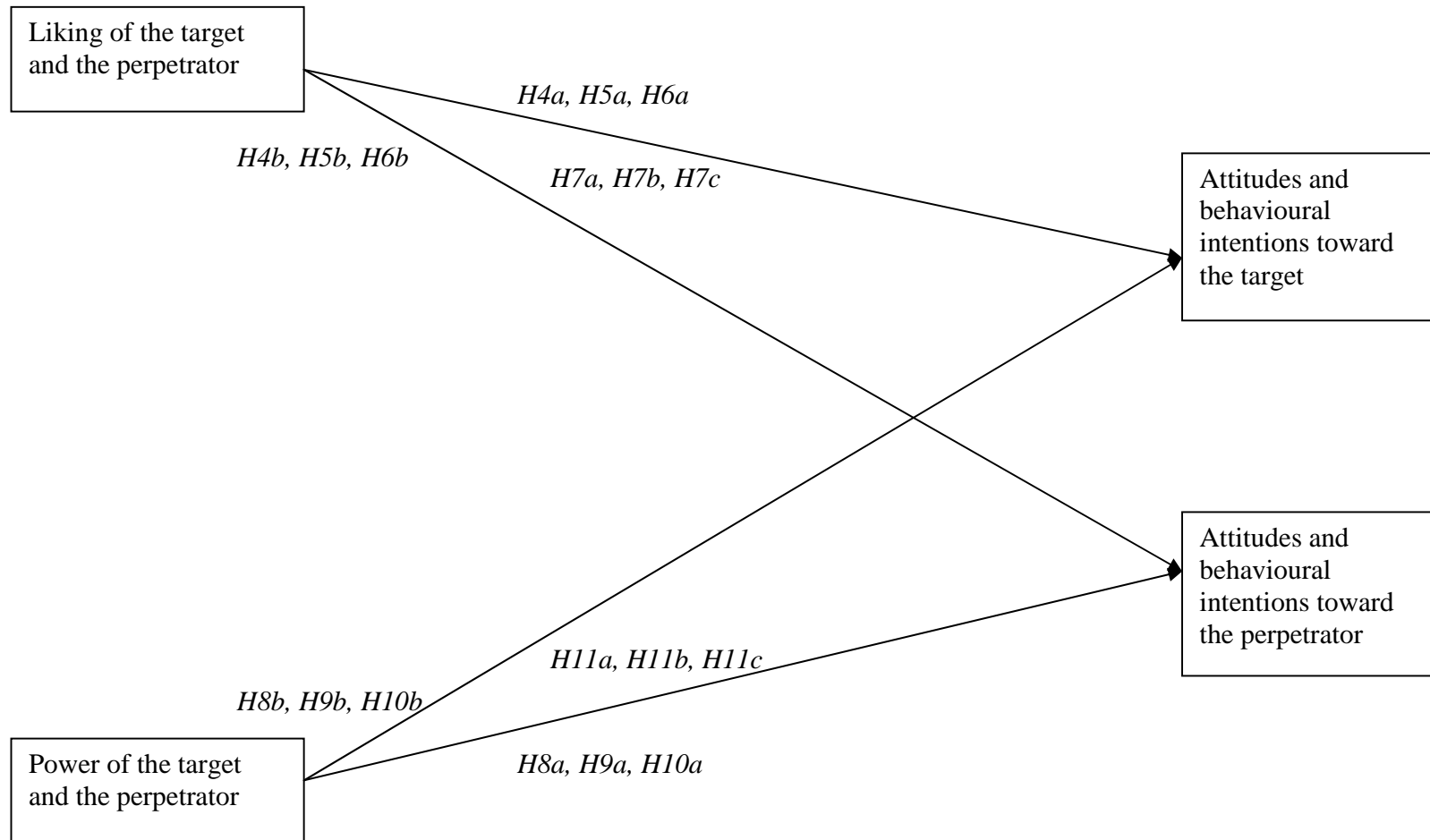


Figure 6

Observers' attitudes toward the target and the perpetrator by liking condition.

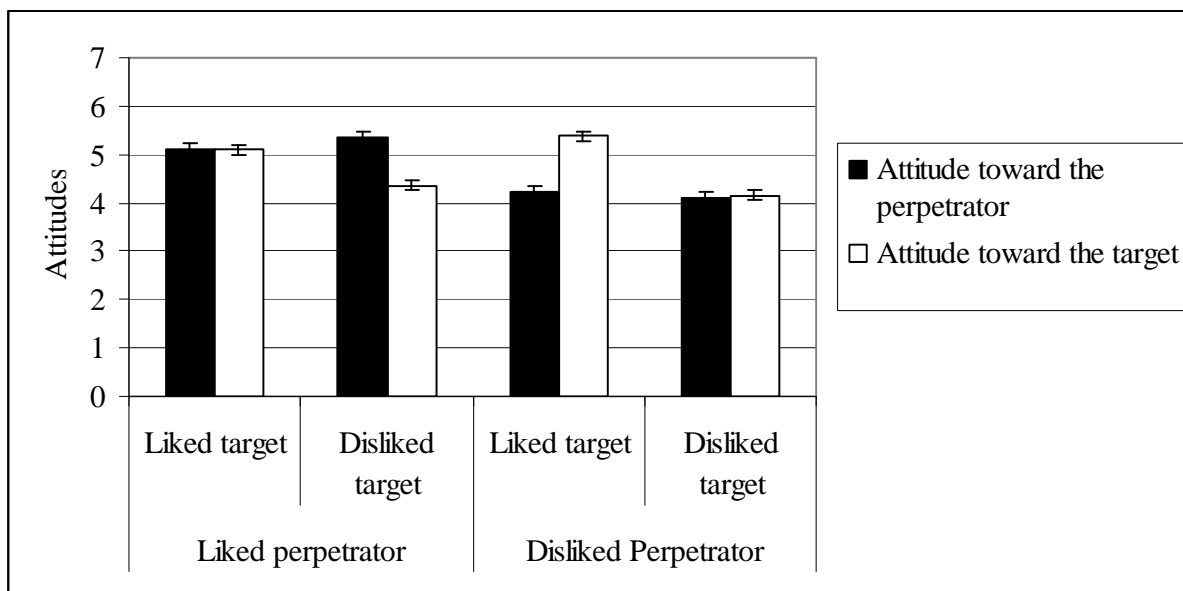
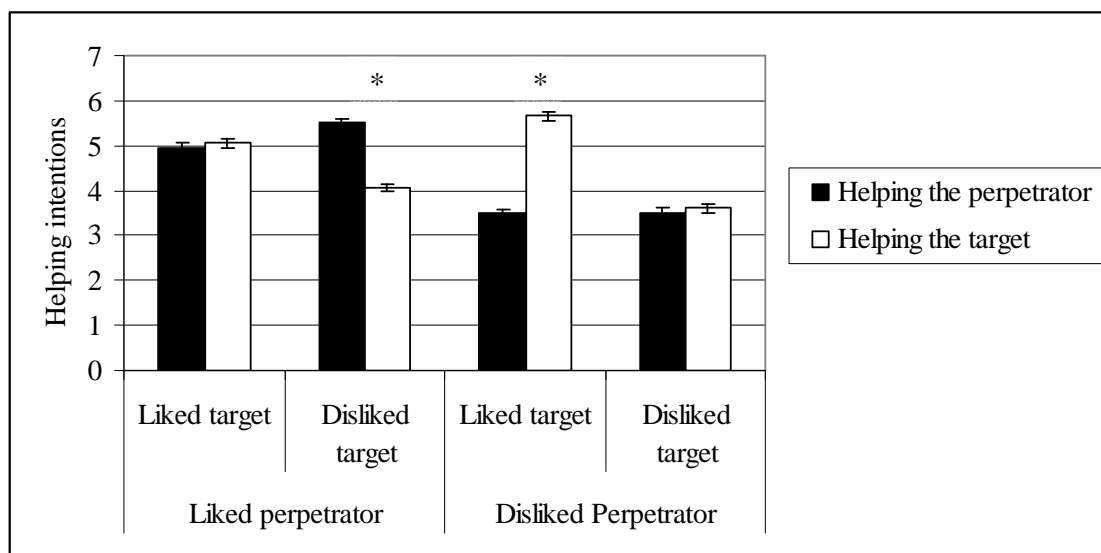


Figure 7

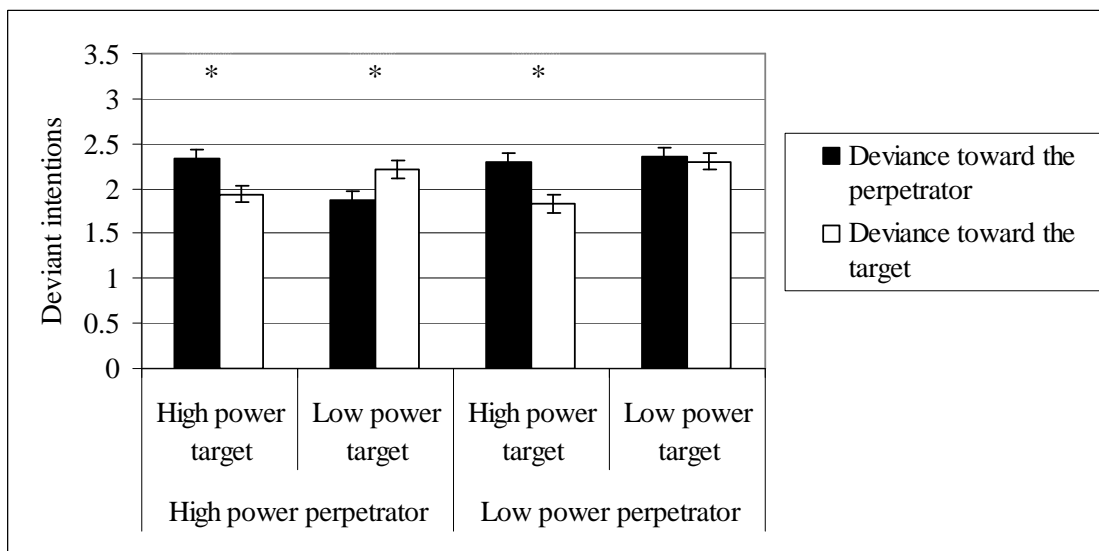
Observers' helping intentions toward the target and the perpetrator by liking condition.



Note: $*p < .05$.

Figure 8

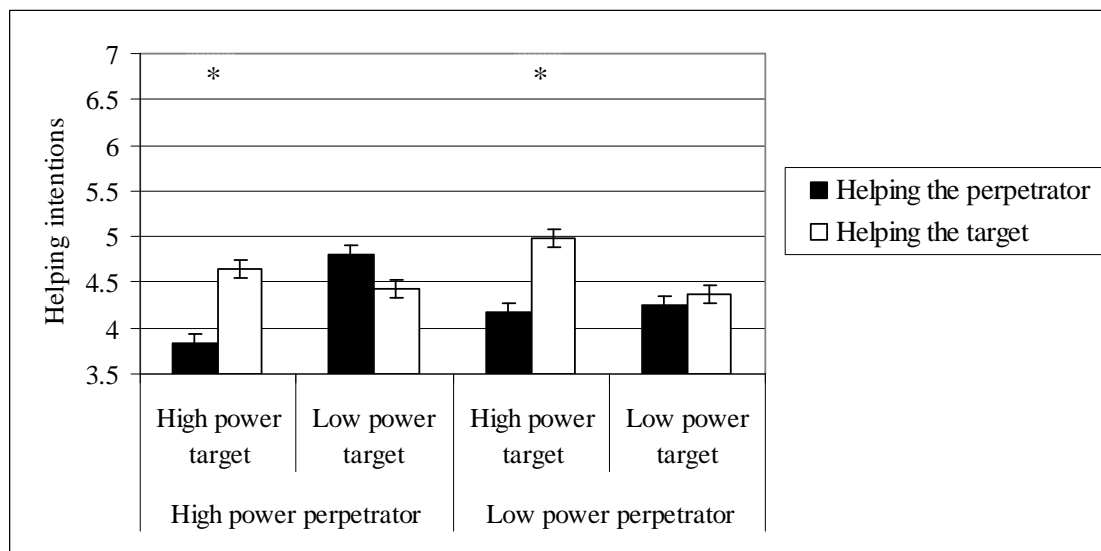
Observers' deviant intentions toward the target and the perpetrator by power condition.



Note: $*p < .05$.

Figure 9

Observers' helping intentions toward the target and the perpetrator by power condition.



Note: $*p < .05$.

Chapter IV

Study 3

In Study 1, I found that observers' attitudes and behaviours are affected by witnessed aggression. In Study 2, I examined the impact of an observer's relationship with the target and the perpetrator on observer attitudes and behavioural intentions towards both actors. In Study 2, I expected that observers' attitudes and behavioural intentions would be influenced by liking and power in an automatic way; that is, my hypotheses for Study 2 were based on a presumed subconscious effect of primed liking and power. However, in addition to the subconscious effect of these relationships, I also expect observers to engage in a certain level of effortful processing of an aggressive incident. That is, I expect that observers will actively think about the incident of aggression and *decide* how they will respond to it. To examine this possibility, in Study 3 I consider the impact of observers' active perspective-taking behaviour to address my third and fourth research questions: (3) How does observer perspective-taking influence observer perceptions of justifiability about the aggression, and attitudes and behaviours toward the target and the perpetrator? and (4) Whose perspective are observers more likely to take?

Research question 3: How does observer perspective-taking influence observer perceptions of justifiability about the aggression, and attitudes and behaviours toward the target and the perpetrator?

Active perspective-taking is defined as an effortful, goal-directed process, in which an individual attempts to understand the thoughts, feelings, and/or motives of another individual (Parker, Atkins, & Axtell, 2008; see also Batson, 1991; Davis, 1983). In effect, perspective-takers attempt to put themselves in the position of another and to imagine how

the other might think and feel. Although researchers have sometimes operationalized perspective-taking as an individual difference (or trait-based) variable (e.g., McBane, 1995; Mohr, Howells, Gerace, Day, & Wharton, 2007; Unger & Thumhuri, 1997), Parker et al.'s (2008) definition suggests that perspective-taking is a behaviour that a perceiver (e.g., an observer) can *choose* to engage in.

According to Parker et al. (2008), an individual must hold two beliefs before he or she will engage in active perspective-taking. First, the individual must believe that understanding the other person's perspective will help him or her achieve his or her goals. Second, the individual must believe that he or she does not already know the perspective of the other person. In addition, perspective-taking can be affected by the perceiver's cognitive load (Roßnagel, 2000), as individuals who are distracted (i.e., who have a limited cognitive capacity) are less likely to engage in perspective-taking. Therefore, individuals must be both *motivated* and *cognitively able* to perspective-take for this behaviour to occur.

Active perspective-taking does not require that the perceiver be accurate in his or her assessment of the other's thoughts, feelings, or motives; rather, according to Parker et al. (2008), the effectiveness of one's perspective-taking is a separate construct. The outcomes of active perspective-taking for the *perceiver* are generally independent from their perspective-taking effectiveness. As such, regardless of the actual thoughts, feelings, and motives of the target and the perpetrator, if an observer actively attempts to take the perspective of either (or both) actor(s), the observer's active perspective-taking should influence his or her attitudes and behaviours toward each actor.

Active perspective-taking has been associated with a number of positive interpersonal outcomes, in both the short- and long-term. Specifically, researchers have found that active

perspective-taking is associated with high quality communication (Schober, 1998; Sermat & Smyth, 1973), high levels of trust (M. Williams, 2007) and low levels of interpersonal aggression (Richardson, Hammock, Smith, Gardner, & Singo, 1994) (see Parker et al., 2008). In the longer-term, perspective-taking is related to high levels of relationship satisfaction (Falk & Wagner, 1985; Franzoi, Davis, & Young, 1985), helping behaviour (Coke, Batson, & McDavis, 1978; Underwood & Moore, 1982), and effective interpersonal problem-solving (Falk & Johnson, 1977).

These positive outcomes may be understood from an attributional perspective. According to Weiner (1985, 1986), individuals attribute responsibility for events based on their perception of three general factors: its locus or source, its stability, and its controllability. The locus dimension is particularly important for observers of aggression, because this dimension is related to perceptions of blame (Weiner, 1985). In terms of the *locus* of an event, individuals who perceive that the source of an occurrence is under the control of an individual makes an *internal* (dispositional) attribution relative to that individual; individuals who perceive that the source of the occurrence is *not* under the control of the individual make an *external* (situational) attribution.

As noted above, when an individual engages in active perspective-taking, he or she attempts to put him or herself in the position of another. For example, an observer who takes the perspective of a perpetrator of aggression will attempt to understand what thoughts and feelings may have motivated the perpetrator to engage in aggression against the target. When an individual assumes the perspective of another, the distinction between self and the other may become blurred. Davis, Conklin, Smith, and Luce (1996) described this as a merging or

“oneness” between the perspective-taker and the other (see also Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Galinsky & Moskowitz, 2000).

Researchers have found that individuals are more likely to make external attributions for their own negative behaviour (i.e., to blame their behaviour on some situational factor), and internal attributions for the negative behaviour of others (i.e., to blame the perpetrator’s disposition); researchers refer to this as the ‘fundamental attribution error’ (Ross, 1977). Stated another way, individuals make self-serving attributions (Bernstein, Stephan, & Davis, 1979). However, when an individual actively tries to take the perspective of another, the merging between the self and the other may make the perceiver more likely to make the same allowances for the behaviour of the other as he or she does for him- or herself. In support of this hypothesis, Regan and Totten (1975) found that individuals who took the perspective of another were more likely to make the same (positive) attributions for the behaviour, feelings, or motives of the other that they would make for themselves. Therefore, active perspective-taking leads individuals to make more positive attributions for the behaviour of others (Betancourt, 1990).

In this thesis, I operationalize the locus attribution as the extent to which the observer perceives the perpetrator’s behaviour as justifiable. Justifications admit responsibility for an act, but deny that the act was inappropriate (Shaw, Wild, & Colquitt, 2003). Observers who take the perspective of the perpetrator can make a positive attribution for the perpetrator’s aggressive behaviour by blaming external (i.e., situational) factors. That is, observers can perceive the perpetrator’s aggression as justifiable; an appropriate response to the target or the situation (i.e., what the perpetrator *should* have done). On the other hand, observers who take the perspective of the target will be motivated to blame internal (i.e., dispositional)

factors for the perpetrator's behaviour. That is, observers can perceive the perpetrator's aggression as an inappropriate or unjustifiable response (i.e., what the perpetrator *should not* have done), thereby minimizing the responsibility of the target in his or her own mistreatment.

Observer perceptions of the justifiability of an aggressive action are likely to predict their attitudes and behaviour toward the target and the perpetrator. As I discussed in Chapter II, according to the deontic model of justice (Cropanzano, Goldman, & Folger, 2003; Folger, 2001), individuals who witness the violation of moral or social norms often experience a negative visceral response (Folger & Skarlicki, 2008), which tends to include strong negative emotions toward the norm violator (Skarlicki & Rupp, 2010). A necessary requirement for this response, however, is that observers perceive that a norm has indeed been violated. Observers should be more likely to perceive that a norm has been violated when he or she perceives that the aggressive act was unjustified. On the other hand, if the observer perceives the aggression as justified, the observer's negative responses should be attenuated.

Consistent with this theoretical rationale, research from the target's perspective suggests that aggressive acts that are perceived as justifiable are associated with lower perceptions of harm (Quigley & Tedeschi, 1996) as well as a decreased likelihood that the target will retaliate (Zillmann & Cantor, 1976). In addition, Zillmann and Cantor (1976) found that targets' physiological arousal was lower when targets were provided with an explanation (i.e., a justification) for the perpetrator's behaviour (see also Spector & Fox, 2010).

The mitigating effects of perceived justification on targets' emotional and behavioural responses to aggression are also likely to extend to observers. For example, researchers have

found that justifiability is inversely related to a number of negative attitudes, including endorsement of punishment and perception of recklessness and responsibility for wrongdoing (Melburg & Tedeschi, 1981). As such, I expected perceived justifiability to mediate the relationship between observers' perspective-taking of the target and the perpetrator and their attitudes toward the perpetrator. In addition, because individuals have a drive to maintain consonance among their related thoughts, feelings, and behaviours (Festinger, 1957), observers who develop negative attitudes toward the perpetrator should be also be more likely to intend to engage in deviance toward and to refrain from helping the perpetrator.

H12a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report more positive attitudes towards the perpetrator.

H12b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report less positive attitudes towards the perpetrator.

H13a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report fewer deviant intentions towards the perpetrator.

H13b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report greater deviant intentions towards the perpetrator.

H14a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report greater helping intentions towards the perpetrator.

H14b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report fewer helping intentions towards the perpetrator.

I also expect observer perspective-taking and perceptions of justifiability to influence observer attitudes towards targets of aggression. Consistent with Duffy, Ganster, and Pagon's (2002) argument that social undermining interferes with the ability of targets to maintain positive social relationships, to the extent that observers perceive a perpetrator's behaviour as justified, observers may develop negative attitudes towards targets. As I argued in Study 1, researchers have found that individuals have a tendency to perceive the world as just; that is, we like to think that people get what they deserve (Lerner, 1980; Lerner & Miller, 1978). As such, we expect that, when observers take the perspective of the perpetrator, they will perceive the perpetrator's behaviour as more justified, which will in turn negatively influence observers' attitudes toward the target.

Conversely, as noted above, observers who take the perspective of the target should be motivated to perceive the aggression as unjustified; that is, that the target is undeserving of his or her victimization. Research has shown that individuals often feel empathic concern for others in need (Batson, Batson, Griffitt, Barrientos, Brandt, Sprengelmeyer, & Bayly, 1989; Davis 1983), and often become saddened and temporarily depressed by the suffering of other human beings (Cialdini, Baumann, & Kenrick, 1981; Cialdini, Darby, & Vincent, 1973; Hatfield, Cacioppo, & Rapson, 1992). These empathic feelings may translate into other-directed behaviours (e.g., helping) to reduce both the other's (Batson et al., 1989; Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Fultz, Batson, Fortenbach, McCarthy, & Varney, 1986), as well as the observer's (Cialdini, Schaller, Houlihan, Arps, Fultz, &

Beaman, 1987) distress. As such, I expected that when observers take the perspective of the target, they will perceive the perpetrator's behaviour as less justified, which will in turn positively influence observers' attitudes, deviant intentions, and helping intentions toward the target.

H15a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report more negative attitudes towards the target.

H15b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report more positive attitudes towards the target.

H16a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report greater deviant intentions towards the target.

H16b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report fewer deviant intentions towards the target.

H17a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report fewer helping intentions towards the target.

H17b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report greater helping intentions towards the target.

Research Question 4: Whose Perspective are Observers More Likely to Take?

According to Duan (2000), the emotions an individual displays will impact the likelihood that an observer will take the perspective of that individual. Specifically, Duan distinguished between intellectual empathy—defined as the extent to which an observer takes the perspective of another individual—and empathic emotion—defined as the extent to which an observer feels the emotions of another individual. He found that, as compared to expressions of happiness, anger, and shame, intellectual empathy (i.e., perspective-taking) was most likely when an actor displayed sadness. In contrast, displayed anger was not associated with either intellectual empathy or empathic emotions.

Both the target and perpetrator of an aggressive incident are likely to display predictable emotional responses to the incident. For instance, according to the group-value model (Lind & Tyler, 1988; Tyler & Lind, 1992), individuals infer their value to the group from the way they are treated by their group members. Targets of aggression may perceive that their group does not value them, which may result in feelings of exclusion. Although targets of aggression often experience a range of emotional responses, K. D. Williams (2001) found that—even when people are excluded by hated individuals—the initial reaction to any form of exclusion is pain, an emotion strongly related to sadness. In contrast, perpetrators of aggression may be expected to express the emotion of anger or hostility, which is not associated with perspective-taking (Duan, 2000).

In addition, as noted above, individuals often become saddened and temporarily depressed by the suffering of others (Cialdini et al., 1981; Cialdini et al., 1973; Hatfield et al., 1992) and will often engage in helping behaviour directed toward these others, to reduce both the other's (Batson et al., 1989; Batson et al., 1981; Fultz et al., 1986), as well as their own (Cialdini et al., 1987) distress. In the context of workplace aggression, observers of

aggression should be more likely to perceive the target—as opposed to the perpetrator—as the suffering party. Although empathic concern does not necessarily result in increased perspective-taking, an increased focus on the target—in his or her role as the needy party—may make observers more likely to take the target’s perspective than the perpetrator’s perspective. As such, I expect that observers will be more likely to take the perspective of the target of an aggressive incident than to take the perspective of the perpetrator.

H18: Observers will be more likely to take the perspective of the target than the perpetrator.

See Figure 10 for an overview of the hypotheses of the current study.

Method

Participants

I invited 520 working adults currently residing in North America to participate in our study using Study Response, an online recruitment service; I encouraged participation by offering participants \$5.00 US for completing our 15 minute online survey. Three hundred and sixty-six people (70%) responded to the survey; however, 68 (19%) were excluded due to missing data, resulting in a final sample of 292 (112 women, 180 men, $M_{age} = 36.56$ years). Most respondents self-identified as Caucasian (70%).

Materials and Procedure

After collecting informed consent (Appendix U) I asked participants to watch a five-minute video of two people interacting in a workplace. In the video, one actor (‘Alex’) aggressed against the other (‘Taylor’); as such, the participant assumed the role of an *observer* of aggression. Specifically, Alex belittled Taylor’s ideas, insulted Taylor, ignored Taylor for a period of time, and slowed Taylor’s ability to get his/her work done. These

behaviours are consistent with five items on Duffy et al.'s (2002) co-worker undermining scale (i.e., "Belittled you or your ideas"; "Insulted you"; "Hurt your feelings"; "Gave you the silent treatment"; "Delayed work to make you look bad or slow you down"; p. 340). To avoid any potential confounds of gender effects, I presented female participants with a video of two female actors interacting and I presented male participants with a video of two male actors interacting (the script for both videos was identical, see Appendix V).

After watching the video, I asked participants to indicate (1) the extent to which they took the perspective of each of Taylor (the target) and Alex (the perpetrator), (2) their perception of the justifiability of Alex's behaviour, (3) their attitude toward each actor, (4) their deviant intentions toward each actor, and (5) their helping intentions toward each actor. These measures are described in more detail below and included in Appendix W).

Perspective-taking. I assessed perspective-taking of each actor (i.e., target and perpetrator) using three items created for the current study. Specifically, I asked participants to indicate the extent to which they agreed with the following statements: "I tried to imagine what Taylor (Alex) was thinking or feeling," "I tried to understand Taylor's (Alex's) point of view," and "I tried to put myself in Taylor's (Alex's) shoes." Each item was assessed on a five point response coding (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach alphas = .84 and .88 for the target and the perpetrator, respectively.

Justifiability. I assessed participants' perception of the justifiability of the perpetrator's behaviour using three items created for the current study. Specifically, I asked participants to indicate the extent to which they agreed with the following statements: "I can imagine that Alex had good reason for treating Taylor the way he (she) did," "Alex's behaviour toward Taylor was justified," and "Alex treated Taylor the way he (she) probably

deserved to be treated.” Each item was assessed on a five point response coding (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach alpha = .91.

Attitudes. I assessed participant attitudes toward the target and the perpetrator on a subset of Greenwald, McGhee, and Schwartz’s (1998) semantic differential pairs. Specifically, participants’ indicated their perception of Taylor and Alex using a three item scale, with each item having a seven-point response coding. Items were respectively anchored by the following adjective pairs: *bad-good*, *dishonest-honest*, and *worthless-valuable*. Note that high scores on the attitude measure indicate more positive attitudes toward the focal actor. Cronbach alphas = .89 and .89 for the target and the perpetrator, respectively.

Deviant intentions. I measured participants’ deviant intentions toward the target and the perpetrator on the interpersonal deviance subscale of Bennett and Robinson’s (2000) Interpersonal and Organizational Deviance Scale. Participants were asked the likelihood that they would engage in each of seven interpersonally deviant behaviours toward each actor. Each item was assessed on a seven point response coding (1 = *very unlikely* to 7 = *very likely*). An example item is “Make fun of Taylor [Alex].” Cronbach alphas = .97 and .96 for the target and the perpetrator, respectively.

Helping intentions. I measured participants’ helping intentions toward the target and the perpetrator on a subset of items from the helping subscale of Lee and Allen’s (2002) organizational citizenship behaviour scale. Specifically, participants’ indicated the likelihood that they would engage in a series of four helping behaviours toward Taylor and Alex. These items included “Help Taylor [Alex] with work-related problems,” “Help Taylor [Alex] when Taylor [Alex] has been absent,” “Show genuine concern and courtesy towards Taylor [Alex]

even in trying circumstances,” and “Assist Taylor [Alex] with work duties.” I chose not to include all of the scale items because two items (i.e., “Adjust your work schedule to accommodate Taylor’s [Alex’s] requests for time off” and “Share your personal property with Taylor [Alex]”) were the weakest loading on the helping factor for both the target (.76 and .76, respectively) and the perpetrator (.76 and .79, respectively) scales (the remaining items’ factor loadings were greater than .80). Participants were asked the likelihood that they would engage in each of the four helping behaviours toward each actor. Each item was assessed on a seven point response coding (1 = *very unlikely* to 7 = *very likely*). Cronbach alphas = .88 and .89 for the target and the perpetrator, respectively.

Demographic variables. Participants indicated their age, gender, and ethnicity for descriptive purposes. Participants’ self-reported gender was also used to assign them to the appropriate video (i.e., female or male).

Results

Means, standard deviations, scale reliabilities, and intercorrelations are presented in Table 10.

I conducted structural equation modeling (SEM) using Mplus (v5, Muthén and Muthén, 1998) to examine the model fit. The indices of goodness of fit that were analyzed across models included the χ^2 analysis, the comparative fit index (CFI), and the root mean squared error of approximation (RMSEA). In general, smaller χ^2 -values indicate better fit. Additionally, CFI-values greater than .9 and RMSEA-values less than .08 indicate “acceptable” fit (McDonald & Ho, 2002).

Using the full data set, I compared six possible measurement models (see Table 11). Specifically, I examined both a 1- (general) and a 2-factor (target and perpetrator) structure

of observer perspective-taking, as well as a 1- (general), 3- (general attitudes, general deviant intentions, general helping intentions), and 6-factor (attitudes toward the target, attitudes toward the perpetrator, deviant intentions toward the target, deviant intentions toward the perpetrator, helping intentions toward the target helping intentions toward the perpetrator) structure of the outcome variables. The best fitting model was the 2-factor perspective-taking and 6-factor outcome model; $\chi^2(593) = 1436.39, p < .001, CFI = 0.92, RMSEA = 0.07$. That is, each outcome variable was best conceptualized as a distinct variable.

I first examined the relative fit of the partial and fully mediated models.¹ Compared to the fully mediated model, $\chi^2(605) = 1588.16, p < .001, CFI = 0.91, RMSEA = 0.08$, the partially mediated model was a significant improvement $\Delta\chi^2(12) = 151.77, p < .001$. As such, I partially supported a number of my meditational hypotheses; each is discussed below.

Standardized path coefficients of the partially mediated model are included in Figure 11. To investigate *H12* to *H17*, I conducted a formal test of the indirect effects. This test is derived from the Sobel test (Sobel, 1982), but the standard errors of the indirect paths are assessed via bootstrapping ($n = 10000$) to correct for the distributional assumptions made by Sobel.

I found partial support for my hypotheses for observer attitudes toward the perpetrator. Specifically, consistent with *H12a*, the indirect effect of perspective-taking of the perpetrator on observer attitudes toward the perpetrator via perceptions of justifiability was positive and significant; product of path coefficients = 0.51, $SE = 0.11, p < .001$. That is, when observers adopt the perspective of a perpetrator to a greater degree, they are more likely to perceive the perpetrator's aggression as justifiable and thus report more positive

attitudes towards the perpetrator. In contrast, consistent with *H12b*, the indirect effect of perspective-taking of the target on observer attitudes toward the perpetrator via perceptions of justifiability was negative and significant; product of path coefficients = -0.32, $SE = 0.09$, $p = .001$. That is, when observers adopt the perspective of a target to a greater degree, they are more likely to perceive the perpetrator's aggression as unjustifiable and thus report more negative attitudes towards the perpetrator.

Although my findings for observer deviant intentions toward the perpetrator were significant, they were in the opposite direction to my hypotheses. Specifically, in contrast to *H13a*, the indirect effect of perspective-taking of the perpetrator on observers' deviant intentions toward the perpetrator via perceptions of justifiability was *positive* and significant; product of path coefficients = 0.90, $SE = 0.11$, $p < .001$. That is, when observers adopt the perspective of a perpetrator to a greater degree, they are more likely to perceive the perpetrator's aggression as justifiable, but also report greater deviant intentions towards the perpetrator. In addition, in contrast to *H13b*, the indirect effect of perspective-taking of the target on observers' deviant intentions toward the perpetrator via perceptions of justifiability was *negative* and significant; product of path coefficients = -0.56, $SE = 0.12$, $p < .001$. That is, when observers adopt the perspective of a target to a greater degree, they are more likely to perceive the perpetrator's aggression as unjustifiable, but also report fewer deviant intentions towards the perpetrator.

I found partial support for *H14a*, as the indirect effect of perspective-taking of the perpetrator on observer helping intentions toward the perpetrator via perceptions of justifiability was positive and significant; product of path coefficients = 0.27, $SE = 0.08$, $p = .001$. When observers adopt the perspective of a perpetrator to a greater degree, they are

more likely to perceive the perpetrator's aggression as justifiable and thus report greater helping intentions towards the perpetrator. In contrast, consistent with *H14b*, the indirect effect of perspective-taking of the target on observer helping intentions toward the perpetrator via perceptions of justifiability was negative and significant; product of path coefficients = -0.17 , $SE = 0.06$, $p = .007$. That is, when observers adopt the perspective of a target to a greater degree, they are more likely to perceive the perpetrator's aggression as unjustifiable and thus report fewer helping intentions towards the perpetrator.

I did not find support for *H15a* or *H15b*, as neither the indirect effect of perspective-taking of the perpetrator nor the indirect effect of perspective-taking of the target (via justifiability) on observer attitudes toward the target was significant; product of path coefficients = 0.07 , $SE = 0.10$, $p = .494$, and product of path coefficients = -0.04 , $SE = 0.06$, $p = .506$, respectively. However, I did find partial support for both *H16a* and *H16b*. Specifically, in support of *H16a*, the indirect effect of perspective-taking of the perpetrator (via justifiability) on observers' deviant intentions toward the target was positive and significant, product of path coefficients = 0.97 , $SE = 0.12$, $p < .001$. In addition, in support of *H16b*, the indirect effect of perspective-taking of the target (via justifiability) on observers' deviant intentions toward the target was negative and significant, product of path coefficients = -0.60 , $SE = 0.14$, $p < .001$. That is, although there was no indirect effect of perspective-taking on observers' attitudes toward the target (i.e., I did not support *H15a* or *H15b*), when observers adopt the perspective of a perpetrator to a greater degree, they are more likely to perceive the perpetrator's aggression as justifiable and thus report more deviant intentions toward the target (in support for *H16a*). In addition, when observers adopt the perspective of

a target to a greater degree, they are more likely to perceive the perpetrator's aggression as unjustifiable and thus report fewer deviant intentions toward the target (in support for *H16b*).

However, I did not find support for *H17a* or *H17b*, as neither the indirect effect of perspective-taking of the perpetrator nor the indirect effect of perspective-taking of the target (via justifiability) on observer deviant intentions toward the target were significant; product of path coefficients = -0.00, $SE = 0.07$, $p = .966$, and product of path coefficients = 0.00, $SE = 0.04$, $p = .966$, respectively. Finally, I conducted a paired-samples *t*-test to compare the extent to which observers took the perspective of each of the perpetrator and the target. In support of *H18*, I found that observers reported significantly more perspective-taking of the target ($M = 3.81$, $SD = 0.74$) than the perpetrator ($M = 3.61$, $SD = 0.92$), $t(291) = -3.03$, $p = .003$.

Discussion

The results of this study suggest that observers do engage in effortful processing (i.e., active perspective-taking) of an aggressive incident. Specifically, consistent with research on the mitigating effects of explanations (i.e., justification) on individuals' reactions to their own mistreatment (Quigley & Tedeschi, 1996; Zillmann & Cantor, 1976; see also Spector & Fox, 2010), observers who took the perspective of the perpetrator were more likely to perceive the aggression as justified, and thus reported more positive attitudes and greater helping intentions toward the perpetrator. Perceptions of justifiability also partially mediated the negative relationship between observers' perspective-taking of the target and their attitudes and helping intentions toward the perpetrator, as observers who took the perspective of the target were less likely to perceive the aggression as justified, and thus reported more negative attitudes and fewer helping intentions toward the perpetrator.

I expected that observers who perceived the aggression as justifiable would reason that the target had done something to deserve the aggression (Lerner, 1980; Lerner & Miller, 1978), and thus would report more negative attitudes, greater deviant intentions, and fewer helping intentions toward the target. Contrary to my predictions, perceptions of justifiability did not mediate the effect of observer perspective-taking of either the perpetrator or the target on observer attitudes or helping intentions toward the target. Instead, perspective-taking of each of the perpetrator and the target had a direct effect on observer attitudes toward the target; observers who took the perspective of the perpetrator reported more negative attitudes toward the target, and observers who took the perspective of the target reported more positive attitudes toward the target. In addition, although there was no direct effect of observer perspective-taking of the perpetrator on observers' helping intentions toward the target, observers who took the perspective of the target reported greater helping intentions toward the target. The lack of support for these mediational hypotheses may be due to the fact that observers' perception of the justifiability of the aggression is largely a judgment about the perpetrator's, not the target's, behaviour; as such, perceptions of justifiability may have had a greater effect on observer responses to perpetrators than targets. That is, perceptions of justifiability reflect the extent to which the observer can excuse the behaviour of the perpetrator; observers who could find a plausible excuse for the perpetrator's behaviour (i.e., deemed it justifiable) were more likely to report positive attitudes and greater helping intentions toward the perpetrator. One way observers may have excused the perpetrator's behaviour is by perceiving that the perpetrator was preoccupied or busy with his or her work assignment, and thus did not mean to behave aggressively toward the target. In contrast, observer attitudes and helping intentions toward the target may be independent from the

extent to which they can excuse the perpetrator's behaviour; for example, excusing the perpetrator's aggressive behaviour on account of his or her preoccupation with work should not bear on observer attitudes toward or helping of the target.

In terms of observers' deviant intentions toward the perpetrator and the target, I found that perceptions of justifiability mediated the effect of perpetrator and target perspective-taking on observer deviant intentions toward both the perpetrator and the target; however, the effects were not entirely as expected. Specifically, consistent with my expectations, I found that perceptions of justifiability partially mediated the effect of observer perspective-taking of both the perpetrator and the target on observers' deviant intentions toward the target. Observers who took the perspective of the perpetrator were more likely to perceive the aggression as justified and thus reported more deviant intentions toward the target, and observer who took the perspective of the target were less likely to perceive the aggression as justified and thus reported fewer deviant intentions toward the target. Perceptions of justifiability also partially mediated the effect of observers' perspective-taking of the perpetrator and the target on observers' deviant intentions toward the perpetrator; however, these findings were in the opposite direction to my hypotheses. Specifically, observers who took the perspective of the perpetrator were more likely to perceive the aggression as justified but also reported greater (rather than fewer) deviant intentions toward the perpetrator, and observers who took the perspective of the target were less likely to perceive the aggression as justified but also reported fewer (rather than greater) deviant intentions toward the perpetrator. Although these findings do not support my predictions, it is possible that these results reflect a more general tolerance of aggression among observers who deem aggression as justifiable. That is, observers who perceived the aggression as justifiable in a

particular incident of aggression may be more likely to perceive aggression in general as justifiable, and thus may be more likely to report that they would engage in deviance toward both the perpetrator and the target. Future research is needed to clarify the relationship between observers' perspective-taking of the perpetrator and the target and their deviance toward each actor.

Finally, I found that observers reported engaging in significantly more perspective-taking of the target as compared to the perpetrator.

Theoretical Contributions

The theoretical contributions of this study are three-fold. First, to complement my findings from Study 1 and Study 2, the results of Study 3 build on the research on social undermining (Duffy et al., 2002). This line of research has assumed that a perpetrator's behaviour influences the observer's perception of and relationship with the target. My results partially support and also build on Duffy et al.'s (2002) findings by suggesting that perspective-taking influences this process. That is, if observers take the perspective of the perpetrator, then as suggested by Duffy et al., observers are likely to report negative attitudes towards targets. However, if they take the target's perspective, observers actually report more positive attitudes towards targets. Thus, perspective-taking seems to be an important variable to consider going forward.

Second, my research suggests that the justifiability of the aggressive acts may also influence observer reactions. Observers were more likely to express deviant intentions toward targets when they took the perspective of the perpetrator and thus perceived the initial act of aggression as justified; in contrast, observers were less likely to express deviant intentions toward targets when they took the perspective of the target and thus perceived the

initial act of aggression as unjustified. Observer attributions about a witnessed incident of aggression (e.g., perceptions of justifiability) are important to consider because they appear to guide their behavioural responses. Considering these attributions in the workplace aggression literature may clarify when observers are likely to become involved in an incident of aggression themselves.

Third and finally, the findings from this study suggest that witnessing an incident of aggression influences observers' attitudes and behavioural intentions not only towards targets, but also towards *perpetrators*. That is, consistent with the findings from Studies 1 and 2, there was a "backlash effect" towards the perpetrator, in which observers punished the perpetrator for engaging in aggressive acts. That is, even though observers who took the perspective of the perpetrator and thus perceived the initial act of aggression as justified reported more positive attitudes and greater helping intentions toward the perpetrator, they also reported greater deviant intentions toward the perpetrator. In fact, observers who perceived the perpetrator's aggression as justified reported more deviant intentions toward both the perpetrator and the target.

Observers' deviant intentions toward both the target and the perpetrator may reflect the start of an incivility spiral. In their seminal work on incivility in the workplace (a low intensity form of workplace aggression), Andersson and Pearson (1999) proposed that in addition to the potential for a single incident of incivility to spiral into increasingly severe forms of aggression between a target and a perpetrator, secondary incivility spirals may also be generated among those who witness an uncivil act. That is, individuals who witness incivility may model this behaviour when interacting with others (Bandura, 1978). This study provides initial evidence for such secondary spirals, as well as the attributional process that

may encourage individuals who are not involved in—and who do not even know the individuals involved in—an incident of aggression report a desire to engage in deviance toward the actors involved.

Practical Implications

In addition to the theoretical implications discussed above, my findings from this study have practical significance. As discussed in Studies 1 and 2, the recognition that observers are influenced by witnessed aggression has important implications for organizational intervention in dyadic incidents of aggression from a managerial perspective. Specifically, traditional approaches to intervention that focus only on the target and the perpetrator may fail to resolve the issue if observers are not included in relationship repair. An observer whose attitudes and behavioural intentions toward the target and/or the perpetrator have been negatively influenced may perpetuate the aggression even after it has been ‘resolved’ in a dyadic intervention session. As such, broadening the organizational scope of intervention to include observers may increase its success rate.

Moreover, my finding that observers were significantly more likely to take the perspective of the target than the perpetrator suggests that observers could be an important resource for targets. Specifically, observers who took the perspective of the target were more likely to perceive the aggression as unjustified and thus reported more negative attitudes and fewer helping intentions toward the perpetrator as compared to observers who took the perspective of the target to a lesser degree. These outcomes may be detrimental to perpetrators, whose own relationships and work-related success may suffer as a result. In addition, observers who develop negative attitudes toward and are less inclined to help the perpetrator may ultimately intervene on behalf of the target. Although additional research

will be needed to examine the influence of perspective-taking on observer intervention, if managers are able to highlight the potential negative outcomes for perpetrators, they may be able to deter perpetrators from continuing to behave aggressively. In addition, observers who took the perspective of the target (and thus perceived the aggression as less justifiable) also reported fewer deviant intentions toward both the target and the perpetrator. Therefore, promoting perspective-taking of the target may be an effective way of reducing the likelihood that the aggression will continue.

Limitations and Future Directions

Because this study is among the first to consider how observer attributions mediate the effect of witnessed aggression on observer reactions, I chose to consider a relatively broad attribution for the perpetrator's aggression (i.e., perceived justifiability). However, observers may perceive aggression as justified (or unjustified) for a number of reasons; for example, observers may have believed the target had provoked the perpetrator or that the perpetrator was too busy to monitor his or her behaviour (and thus may have behaved aggressively toward anyone who had been around). Although both types of attributions may 'excuse' (i.e., justify) the perpetrator's behaviour in the eyes of the observer, they would naturally predict different perceptions of the target. The broad approach I chose to take precludes a distinction among these and other attributional alternatives. As such, future research will benefit from considering more specific types of attributions.

In addition, my explicit focus on observers of aggression made self-report scales of perspective-taking, perceptions of justifiability, and attitudes and behavioural intentions necessary; however, self-report scales may suffer from common method variance (CMV). I attempted to reduce the effect of this bias by assuring participants of the anonymity of their

responses. Nonetheless, to test for the presence of CMV, I conducted an exploratory factor analysis on all of the items I included in the study and examined the unrotated factor solution of (i.e., Harman's single factor test). This analysis revealed six factors with Eigenvalues greater than 1.00, which is inconsistent with a single factor solution and suggests that common method bias was not a significant issue. Nonetheless, future research would benefit from the inclusion of observable outcomes (e.g., other-reported deviance), for which other-report data could be collected.

Finally, although the design of the current study allowed me a great deal of control over the aggressive interaction that observers witnessed, I had to sacrifice external and ecological validity; that is, the aggressive interaction observers witnessed occurred in a video between two individuals that the observer did not and had no expectation of getting to know. In real organizations, observers will likely have at least some form of preexisting relationship with both the target and the perpetrator, and my results from Study 2 suggest that these relationships (particularly the extent to which the observer likes each of the target and the perpetrator) will influence observer responses. To address this issue, I consider the effect of observer perspective-taking, perceptions of justifiability, and attitudes toward the target and the perpetrator in a longitudinal event-based diary study in a field setting in Study 4. Thus, in Study 4 I will replicate and extend the findings of this study by also considering observers' actual relationships with the target and the perpetrator.

Conclusion

The current study suggests that observer perspective-taking and perceptions of justifiability do indeed influence observers' attitudes and behavioural intentions toward the

target and the perpetrator. As such, these variables will be important to consider as research on observers of aggression develops.

Figure 10

A graphical representation of the hypotheses of Study 3.

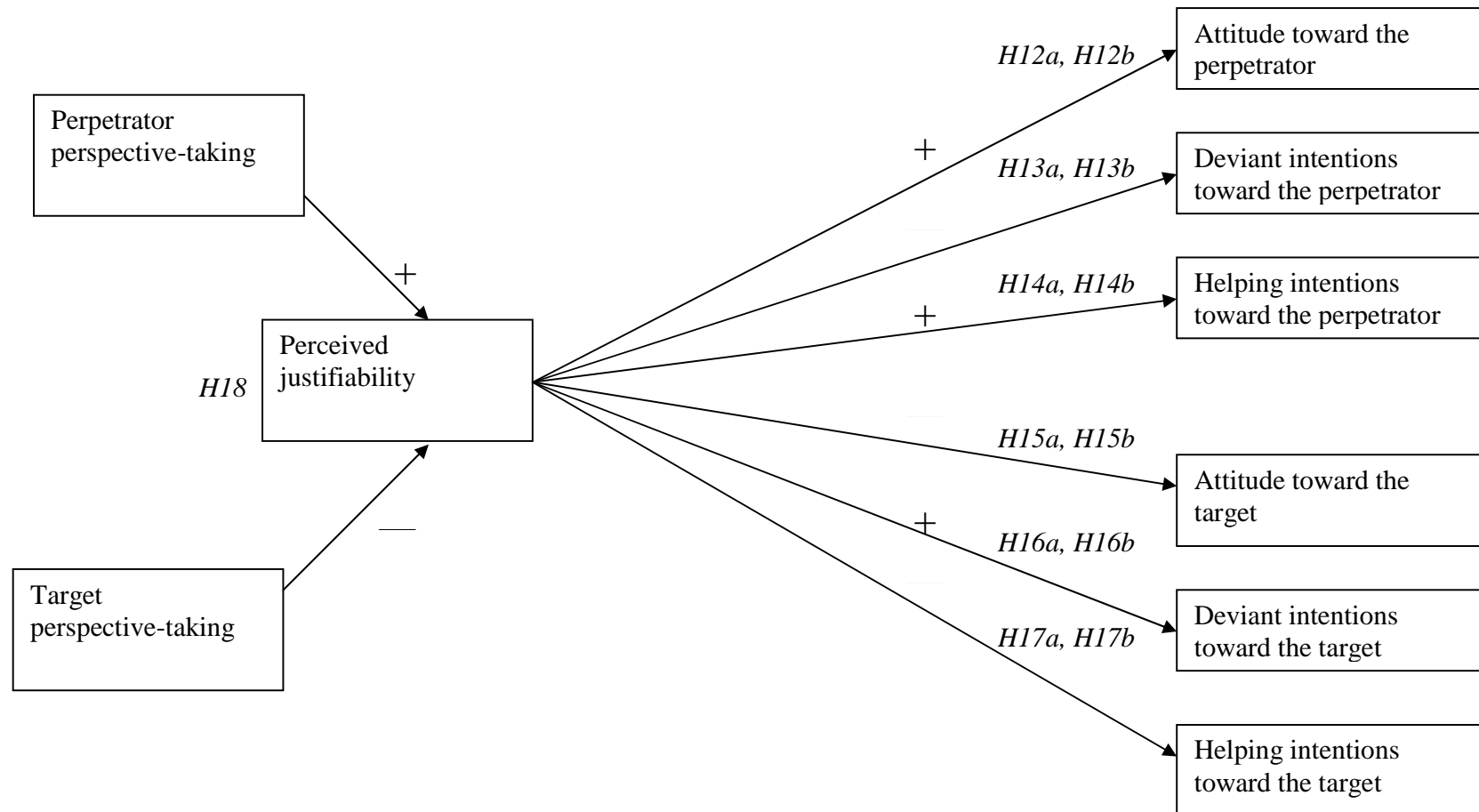


Figure 11

Structural equation model of observer perspective-taking, justifiability, and attitudes and behavioural intentions of the target and the perpetrator.

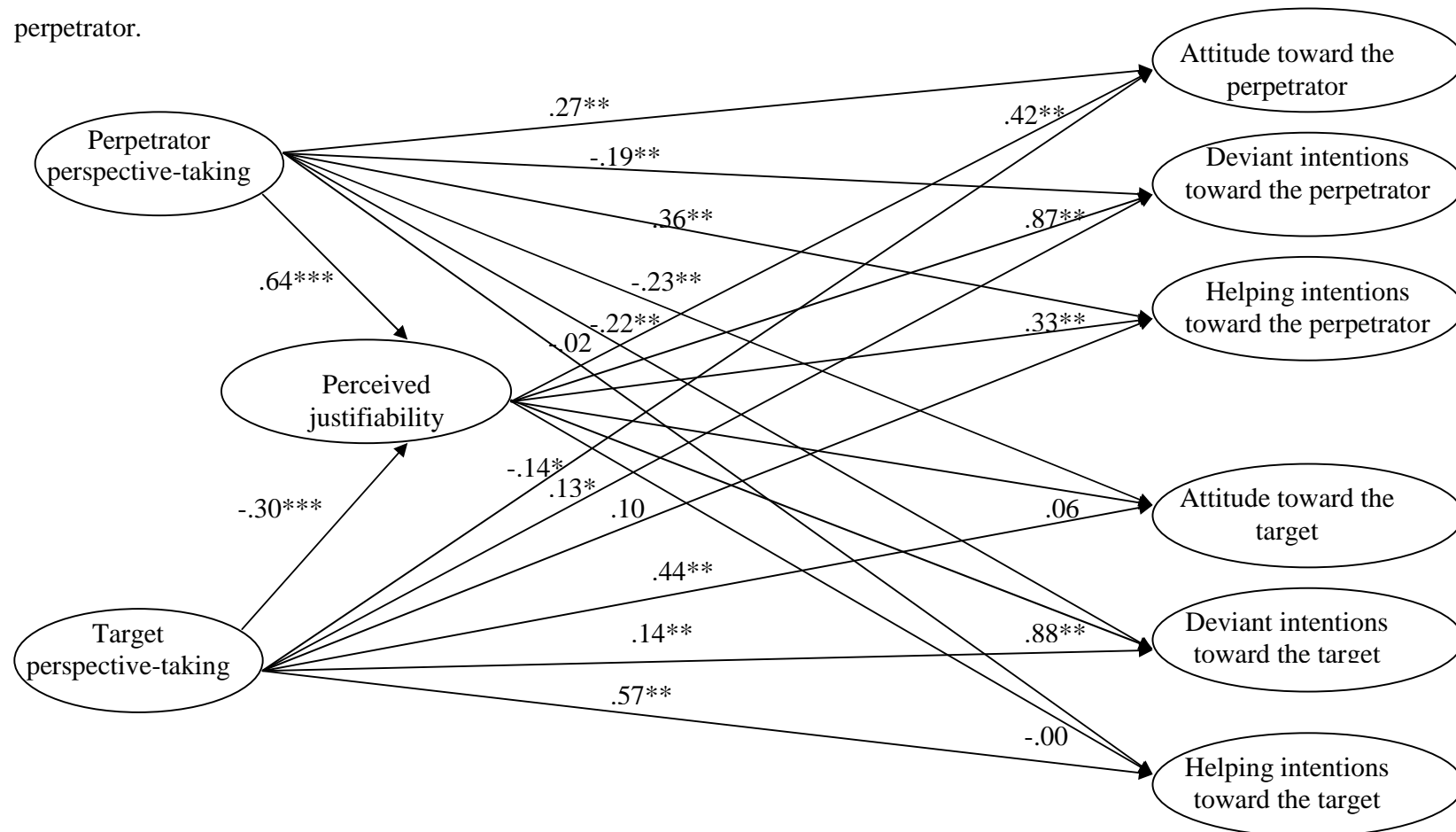


Table 10

Means, standard deviations, intercorrelations, and scale reliabilities for all observers.

	<i>M</i> (<i>SD</i>)	1	2	3	4	5	6	7	8	9
1. Perspective-taking of the target	3.81 (0.74)	.84								
2. Perspective-taking of the perpetrator	3.62 (0.92)	.14*	.88							
3. Perpetrator justifiability	3.06 (1.16)	-.18**	.53***	.91						
4. Attitudes toward the target	4.74 (1.28)	.34***	-.09	-.11	.89					
5. Attitudes toward the perpetrator	4.51 (1.40)	-.15**	.43***	.53***	.23***	.89				
6. Deviant intentions toward the target	2.75 (1.54)	-.07	.30***	.69***	-.09	.26***	.97			
7. Deviant intentions toward the perpetrator	2.99 (1.47)	-.06	.31***	.67***	-.08	.24***	.89***	.96		
8. Helping intentions toward the target	4.20 (1.03)	.50***	.07	-.12	.30***	-.10	.17**	.15*	.88	
9. Helping intentions toward the perpetrator	3.95 (1.10)	.07	.50***	.47***	-.09	.40***	.45***	.40***	.38***	.89

Note. N = 292. Cronbach alphas are shown along the diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 11

Fit indices of six competing measurement models.

	χ^2 (df)	CFI	RMSEA
1-factor IV and 1-factor DV	4647.302 (626)	.615	.148
1-factor IV and 3-factor DV	3301.052 (619)	.744	.122
1-factor IV and 6-factor DV	1936.349 (601)	.873	.087
2-factor IV and 1-factor DV	4250.188 (623)	.654	.141
2-factor IV and 3-factor DV	2893.194 (614)	.783	.113
2-factor IV and 6-factor DV	1436.388 (593)	.920	.070

Chapter V

Study 4

In Chapter IV, I introduced the concept of observer perspective-taking and discussed Study 3 in which I examined the effect of observer perspective-taking on observer attitudes and behavioural intentions toward the target and perpetrator of aggression. In Study 3, I found that, all else being equal, observers who took the perspective of the perpetrator were more likely to perceive that an incident of aggression was justifiable, and thus reported more positive attitudes and greater helping intentions toward the perpetrator, but also more deviant intentions toward both the target and the perpetrator. In contrast, observers who took the perspective of the target were less likely to perceive that an incident of aggression was justifiable, and thus reported less positive attitudes and fewer helping intentions toward the perpetrator, and fewer deviant intentions toward both the target and the perpetrator. Further, I found that observers were more likely to take the perspective of the target than the perpetrator.

However, as I noted in Chapter III, all else in workplace relationships is rarely equal; observers will likely have some relationship with and knowledge of both the target and the perpetrator. In Study 2 (Chapter III), I examined the direct effect of an observer's liking of and power relative to the target and the perpetrator on observer attitudes and behavioural intentions towards each actor. I found that observers reported more positive attitudes and behavioural intentions toward the target when they liked the target than when they disliked the target, and when the target had high power as compared to when the target had low power. I also found that observers reported more positive attitudes and behavioural intentions toward the perpetrator when they liked the perpetrator than when

they disliked the perpetrator. Finally, although there was no influence of perpetrator power on observers' behavioural intentions toward the perpetrator, I found that observers reported more positive attitudes toward the perpetrator when the perpetrator had high power as compared to when the perpetrator had low power. In the present study, I replicate and extend Studies 2 and 3 by examining the relationships among the variables of interest in a field sample, and by considering the influence of liking and power (Study 2) on observer perspective-taking (Study 3) to address my fifth and final research question: How is observer perspective-taking influenced by the observer's relationship with each of the target and the perpetrator?

As I discussed in Chapter III, the relational variables of liking and power reflect employees' informal and formal relationships at work, respectively. That is, at work, employees' lives generally consist of both informal relationships—which include friendships and other social relationships that emerge from their daily interactions—as well as formal relationships—which include hierarchical (e.g., supervisory) and peer relationships that are prescribed by the organization. Informal relationships tend to be characterized by the degree of interpersonal affect, or liking, felt by the participants (Frantz & Janoff-Bulman, 2000). In contrast, formal relationships tend to be characterized by the relative degree of organizationally-sanctioned power (e.g., Aquino, 2000; Pfeffer, 1992a, 1992b); that is, the extent to which each individual has control over the outcomes of the other (Deprét & Fiske, 1993; Fiske, 1993; Fiske & Morling, 1996).

Researchers have found that perspective-taking is related to the relational variables of liking and power (e.g., Frantz & Janoff-Bulman, 2000; Galinsky, Magee, Inesi, & Gruenfeld, 2006; Lammers, Gordijn, & Otten, 2008). Specifically, individuals

are more likely to take the perspective of those they like than those they dislike (Frantz & Janoff-Bulman, 2000) and of those who have high power than those who have low power (Galinsky et al., 2006). Therefore, in addition to the direct effect of liking and power on observers' attitudes (and behaviours) toward the target and perpetrator of an aggressive incident I examined in Study 2, I also expect that these variables will indirectly influence observer attitudes via their effect on observer perspective-taking.

Liking. Whereas in Study 2 I examined the observer's liking of the target and the perpetrator, in the present study I investigate observers' attitudes toward and the extent to which observers' take the perspective of someone who is generally liked by others at work. Since the social context of employees at work is likely to influence observer attitudes and perspective-taking, I was interested in how observers react towards targets and perpetrators who are generally liked (or disliked) by others at work.

Researchers have found that employees who have positive interpersonal relationships with their colleagues benefit from a number of positive outcomes. For example, compared to those who have less positive relationships, these individuals report lower intentions to quit, higher organizational commitment, and higher levels of job satisfaction, job involvement, and job performance (Berman, West, & Richter, 2002; Feeley, Hwang, & Barnett, 2008; Riordan & Griffeth, 1995; Winstead, Derlega, Montgomery, & Pilkington, 1995), as well as improved immune system functioning, cardiovascular activity, and hormone patterns (Heaphy & Dutton, 2008). Because of these positive psychological and physiological benefits, individuals (e.g., observers) should be motivated to develop and maintain positive relationships with their colleagues.

According to Newcomb's (1956, 1968) symmetry, or A-B-X, model of attraction I discussed in Chapter III, individuals seek symmetry in their relationships with others. In this model, A and B each represent an individual, and X represents an attitudinal object (e.g., a thing, an issue, or another person). Symmetry among A, B, and X is attained when the product of the relationships between each of A, B, and X is positive (i.e., when the relationships among A, B, and X are all positive, or when one of the relationships is positive and the other two are negative). Stated another way, individuals can develop and maintain positive relationships with others (e.g., their colleagues) by (a) aligning themselves with individuals who are liked by their colleagues, and (b) aligning their perceptions (positive or negative) with the perceptions of their colleagues.

In the context of a witnessed incident of aggression, the relevant attitudinal objects are the target and the perpetrator. An observer (A) who wishes to develop or maintain positive relationships with their colleagues (B) should be motivated to align his or her perception of each of the target (X_1) and the perpetrator (X_2) with the way each actor is perceived by their colleagues. Therefore, if the observer's colleagues have a positive relationship with the target (or the perpetrator) (X), the observer should also develop a positive relationship with the target (or the perpetrator) in order to develop or maintain a positive relationship with their colleagues.

In an aggressive interaction, the target and the perpetrator have a negative relationship and to maintain symmetry in their own relationships, others at work are likely to like one of the target or perpetrator more than the other. That is, the model will be asymmetrical if the observer's colleagues have a positive relationship with both actors. To summarize my arguments so far, I expect that (1) observers will want to maintain

positive relationships with their colleagues; therefore (2) they will aim to like/dislike the same people their coworkers like/dislike, and that (3) observers' colleagues are likely to like one of the target or perpetrator more than the other to maintain symmetry in their own relationships.

Researchers have found that one's liking of an actor has an automatic and powerful effect on perspective-taking (Frantz & Janoff-Bulman, 2000). Specifically, in their study of perspective-taking in conflict situations, Frantz and Janoff-Bulman (2000) found that observers were more likely to take the perspective of the disputant they liked more. Further, they found that when these observers received instructions to be "as fair as possible," their preference for the disputant they liked was even stronger than when they were not given any instruction. The authors reasoned that this effect was due to a form of naïve realism (Ross & Ward, 1995, 1996); that is, observers perceived their automatic, affect-based perspective-taking as a reflection of objective reality rather than reflecting a bias for one party over the other. As such, rather than correcting for bias when given the fairness instruction, observers attempted to justify their preference for the liked disputant, further polarizing their perception. Therefore, if one actor is generally more liked by the observer's colleagues than the other, the observer's colleagues should be more likely to take the liked actor's perspective. In order to maintain their positive relationship with their colleagues, observers should be motivated to align their perceptions with those of their colleagues. Therefore, I hypothesize that observers will also be more likely to take the perspective of the actor that is generally more liked.

H19a: Observers will be more likely to take the perspective of the target when the target is more liked than the perpetrator.

H19b: Observers will be more likely to take the perspective of the perpetrator when the perpetrator is more liked than the target.

Power. In addition to the influence of observers' informal relationships on their perspective-taking of the target and the perpetrator, I also expect observers' formal relationships to play a role. I consider the influence of the relative power of the target and the perpetrator with respect to the observer, as well as the relative power of the perpetrator with respect to the target in turn.

Observer-target and observer-perpetrator relative power. As I noted in Chapter IV, active perspective-taking is an effortful, goal-directed process (Parker et al., 2008). For an individual to engage in active perspective-taking, he or she must be both *motivated* (Parker et al., 2008) and *cognitively able* (Roßnagel, 2000) to do so.

Researchers have found that, in comparison to those with high power, individuals with low power are more inclined to take the perspective of others (Galinsky et al., 2006). In a series of studies, Galinski et al. (2006) found that individuals primed with low power were more likely to recognize that their interaction partner had a different perspective, and to correct for this by providing their partner with additional information, than were those primed with high power. In addition, Lammers et al. (2008) found that low power individuals were more likely to engage in metastereotyping—i.e., trying to understand the way out-group members perceive their in-group—than individuals with high power. That is, members of the low power group were more likely to try to take the perspective of members of high power groups.

From a purely instrumental perspective, the finding that low power individuals are more likely to take the perspective of powerful individuals than vice versa makes sense.

Because power holders are not dependent on those with low power for their desired outcomes, they do not need to accurately understand the perspective of these individuals to achieve these outcomes (Fiske, 1993); that is, their *motivation* to perspective-take should be low. In contrast, the desired outcomes of low power individuals are often influenced by power holders, such as a supervisor's power over a subordinate's year-end bonus. As such, low power individuals should be motivated to focus their attention on power holders in order to better influence and predict their outcomes (Stevens & Fiske, 2000).

In addition, researchers have found that, in contrast to those with high power, low power individuals often have fewer demands on their attention (Fiske, 1993). Compared to those with low formal power, individuals with high power are often charged with supervising a greater number of employees. As such, individuals with high formal power may have less time or cognitive capacity to focus on any one of their subordinates in particular. In support of this hypothesis, Goodwin and Fiske (1993) found that as undergraduate students' influence (i.e., power) over an ostensible hiring decision increased, the students paid less attention to the applicants.

Galinski et al. (2006) reasoned that the negative relationship between power and perspective-taking was likely due to the opposing roles of 'the power holder' and 'the perspective-taker.' Specifically, power is associated with a psychological distancing from others (Lee & Tiedens, 2001), whereas perspective-taking attempts to bring the perceiver closer to others (Davis, Conklin, Smith, & Luce, 1996). Therefore, low power individuals should be both more motivated and cognitively able to take the perspective of a powerful

other. As such, I expect that observers will be more likely to take the perspective of both the target and the perpetrator when these actors have high power relative to the observer.

H20a: Observers will be more likely to take the perspective of the target when the target has high power relative to the observer than when the target has low power relative to the observer.

H20b: Observers will be more likely to take the perspective of the perpetrator when the perpetrator has high power relative to the observer than when the perpetrator has low power relative to the observer.

Perpetrator-target relative power. Although I hypothesized that an observer will be more likely to take the perspective of the target when the target has high power (*H20a*) and to take the perspective of the perpetrator when the perpetrator has high power (*H20b*), this may not always be the case. Specifically, as I noted in Chapter III, employees form psychological contracts with their organizations that delineate employees' expectations regarding their exchange relationships with the organization (Rousseau, 1995). Researchers have found that violation of these expectations tends to evoke feelings of betrayal and anger (Morrison & Robinson, 1997; Robinson & Morrison, 2000).

One expectation employees may have is that neither they, nor their colleagues, will come to harm at the hands of organizational members. For example, researchers have found that employees who witness or hear about workplace violence (i.e., a physical and high intensity form of workplace aggression; Andersson & Pearson, 1999) were more likely to fear that violence would occur in the future; further, this fear of violence, in turn, predicted a number of negative emotional and physical outcomes for these employees

(Schat & Kelloway, 2000, 2003; Rogers & Kelloway, 1997). Therefore, in addition to victimizing the target, workplace aggression may also victimize those who witness or hear about the incident. Further, according to Postmes, Tanis, and de Wit (2001), individuals with high levels of power—for example, those in supervisory or managerial roles—are often perceived by lower level employees as representatives of the organization. As such, observers may perceive aggression perpetrated by an individual in a position of high power to be a violation of their psychological contract with the organization.

In addition, as I discussed in Chapter IV, individuals have a tendency to feel empathic concern for, and a desire to help those in need (Batson, Batson, Griffitt, Barrientos, Brandt, Sprengelmeyer, & Bayly, 1989; Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Cialdini, Schaller, Houlihan, Arps, Fultz, & Beaman, 1987; Davis 1983; Fultz, Batson, Fortenbach, McCarthy, & Varney, 1986). When the perpetrator has high power relative to the target, observers may perceive a greater need on the part of the target as compared to when the perpetrator has low power relative to the target. Therefore, I propose that when the perpetrator has high power relative to the target, observers will be more likely to take the perspective of the target than when the perpetrator has low power.

H21a: Observers will be more likely to take the perspective of the target when the target has low power relative to the perpetrator than when the target has high power relative to the perpetrator.

H21b: Observers will be less likely to take the perspective of the perpetrator when the target has low power relative to the perpetrator than when the target has high power relative to the perpetrator.

Further, as noted in Chapter IV, researchers have found that perspective-taking is associated with more positive attitudes toward the individual whose perspective is taken (Falk & Wagner, 1985; Franzoi, Davis, & Young, 1985; Williams, 2007) (see *H12*, *H15*, and *H18*). Therefore, in addition to the direct effect of the observer's relationship with the target and the perpetrator on observer attitudes that I proposed in *H7a*, *H8*, and *H11a* I discussed in Chapter III, I also expect that the relational variables of liking and power will influence observer attitudes toward the target and the perpetrator via their effect on observer perspective-taking.

H22a: When an observer perceives that the target is more liked than the perpetrator, the observer will be more likely to adopt the perspective of the target, and thus will report more positive attitudes towards the target.

H22b: When the target has high power, the observer will be more likely to adopt the perspective of the target, and thus will report more positive attitudes towards the target.

H23a: When an observer perceives that the perpetrator is more liked than the target, the observer will be more likely to adopt the perspective of the perpetrator, and thus will report more positive attitudes towards the perpetrator.

H23b: When the perpetrator has high power, the observer will be more likely to adopt the perspective of the perpetrator, and thus will report more positive attitudes towards the perpetrator.

See Figure 12 for an overview of the hypotheses of the current study.

Due to the method used in the present study, I investigate observer attitudes but not behaviours towards targets and perpetrators. In Study 4, I chose to use an ecological momentary analysis (EMA) (Stone & Shiffman, 1994)—also known as an event-based diary study (cf. Bolger, Davis, & Rafaeli, 2003)—in which I asked employees of an actual organization to be aware of the negative interactions among their colleagues. As described by Shiffman, Stone, and Hufford (2008), EMA involves repeatedly assessing participants' responses to an event or state of interest (e.g., witnessing aggression at work) in real time; participants are usually asked to report on the event or state as it occurs (or as soon as possible afterward). EMA overcomes a number of limitations from my previous studies. For example, this method allows me to assess observers' actual relationships with and perceptions of the target and the perpetrator of aggression rather than their ostensible relationships with unknown (Study 1) or hypothetical others (Study 2). In addition, EMA allows me to assess perspective-taking as it occurs in an actual organization rather than while watching a video-taped interaction (Study 3). That is, in comparison to the methods used in Studies 2 and 3, EMA has much higher ecological validity (Shiffman et al., 2008). Finally, EMA is preferable over other survey methods for collecting data because it does not rely on retrospective accounts of relationships or perspective-taking (Shiffman, 2009; Shiffman et al., 2008).

In the current study, I asked participants to complete a brief survey as soon as possible after witnessing an incident of aggression over a number of work days (see the Method section for a detailed description of this procedure). Although this method allowed me to take advantage of the benefits of EMA discussed above, the immediacy

with which I asked participants to report on their experiences limited the types of questions I could ask. Specifically, although I expected that observer attitudes would be affected quite quickly following witnessed aggression, behaviours require action on the part of the observer. As such, asking participants about the behaviours they enacted toward the target and the perpetrator immediately following witnessing aggression would likely result in null findings (due to the absence of a time lag). In addition, due to logistical and ethical constraints of this field research, I was not able to ask participants to identify the target or the perpetrator; as such, I could not assess their target- or perpetrator-directed behaviour at a later time point. Because of this limitation, I was not able to assess observers' target- or perpetrator-directed behaviours and therefore I do not make hypotheses about them here.

Method

To investigate the hypotheses presented in this chapter, I conducted an EMA (i.e., an event-based diary study) in which I examined participants' (in the role of observers') perspective-taking as well as their attitude change toward their colleagues as they witnessed incidents of aggression in their workplace. Note that in this study I assessed attitude *change* rather than attitudes in general (as I did in Studies 1, 2, and 3) because, unlike Studies 1, 2, and 3, participants in the current study would likely have had a preexisting attitude toward both the target and the perpetrator.

Over the course of 15 work shifts, I asked participants to be aware of the interactions of their colleagues and asked participants to complete a number of questions concerning the interaction as soon as possible after they witnessed the interaction. Specifically, I asked participants to indicate the extent to which the target was liked, in

general, in relation to the perpetrator, as well as the relative power of the actors involved in the interaction. I also assessed the extent to which the participant perceived that the event was justified, the extent to which the participant took the perspective of each actor, and his or her attitude change toward each.

In this study I investigated both positive and negative interactions (though I only considered the negative interactions in my analysis), to reduce the potential social desirability bias of only reporting on the negative interactions of others; as such, I used the term “initiator” rather than “perpetrator” in my materials to ensure that the language was appropriate for both positive and negative interactions. In addition, for negative interactions, I used the term “uncivil” rather than “aggressive” to describe the behaviours of interest, because this language is less threatening for participants and the behaviour is more normalized. Andersson and Pearson (1999) define incivility as behaviour that demonstrates a disregard for one’s colleagues and violates the norms of respect in the workplace. Although it is lower in intensity, researchers have found that targets of workplace incivility experience a number of negative outcomes that parallel those of workplace aggression (i.e., increased psychological distress, negative job attitudes; Caza & Cortina, 2007; Cortina et al., 2001). In addition, recent research has argued that “workplace aggression” and “incivility” (as well as a number of other constructs in the workplace mistreatment literature) are actually much more similar than they are different, and thus would be better conceptualized as a single construct (Aquino & Thau, 2009; Hershcovis, 2011). Though I asked about both positive and negative interactions, I will describe the procedure related to negative interactions only since this is the variable of interest in this dissertation.

Participants

I recruited 59 participants from an Emergency Department at a National Health Trust (i.e., a hospital) in the North of England by posting flyers (see Appendix X) and distributing memos (see Appendix Y) to all staff. Thirty-nine completed survey packages were returned (32 women, six men, one did not report gender, $M_{\text{age}} = 38.74$, $SD = 11.91$, age range: 20-62 years), for a response rate of 66%. Participants reported a mean organizational tenure of 8.97 years ($SD = 7.30$) and a mean job tenure of 5.54 years ($SD = 6.51$); nearly all participants reported that English was their first language ($n = 36$; 3 did not report their first language) and identified themselves as Caucasian ($n = 37$). Participants' highest level of education was distributed as follows: 11 General Certificate of Secondary Education, 8 Advanced-level degrees, 12 First degrees (equivalent of an undergraduate degree in North America), and 4 Master's or PhD degrees.

I chose the emergency department for several reasons. First, it is a hierarchical environment in which most participants constantly interact with higher and lower power employees. Second, there are a range of positions in the emergency department (e.g., medical, administrative, clerical, and janitorial) which should allow the findings to be generalized to a broader population than if only one job type had been included. Third, the director provided access to the work environment and encouraged participation. Finally, the emergency department is a high stress environment, which previous research has found to predict higher levels of aggression (Einarsen, Raknes, & Matthiesen, 1994; Tuckey, Dollard, Hosking, & Winefield, 2009). As such, the emergency department offered me an excellent context in which to examine observers of aggression. I also encouraged participation by offering £50 (approximately \$90 CAD) to those individuals

who completed the study; this compensation worked out to approximately £10 per hour, which is much lower than the average salary of these participants.

To maintain participants' confidentiality, I assigned a nine-digit code to each participant, which I included on all of their survey booklets. The code was used to match all of the booklets completed by each participant and to allocate payment to those who completed the study. I kept the list of participants' names and codes separate from the data at all times to ensure that participants' names were never associated with their particular responses.

Materials and Procedure

I asked all interested employees of the emergency department to sign up for the study; when participants signed up, I explained to each individual that the study was interested in their experiences witnessing the negative interactions of their co-workers. I explained that their participation would involve being aware of and completing a number of short surveys about their experiences. I explained that they would need to focus on one to two negative events per day over the course of 15 work shifts. I asked interested participants to complete an informed consent form (see Appendix Z).

I provided all those who signed up with an initial survey in which they completed demographic and personality-related questions, plus a series of event-based short surveys (described below).

Survey Booklets

Initial Survey. Before continuing on to any of the event surveys, I asked all participants to review the general instructions (see Appendix AA) and to complete the

Initial Survey. The Initial Survey included my demographic variables for descriptive purposes (Appendix BB).

Event-based Surveys. As noted above, I asked participants to be cognizant of the negative interactions among their colleagues, and as soon as possible after witnessing such an interaction, to complete an event-based survey. Note that each witnessed negative interaction constituted an ‘event.’ For each event-based survey, I asked the participant to indicate who was more liked by their colleagues, between the perpetrator² and the target on an 11-point scale (1 = *the perpetrator is liked a lot more* to 11 = *the target is liked a lot more*); note that the mid-point of this scale (i.e., 6) represents *equal liking*. This question was intended to determine the extent to which the target was liked, in general, relative to the perpetrator.

I also asked the participant to indicate the formal power difference between the perpetrator and the target, between the perpetrator and the observer (i.e., the participant) and between the target and the observer; each of these was assessed on an 11-point scale (1 = *the perpetrator/perpetrator/target has a lot more power* to 11 = *the target/you/you has/have a lot more power*); note that the mid-point of this scale (i.e., 6) represents *equal power*. These questions were intended to determine the relative formal power of the target in relation to the observer and the perpetrator and of the perpetrator relative to the observer.

To assess observer perspective-taking and attitudes, I asked the participant to indicate the extent to which they took the perspective of the target and the perpetrator, each on a five-point scale (1 = *very slightly or not at all* to 5 = *extremely*) and the extent to which their attitude toward the target and the perpetrator had changed because of the

witnessed interaction on a five-point scale (1 = *much more negative now* to 5 = *much more positive now*). Finally, I asked participants the extent to which they agreed that the event was justified on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). I included this variable because I predicted that observer perceptions of justifiability would mediate the effect of observer perspective-taking on observer attitudes (i.e., *H12* and *H15*). Each event-based survey took approximately five minutes to complete. The general instructions for the event-based surveys, as well as an example (negative) event-based survey, are included in Appendix CC and Appendix DD, respectively.

Once the participant had completed 15 event-based surveys, I asked the participant to enclose them in a university-addressed, postage paid envelope and send it to me. At this point, I informed the participant that he or she had completed the study and a research assistant was sent to pay participants who completed the surveys.

Note that, in addition to hypotheses *H19-H23* that I introduced in this chapter, I also investigated *H7a*, *H8*, and *H11a* related to observers' relative liking of and power relative to the target and the perpetrator discussed in Chapter III, as well as *H12*, *H15*, and *H18* related to observer perspective-taking of the target and the perpetrator and observer perceptions of the justifiability of the aggression discussed in Chapter IV. See Table 13 for an overview of these hypotheses as well as the results of each.

Results

I used the mixed procedure in SPSS to investigate my hypotheses, which allowed me to fit repeated-measures multilevel models to the data (Peugh & Enders, 2005). The mixed procedure was necessary because witnessed aggressive interactions (Level 1) were nested within individuals (Level 2).

The procedure for the mixed method is as follows (Peugh & Enders, 2005; see also Stride, 2009): In the first step, I calculated the null model, which includes only the dependent variable without any predictors; the null model calculates the mean of the dependent variable and gives a baseline -2 Log Likelihood (-2LL), which is a deviance statistic for the mixed procedure, to which subsequent models can be compared.

Although the -2LL of each model cannot be meaningfully compared to another unless no new predictors have been added, the -2LL will decrease as the model fit is improved. In the second step, I calculated the unconditional model by allowing the intercepts of the dependent variable to vary by the Level 2 variable (i.e., by individual). By comparing the unconditional model (step 2) with the null model (step 1), I was able to determine whether a substantial increase in the variance in the dependent variable was accounted for by allowing the mean of the dependent variable to vary by individual, thus verifying the appropriateness of the mixed procedure. In the third step, I added the predictor of interest as a fixed variable. By comparing the unconditional model (step 2) with the fixed effects model (step 3), I can determine whether the predictor variable has accounted for any additional variance in the dependent variable. I can also calculate the significance level of the slope of the fixed regression line. Although it is possible to proceed to a fourth step in which I would allow the slope of the regression line of the predictor to vary by individual respondent, because I did not have any cross-level hypotheses, I did not include this step.

When a mediated effect was hypothesized (i.e., *H12*, *H15*, *H22*, and *H23*), I first examined the three direct effects (i.e., the prediction of the outcome variable from each of the independent variable and the mediator, as well as the prediction of the mediator from the independent variable). Provided each of these relationships was significant, I then

compared the strength of the prediction of the outcome variable from the independent variable only with the strength of the prediction of the outcome variable from both the independent variable and the mediator to determine whether the presence of the mediator significantly reduced the fixed effect of the predictor (Judd & Kenny, 1981). If the strength of the fixed effect of the predictor was substantially reduced when the mediator was also included in the model, I concluded that mediation was supported.

I calculated the null (step 1) and unconditional models (step 2) for each dependent variable of interest. I present the mean and -2LL of each of these models for observer perspective-taking of the target (row 1), and observer perspective-taking of the perpetrator (row 2), observer attitude change toward the perpetrator *relative* to the target (row 3), observer perception of the justifiability of the aggression (row 4), observer attitude change toward the target (row 5), and observer attitude change toward the perpetrator (row 6), in Table 12. Table 12 also includes the interclass correlation [ICC(1)] for each dependent variable, which is an estimate of the amount of variance attributed to differences between individuals. In the paragraphs that follow, I will describe the effects of each of my predictor variables, organized by outcome variable.

Observer perspective-taking of the target

To investigate *H19a*, that observers would report taking the perspective of the target to a greater degree the target was more liked than the perpetrator, I used observers' perception of the relative liking of the perpetrator and the target as a Level 1 predictor of observers' perspective-taking of the target. Note that high scores on relative liking indicated that the observer believed that the target was more liked, in general, than the perpetrator. By adding relative liking as a fixed variable, the -2LL decreased to 1438.75,

which appeared to be a substantial reduction from the unconditional model (see Table 12, row 1), and the residual variance of the dependent variable was reduced by approximately 5% (from 1.06 to 1.01). That is, the addition of relative liking to the model improved the prediction of observer perspective-taking of the target. In addition, the fixed effect of relative liking was positive and significant ($B = 0.10, p < .001$); as observers perceived that the target was more liked than the perpetrator, they reported taking the perspective of the target to a greater degree. Therefore, *H19a* was supported.

To investigate *H20a*, that observers would report more perspective-taking of the target when the target had more power than the observer, I used observers' perception of the relative power between the target and themselves (i.e., target-observer relative power) as a Level 1 predictor of observers' perspective-taking of the target. Note that low scores on target-observer relative power indicated that the observer believed that the target had more power than them. By adding target-observer relative power as a fixed variable, the -2LL decreased to 1437.84, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 1). However, the addition of target-observer relative power did not effect the residual variance of the dependent variable (i.e., the residual variance increased by less than 1%, from 1.06 to 1.07). In addition, the fixed effect of target-observer relative power was not significant ($B = -0.02, p = .515$).

Therefore, *H20a* was not supported.

To investigate *H21a*, that observers would be more likely to take the perspective of the target when the perpetrator had high power *relative to the target*, I used observers' perception of the relative power between the perpetrator and the target (i.e., perpetrator-target relative power) as a Level 1 predictor of the extent to which observers took the

perspective of the target. Note that high scores on perpetrator-target relative power indicated that the observer believed that the target had more power than the perpetrator. By adding perpetrator-target relative power as a fixed variable, the -2LL decreased to 1476.71, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 1). However, the addition of perpetrator-target relative power did not effect the residual variance of the dependent variable (i.e., the residual variance increased by less than 1%, from 1.06 to 1.07). In addition, the fixed effect of perpetrator-target relative power was not significant ($B = -0.04, p = .082$). Therefore, *H21a* was not supported.

Observer perspective-taking of the perpetrator

To investigate *H19b*, that observers would report more perspective-taking of the perpetrator when the perpetrator was liked more than the target, I used observers' perception of the relative liking of the perpetrator and the target as a Level 1 predictor of the observer perspective-taking of the perpetrator. Note that high scores on relative liking indicated that the observer believed that the target was more liked, in general, than the perpetrator. By adding relative liking as a fixed variable, the -2LL decreased to 1399.08, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 2). However, the addition of relative liking *increased* the residual variance of the dependent variable by approximately 2% (from 0.89 to 0.91); that is, the residual variance of the fixed effects model was greater than the residual variance of the unconditional model. Also, the fixed effect of relative liking was not significant ($B = -0.02, p = .432$). Therefore, *H19b* was not supported.

To investigate *H20b*, that observers would report more perspective-taking of the perpetrator when the perpetrator had high power relative to the observer, I used

observers' perception of the relative power between the perpetrator and themselves (i.e., perpetrator-observer relative power) as a Level 1 predictor of observer perspective-taking of the perpetrator. Note that low scores on relative power indicated that the observer believed that the perpetrator had more power than them. By adding perpetrator-observer relative power as a fixed variable, the -2LL decreased to 1345.62, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 2). However, the addition of perpetrator-observer relative power *increased* the residual variance of the dependent variable by 2% (from 0.89 to 0.91). Also, the fixed effect perpetrator-observer relative power was not significant ($B = -0.01, p = .559$). Therefore, *H20b* was not supported.

To investigate *H21b*, that observers would be less likely to take the perspective of the perpetrator when the perpetrator had high power *relative to the target*, I used observers' perception of the relative power between the perpetrator and the target (i.e., perpetrator-target relative power) as a Level 1 predictor of observer perspective-taking of the perpetrator. Note that high scores on perpetrator-target relative power indicated that the observer believed that the target had more power than the perpetrator. By adding perpetrator-target relative power as a fixed variable, the -2LL decreased to 1408.18, which was a reduction from the unconditional model (see Table 12, row 2). However, the addition of perpetrator-target relative power *increased* the residual variance of the dependent variable by approximately 3% (from 0.89 to 0.92). In addition, the fixed effect of perpetrator-target relative power was not significant ($B = 0.01, p = .604$). Therefore, *H21b* was not supported.

Observer attitudes toward the target *relative to the perpetrator*

To investigate the hypotheses that involved a comparison of observer attitudes toward the target *relative* to their attitudes toward the perpetrator (i.e., *H7a* and *H11a*), I created an attitudinal difference score by subtracting observer attitude change toward the perpetrator from observer attitude change toward the target. High scores on this target-perpetrator attitude variable indicate more positive attitude change toward the target, whereas low scores indicate more positive attitude change toward the perpetrator.

To investigate *H7a*, that observers would report more positive attitude change toward the actor who was liked more, I entered observers' perception of the relative liking of the perpetrator and the target as a Level 1 predictor of observers' attitude change toward the target relative to the perpetrator. Note that high scores on relative liking indicated that the observer believed that the target was more liked, in general, than the perpetrator. By adding relative liking as a fixed variable to the model, the -2LL decreased to 1506.36, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 3), and the addition of relative liking reduced the residual variance of the dependent variable by approximately 8% (from 1.28 to 1.17). That is, the addition of relative liking to the model improved the prediction of observer attitude change toward the target relative to the perpetrator. The fixed effect of relative liking was positive and significant ($B = 0.18, p < .001$); observers who perceived that the target (perpetrator) was more liked than the perpetrator (target) reported more positive attitude change toward the target (perpetrator) as compared to the perpetrator (target). That is, observers reported more positive attitude change toward the actor they perceived to be more liked. As such, *H7a* was supported.

To investigate *H11a*, that observers would report more positive attitude change toward the actor who had relatively more power, I entered observers' perception of the relative power of the perpetrator and the target (i.e., perpetrator-target relative power) as a Level 1 predictor of observers' attitude change toward the target relative to the perpetrator. Note that high scores on perpetrator-target relative power indicated that the observer believed that the target had more power than the perpetrator. By adding perpetrator-target relative power as a fixed variable to the model, the -2LL decreased to 1566.26, which appeared to be a substantial reduction from the unconditional model (see Table 2, row 3). However, the addition of perpetrator-target relative power *increased* the residual variance of the dependent variable by approximately 3% (i.e., from 1.28 to 1.32). Also, the fixed effect of perpetrator-target relative power was not significant ($B = -0.03$, $p = .172$), which suggests that the relative power between the perpetrator and the target did not influence observer attitude change toward the target relative to the perpetrator. As such, I concluded that *H11a* was not supported.

Observer attitudes toward the target

To investigate *H8a*, that observers would be more likely to report positive attitudes toward the target when the target had high power relative to the observer, I used observers' perception of the relative power between the target and themselves (i.e., target-observer relative power) as a Level 1 predictor of observers' attitude change toward the target. Note that low scores on target-observer relative power indicated that the observer believed that the target had more power than them. By adding target-observer relative power as a fixed variable to the model, the -2LL decreased to 1081.46, which appeared to be a substantial reduction from the unconditional model (see Table 12,

row 5). However, the addition of target-observer relative power *increased* the residual variance of the dependent variable by approximately 3% (i.e., from 0.51 to 0.52). Further, the fixed effect of target-observer relative power was not significant ($B = 0.01, p = .660$). Therefore, *H8a* was not supported.

To investigate *H15a*, that perceptions of justifiability would mediate the negative relationship between observer perspective-taking of the perpetrator and observer attitude change toward the target, I examined the interrelationships among each of these three variables. For mediation to be present, each of the variables must be significantly related to the other two. Therefore, I examined (1) the effect of perceived justifiability on observer attitude change toward the target, (2) the effect of observer perspective-taking of the perpetrator on perceived justifiability, and (3) the effect of observer perspective-taking of the perpetrator on observer attitude change toward the target.

By adding perceived justifiability as a fixed predictor of observer attitude change toward the target [i.e., effect (1)], the -2LL decreased to 1073.91, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 5) (note, this effect is also relevant to *H15b*). Also, the addition of perceived justifiability reduced the residual variance of the dependent variable by approximately 8% (from 0.51 to 0.47). That is, the addition of perceived justifiability to the model improved the prediction of observer attitude change toward the target. The fixed effect of perceived justifiability was negative and significant ($B = -0.27, p < .001$), which suggests that, consistent with *H15a* (and *H15b*), observers who perceived the aggression as more justified reported more negative attitude change toward the target.

Next, I examined the effect of observer perspective-taking of the perpetrator on observer perceptions justifiability [i.e., effect (2)] (note, this effect is also relevant to *H12a*). By adding perspective-taking of the perpetrator as a fixed predictor of observer perceptions of justifiability, the -2LL decreased to 1352.11, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 4). Also, the addition of perspective-taking of the perpetrator reduced the residual variance of the dependent variable by approximately 11% (from 0.88 to 0.79); the addition of observer perspective-taking of the perpetrator to the model improved the prediction of perceived justifiability. The fixed effect of perspective-taking of the perpetrator was positive and significant ($B = 0.32, p < .001$), which suggests that, consistent with *H15a* (and *H12a*), observers who took the perspective of the perpetrator to a greater degree perceived the aggression as more justified.

Finally, I examined the effect of observer perspective-taking of the perpetrator on observer attitude change toward the target [i.e., effect (3)]. By adding observer perspective-taking of the perpetrator as a fixed variable to the model, the -2LL decreased to 1106.60, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 5). Also, the addition of observer perspective-taking of the perpetrator reduced the residual variance of the dependent variable by approximately 5% (from 0.51 to 0.48). That is, the addition of observer perspective-taking of the perpetrator to the model improved the prediction of observer attitude change toward the target. The fixed effect of observer perspective-taking of the perpetrator was negative and significant ($B = -0.17, p < .001$), which suggests that, consistent with *H15a*, observers who took the

perspective of the perpetrator to a greater degree reported more negative attitudes toward the target.

To formally investigate *H15a*, I added observer perceptions of justifiability as a fixed variable to the above model, which only included observer perspective-taking of the perpetrator, to determine whether the addition of perceived justifiability would substantially reduce the effect of observer perspective-taking of the perpetrator on observer attitude change toward the target. By adding perceived justifiability as a fixed variable to this model, the -2LL decreased to 1066.36, which appeared to be a substantial reduction from the previous model. Also, the addition of perceived justifiability reduced the residual variance of the dependent variable by approximately 5% (from 0.48 to 0.46). The fixed effect of perceived justifiability was still negative and significant ($B = -0.23, p < .001$), and although the fixed effect of observer perspective-taking of the perpetrator was still negative and significant ($B = -0.09, p = .004$), it was a weaker predictor of observer attitude change toward the target. Because the addition of perceived justifiability reduced the direct effect of observer perspective-taking of the perpetrator on observer attitude change toward the target, I concluded that *H15a* was supported.

To investigate *H15b*, that perceptions of justifiability would mediate the positive relationship between observer perspective-taking of the target and observer attitude change toward the target, I examined (1) the effect of perceived justifiability on observer attitude change toward the target, (2) the effect of observer perspective-taking of the target on perceived justifiability, and (3) the effect of observer perspective-taking of the target on observer attitude change toward the target. However, note that in my discussion of *H15a* above, I found that the fixed effect of perceived justifiability on observer attitude

change toward the target was negative and significant ($B = -0.27, p < .001$) [i.e., effect (1)]. Therefore, I only examined relationships (2) and (3).

To examine the effect of observer perspective-taking of the target on observer perceptions justifiability [i.e., effect (2)], I added perspective-taking of the target as a fixed variable to the model of perceived justifiability (note, this effect is also relevant to *H12b*). This addition decreased the -2LL to 1340.01, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 4). Also, the addition of perspective-taking of the target reduced the residual variance of the dependent variable by approximately 14% (from 0.88 to 0.76). That is, the addition of observer perspective-taking of the target to the model improved the prediction of perceived justifiability. The fixed effect of perspective-taking of the target was negative and significant ($B = -0.33, p < .001$), which suggests that, consistent with *H15b* (and *H12b*), observers who took the perspective of the target to a greater degree perceived the aggression as less justified.

Next, I examined the examined the effect of observer perspective-taking of the target on observer attitude change toward the target [i.e., effect (3)]. By adding observer perspective-taking of the target as a fixed variable to the model, the -2LL decreased to 1022.89, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 5). Also, the addition of observer perspective-taking of the target reduced the residual variance of the dependent variable by approximately 19% (from 0.51 to 0.41). That is, the addition of observer perspective-taking of the target to the model improved the prediction of observer attitude change toward the target. The fixed effect of observer perspective-taking of the target was positive and significant ($B = 0.29, p < .001$),

which suggests that, consistent with *H15b*, observers who took the perspective of the target to a greater degree reported more positive attitude change toward the target.

To formally investigate *H15b*, I added observer perceptions of justifiability as a fixed variable to the above model, which only included observer perspective-taking of the target, to determine whether the addition of perceived justifiability would substantially reduce the effect of observer perspective-taking of the target on observer attitude change toward the target. By adding perceived justifiability as a fixed variable to the model, the $-2LL$ decreased to 1012.37, which was a reduction from the fixed predictor model, and the addition of perceived justifiability reduced the residual variance of the dependent variable by approximately 2% (from 0.41 to 0.40). The fixed effect of perceived justifiability was still negative and significant ($B = -0.16, p < .001$), and although the fixed effect of observer perspective-taking of the target was still positive and significant ($B = 0.23, p < .001$), it was a weaker predictor of observer attitude change toward the target. Because the addition of perceived justifiability reduced the direct effect of observer perspective-taking of the target on observer attitude change toward the target, I concluded that *H15b* was supported.

To investigate *H22a*, that observer perspective-taking of the target would mediate the relationship between the extent to which the perpetrator was liked relative to the target and observer attitude change toward the target, I considered (1) the effect of relative liking on observer perspective-taking of the target, (2) the effect of observer perspective-taking of the target on observer attitude change toward the target, and (3) the effect of perpetrator-target relative liking on observer attitude change toward the target. However, note that in my investigation of *H19a* above, I found that the fixed effect of

relative liking on observer perspective-taking of the target was positive and significant ($B = 0.10, p < .001$) [i.e., effect (1)]. Also, in my discussion of *H15b*, I found the fixed effect of observer perspective-taking of the target on observer attitude change toward the target positive and significant ($B = 0.29, p < .001$) [i.e., effect (2)]. Both of these effects are consistent with *H22a*. As such, I proceeded to examine only relationship (3); that is, the effect of relative liking on observer attitude change toward the target.

I added observers' perception of the relative liking of the perpetrator and the target as a Level 1 predictor of observers' attitude change toward the target. Note that high scores on relative liking indicated that the observer believed that the target was more liked, in general, than the perpetrator. By adding relative liking as a fixed variable to the model, the -2LL decreased to 1072.06, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 5) and the residual variance of the dependent variable was reduced by approximately 4% (from 0.51 to 0.49). That is, the addition of relative liking to the model improved the prediction of observer attitude change toward the target. The fixed effect of relative liking was positive and significant ($B = 0.07, p < .001$); consistent with *H22a*, as relative liking of the target increased, observers reported more positive attitude change toward the target.

To formally examine *H22a*, I added observer perspective-taking of the target as a fixed variable to the above model, which only included relative liking, to determine whether the addition of observer perspective-taking of the target would substantially reduce the effect of relative liking on observer attitude change toward the target. By adding observer perspective-taking of the target as a fixed variable to this model, the -2LL decreased to 981.47, which appeared to be a substantial reduction from the previous

model. Also, the addition of observer perspective-taking of the target reduced the residual variance of the dependent variable by approximately 18% (from 0.49 to 0.40). The fixed effect of observer perspective-taking of the target was still positive and significant ($B = 0.28, p < .001$), and although the fixed effect of relative liking was still positive and significant ($B = 0.04, p = .005$), it was a weaker predictor of observer attitude change toward the target. Because the addition of observer perspective-taking of the target reduced the effect of relative liking on observer attitudes toward the target, I concluded that *H22a* was supported.

To investigate *H22b*, that observer perspective-taking of the target would mediate the relationship between the power of the target relative to the observer and observer attitude change toward the target, I considered (1) the effect of target-observer relative power on observer perspective-taking of the target, (2) the effect of observer perspective-taking of the target on observer attitude change toward the target, and (3) the effect of target-observer relative power on observer attitude change toward the target. However, although I found the fixed effect of observer perspective-taking of the target on observer attitude change toward the target was positive and significant ($B = 0.29, p < .001$) [i.e., effect (2); see *H15b*], in my examination of *H20a*, I found that the fixed effect of target-observer relative power on observer perspective-taking of the target was not significant ($B = -0.02, p = .515$) [i.e., effect (1)]. Because there was no significant effect of target-observer relative power on observer perspective-taking of the target, I concluded that *H22b* was not supported.

Observer attitudes toward the perpetrator

To investigate *H8b*, that observers would report more positive attitudes toward the perpetrator when the perpetrator had more power relative to the observer, I used observers' perception of the relative power between the perpetrator and themselves (i.e., perpetrator-observer relative power) as a Level 1 predictor of observers' attitude change toward the perpetrator. Note that low scores on perpetrator-observer relative power indicated that the observer believed that the perpetrator had more power than them. By adding perpetrator-observer relative power as a fixed variable to the model, the -2LL decreased to 1132.13, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 6). However, the addition of perpetrator-observer relative power *increased* the residual variance of the dependent variable by approximately 2% (from 0.56 to 0.56) and the fixed effect of perpetrator-observer relative power was not significant ($B = -0.01, p = .531$). Therefore, *H8b* was not supported.

To investigate *H12a*, that perceptions of justifiability would mediate the positive relationship between observer perspective-taking of the perpetrator and observer attitude change toward the perpetrator, I examined (1) the effect of perceived justifiability on observer attitude change toward the perpetrator, (2) the effect of observer perspective-taking of the perpetrator on perceived justifiability, and (3) the effect of observer perspective-taking of the perpetrator on observer attitude change toward the perpetrator. However, note that in my discussion of *H15a* above I found that, consistent with *H12a*, the fixed effect of observer perspective-taking of the perpetrator on perceived justifiability was positive and significant ($B = 0.34, p < .001$) [i.e., effect (2)]. Therefore, I only examined relationships (1) and (3).

To examine the effect of perceived justifiability on observer attitude change toward the perpetrator [i.e., effect (1)], I added perceived justifiability as a fixed predictor of observer attitude change toward the perpetrator (note, this effect is also relevant to *H12b*). This addition decreased the -2LL to 1008.61, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 6). Also, the addition of perceived justifiability reduced the residual variance of the dependent variable by approximately 28% (from 0.56 to 0.40). That is, the addition of perceived justifiability to the model improved the prediction of observer attitude change toward the perpetrator. The fixed effect of perceived justifiability was positive and significant ($B = 0.45, p < .001$), which suggests that, consistent with *H12a* (and *H12b*), observers who perceived that the aggression was more justified reported more positive attitude change toward the perpetrator.

Next, I examined the effect of observer perspective-taking of the perpetrator on observer attitude change toward the perpetrator [i.e., effect (3)]. By adding observer perspective-taking of the perpetrator as a fixed variable to the model, the -2LL decreased to 1150.06, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 6). Also, the addition of observer perspective-taking of the perpetrator reduced the residual variance of the dependent variable by approximately 7% (from 0.56 to 0.52). That is, the addition of observer perspective-taking of the perpetrator to the model improved the prediction of observer attitude change toward the perpetrator. The fixed effect of observer perspective-taking of the perpetrator was positive and significant ($B = 0.19, p < .001$), which suggests that, consistent with

H12a, observers who took the perspective of the perpetrator to a greater degree reported more positive attitudes toward the perpetrator.

To formally investigate *H12a*, I added observer perceptions of justifiability as a fixed variable to the above model, which only included observer perspective-taking of the perpetrator, to determine whether the addition of perceived justifiability would substantially reduce the effect of observer perspective-taking of the perpetrator on observer attitude change toward the perpetrator. By adding perceived justifiability as a fixed variable to this model, the -2LL decreased to 998.54, which appeared to be a substantial reduction from the previous model. Also, the addition of perceived justifiability reduced the residual variance of the dependent variable by approximately 24% (from 0.52 to 0.39). The fixed effect of perceived justifiability was still positive and significant ($B = 0.43, p < .001$); however, the fixed effect of observer perspective-taking of the perpetrator was no longer significant ($B = 0.06, p = .060$). Because the addition of perceived justifiability significantly weakened the effect of observer perspective-taking of the perpetrator on observer attitudes toward the perpetrator, I concluded that *H12a* was supported.

To investigate *H12b*, that perceptions of justifiability would mediate the negative relationship between observer perspective-taking of the target and observer attitude change toward the perpetrator, I examined (1) the effect of perceived justifiability on observer attitude change toward the perpetrator, (2) the effect of observer perspective-taking of the target on perceived justifiability, and (3) the effect of observer perspective-taking of the target on observer attitude change toward the perpetrator. However, note that in my discussion of *H12a* above, I found that the fixed effect of perceived

justifiability on observer attitude change toward the perpetrator was positive and significant ($B = 0.45, p < .001$) [i.e., effect (1)]. Also, in my discussion of *H15b* above I found that the fixed effect of observer perspective-taking of the target on perceived justifiability to be negative and significant ($B = -0.33, p < .001$) [i.e., effect (2)]. Both of these effects are consistent with *H12b*. Therefore, I only examined relationship (3).

To examine the examined the effect of observer perspective-taking of the target on observer attitude change toward the perpetrator, I added observer perspective-taking of the target as a fixed variable to the model. This decreased -2LL to 1129.97, which appeared to be a substantial reduction from the unconditional model (see Table 12, row 6). Also, the addition of observer perspective-taking of the target reduced the residual variance of the dependent variable by approximately 12% (from 0.56 to 0.49). That is, the addition of observer perspective-taking of the target to the model improved the prediction of observer attitude change toward the perpetrator. The fixed effect of observer perspective-taking of the target was negative and significant ($B = -0.24, p < .001$), which suggests that, consistent with *H12b*, observers who took the perspective of the target to a greater degree reported more negative attitude change toward the perpetrator.

To formally investigate *H12b*, I added observer perceptions of justifiability as a fixed variable to the above model, which only included observer perspective-taking of the target, to determine whether the addition of perceived justifiability would substantially reduce the effect of observer perspective-taking of the target on observer attitude change toward the perpetrator. By adding perceived justifiability as a fixed variable to the model, the -2LL decreased to 994.81, which appeared to be a substantial reduction from the random predictor model. The addition of perceived justifiability reduced the residual

variance of the dependent variable by approximately 21% (from 0.49 to 0.39). The fixed effect of perceived justifiability was still positive and significant ($B = 0.41, p < .001$), and although the fixed effect of observer perspective-taking of the target was still negative and significant ($B = -0.10, p < .001$), it was a weaker predictor of observer attitude change toward the perpetrator. Because the addition of perceived justifiability reduced the direct effect of observer perspective-taking of the target on observer attitude change toward the perpetrator, I concluded that *H12b* was supported.

To investigate *H23a*, that observer perspective-taking of the perpetrator would mediate the relationship between the extent to which the perpetrator was liked relative to the target and observer attitudes toward the perpetrator, I considered (1) the effect of relative liking on observer perspective-taking of the perpetrator, (2) the effect of observer perspective-taking of the perpetrator on observer attitude change toward the perpetrator, and (3) the effect of relative liking on observer attitude change toward the perpetrator. However, note that in my investigation of *H19b* above, I found that the fixed effect of relative liking on observer perspective-taking of the perpetrator was not significant ($B = -0.02, p = .432$) [i.e., effect (1)]. Because mediation cannot be present if the independent variable (i.e., relative liking) is not significantly related to the mediator (i.e., perceived justifiability), I concluded that *H23a* was not supported.

Finally, to investigate *H23b*, that observer perspective-taking of the perpetrator would mediate the relationship between the power of the perpetrator relative to the observer and observer attitudes toward the perpetrator, I considered (1) the effect of perpetrator-observer relative power on observer perspective-taking of the perpetrator, (2) the effect of observer perspective-taking of the perpetrator on observer attitude change

toward the perpetrator, and (3) the effect of perpetrator-observer relative power on observer attitude change toward the perpetrator. However, note that in my examination of *H20b* above, I found that the fixed effect of perpetrator-observer relative power on observer perspective-taking of the perpetrator was not significant ($B = -0.01, p = .559$) [i.e., effect (1)]. Because mediation cannot be present if the independent variable (i.e., perpetrator-observer relative power) is not significantly related to the mediator (i.e., perceived justifiability), I concluded that *H23b* was not supported.

Observer perspective-taking of the perpetrator relative to the target

As a final analysis, I conducted a paired-samples *t*-test to compare the extent to which observers took the perspective of each of the perpetrator and the target. In support of *H18*, I found that observers reported significantly more perspective-taking of the target ($M = 2.38, SD = 1.28$) than the perpetrator ($M = 2.08, SD = 1.21$), $t(495) = -4.60, p < .001$.

Discussion

In the current study, I examined how observers' actual perceptions of the target and the perpetrator of an aggressive incident influenced observer perspective-taking of and attitudes toward each actor. Drawing on the symmetry (i.e., A-B-X) model (Newcomb, 1956, 1968) and theories of power and perspective-taking, I expected that observers would be more likely to take the perspective of and to report more positive attitude change toward an actor who was liked than an actor who was disliked, and to take the perspective of and to report more positive attitude change toward an actor who had high power than an actor who had low power. This study aimed to replicate and extend a number of the hypotheses I investigated in Studies 2 and 3.

Consistent with my findings from Study 2, I found that when one actor (i.e., the target or perpetrator) was more liked than the other (i.e., the perpetrator or target), observers reported more positive attitude change toward the liked actor in relation to the disliked actor (i.e., *H7a* was supported in both Study 2 and Study 4). In addition, contrary to my expectations, I found that there was no effect of the relative power difference between the target and the perpetrator on observers' attitude change toward the target in relation to the perpetrator (i.e., *H11a* was not supported in either Study 2 or Study 4). Further, consistent with my findings from Study 3, I found that perceptions of justifiability mediated the effect of observer perspective-taking of both the perpetrator and the target on observer attitudes toward the perpetrator. Observers who took the perspective of the perpetrator perceived the aggression as more justified and thus reported more positive attitudes toward the perpetrator (i.e., *H12a* was supported in both Study 3 and Study 4); observers who took the perspective of the target perceived the aggression as less justified and thus reported less positive attitudes toward the perpetrator (i.e., *H12b* was supported in both Study 3 and Study 4). I also found that observers were more likely to take the perspective of the target as compared to the perpetrator (i.e., *H18* was supported in both Study 3 and Study 4).

However, there were some differences in my lab-based and field findings. Specifically, in Study 3 I did not find support for either *H15a* or *H15b*, as justifiability did not mediate the effect of observer perspective-taking of either the perpetrator or the target on observer attitudes toward the target. However, these mediated effects were significant in the current study. That is, consistent with *H15a*, observers who took the perspective of the perpetrator to a greater degree perceived the aggression as more

justified and thus reported more negative attitudes toward the target. In contrast, consistent with *H15b*, observers who took the perspective of the target to a greater degree perceived the aggression as less justified and thus reported more positive attitudes toward the target.

In addition, in contrast to my findings in Study 2, I did not find an effect of either the target or the perpetrator's power relative to the observer on observer attitudes toward these actors (i.e., both *H8a* and *H8b* were supported in Study 2, whereas neither was supported in Study 4). In fact, I didn't find support for any of my power hypotheses in this study (i.e., *H8a*, *H8b*, *H20*, *H21*, *H22b*, and *H23b* were not supported). It is possible that observers in the field study (Study 4) may have felt that the high power perpetrator was taking advantage of his or her formal position to engage in aggression; a perception that may have been less pronounced in the online vignette study (Study 2). Although previous research has suggested that individuals are more inclined to take the perspective of high powered others (e.g., Galinski et al., 2006) and that they are motivated to evaluate power holders positively (Stevens & Fiske, 2000), it is possible that when these individuals are involved in an incident of aggression, the tendency to take the power holder's perspective or to perceive the power holder in a positive light is attenuated. This inconsistent finding may be due to opposing forces on observer perceptions.

For example, when the perpetrator had *high* power relative to either the observer or the target, observers may have perceived the aggression as a breach of their psychological contract with their organization (Rousseau, 1995). As I discussed at the beginning of this chapter, researchers have found that employees who perceive that their psychological contracts have been violated often experience negative emotional reactions

(Morrison & Robinson, 1997; Robinson & Morrison, 2000). Therefore, observers may have been focused on what the witnessed incident of aggression meant for their *own* psychological relationship with their organization. This focus would have left fewer cognitive resources available to take the perspective of or to acknowledge an attitude change toward either the target or the perpetrator. A similar effect may have occurred when the target had low power relative to either the observer or the perpetrator.

In contrast, when the perpetrator had *low* power relative to either the observer or the target, observers may have perceived the aggression as less harmful because the perpetrator was not in a structural position to affect the target's work-related outcomes. Similarly, when the target had high power relative to either the observer or the perpetrator, observers may have felt less concern for the target, perceiving the target to be in a structural position that would buffer them from any negative effects of the aggression (O'Reilly & Aquino, in press). Therefore, though research has shown that observers are more likely to take the perspective of powerful others, the type of interaction these individuals are involved in may present a boundary condition around this effect. Future research is needed to examine these potential opposing effects of the target and the perpetrator's power on observer perspective-taking and attitude change.

The current study also extended my previous studies by examining the effect of observers' perception of the extent to which the target and perpetrator were liked, as well as the relative power of the target and perpetrator, on observers' perspective-taking of each actor. Consistent with *H19a*, I found that observers who perceived that the target was liked more than the perpetrator were more likely to take the perspective of the target. Also, consistent with *H22a*, I found that observer perspective-taking of the target

mediated the relationship between relative liking and observer attitudes toward the target; consistent with my expectations, observers who perceived that the target was more liked than the perpetrator were more likely to take the perspective of the target, and thus reported more positive attitude change toward the target. Interestingly, the same pattern of results was not found for observer perspective-taking or attitude change toward the perpetrator. In contrast to *H19b* and *H23a*, I did not find an effect of relative liking on observer perspective-taking of the perpetrator. I discuss the imbalance of these findings in my implications section below.

Theoretical and practical implications

The results of this study support my findings from Studies 1, 2, and 3 that observers are indeed influenced by witnessed aggression. As such, going forward, observers of workplace aggression will be an important consideration for researchers in this area. In addition to highlighting the need to consider observers in workplace aggression research, my findings also have implications for research on both social undermining and perspective-taking, as well as for the A-B-X model of interpersonal relationships. I review each of these in turn.

As I have noted in previous chapters, social undermining is defined as the intentional interference in a target's work-related success, as well as his or her relationships and reputation at work (Duffy et al., 2002). What is implied by this definition is that perpetrators of social undermining are able to influence the target's relationships with and reputation as held by others (e.g., observers). The findings of this study support this assumption, as observers who took the perspective of the perpetrator to a greater degree perceived the aggression as more justified, and thus reported more

negative attitudes toward the target. Therefore, to the extent that observers take the perspective of the perpetrator, the perpetrator may indeed be able to negatively influence the way the target is perceived by individuals who were not involved in the aggression.

However, consistent with my prior studies, my Study 4 findings also suggest a backlash effect against perpetrators. That is, observers who took the perspective of the *target* to a greater degree perceived the aggression as less justified and thus reported not only more *positive* attitude change toward the target (i.e., attenuating the negative influence of aggression on observer attitudes toward the target implied by the definition of the social undermining construct), but also more negative attitudes toward the *perpetrator*. Therefore, consistent with Study 3, these findings suggest that a perpetrator's aggressive behaviour not only influences observer attitudes toward the target (consistent with the definition of social undermining), but also observer attitudes toward the perpetrator. Further, my findings suggest that the valence of observer attitude change toward each actor depends heavily on the observer's perspective-taking behaviour. Therefore, considering observer perspective-taking may be beneficial to the continued study of social undermining.

I also found that observer perspective-taking influenced observer attitudes toward both the target and the perpetrator via its influence on perceptions of *justifiability*. That is, the extent to which observers took the perspective of each of the target and the perpetrator influenced the type of attribution the observer made for the perpetrator's behaviour. Observers who took the perspective of the perpetrator to a greater degree perceived the aggression as more justified, and this perception in turn resulted in more positive attitude change toward the perpetrator and more negative attitude change toward

the target. In contrast, observers who took the perspective of the target to a greater degree perceived the aggression as less justified, and this perception in turn resulted in more negative attitude change toward the perpetrator and more positive attitude change toward the target. Therefore, perspective-taking appears to shape the way an aggressive incident is understood by observers, as well as the effect of the incident on observer attitude change.

This pattern of findings is encouraging given that I found that observers were more likely to take the perspective of the target than the perpetrator. That is, because observers who take the perspective of the target to a greater degree reported more positive attitude change toward the target and more negative attitude change toward the perpetrator, the presence of observers may be more likely to buffer the negative effects of aggression rather than exacerbate them. Indeed, perpetrators may be less successful at influencing their target's relationships and reputation than the social undermining definition implies, and more likely to negatively affect their *own* relationships and reputation. I discuss the implications of these findings for organizations in more detail below.

Finally, my findings also suggest some boundary conditions of the symmetry model of interpersonal relationships. According to the symmetry model (Newcomb, 1956, 1968), in order to maintain a positive relationship with others, individuals (e.g., observers) should be motivated to align their perceptions with those of others. Therefore, I expected that observers would take the perspective of the actor (i.e., target or perpetrator) who was more liked by their colleagues. Consistent with this model, I found that observers were indeed more likely to take the perspective of the target when the

target was liked more than the perpetrator. However, when the perpetrator was liked more than the target, observers did not report taking the perspective of the perpetrator to a greater degree. The imbalance in these findings suggests that although individuals may wish to develop and maintain positive relationships with their colleagues, they will not blindly adopt their perspective. Therefore, it appears that the drive for symmetry (see Newcomb, 1956, 1968) may be curbed when the issue at hand is value laden (e.g., taking the perspective of a perpetrator of aggression). Future research examining perspective-taking in relation to other types of moral or value-laden interactions would provide further support for this potential explanation.

In addition to the implications for theory I discussed above, there are a number of practical implications of my findings. For example, this study highlights the influence of observers' preexisting perceptions of the extent to which the target and the perpetrator are liked on observer perspective-taking of and attitudinal response to each actor. Practically, this finding is important for two main reasons. First, it highlights the difficulty managers may have in objectively evaluating an incident of aggression between their employees. That is, managers' perspective-taking of and attitude change toward the target of an incident of aggression may be largely directed by their perception of the extent to which the actors are liked by their colleagues. However, managers need to be able to objectively consider both sides of an incident of aggression to effectively intervene. Further, instructing managers to try to overcome the tendency to take the perspective of the liked actor is unlikely to be successful, as researchers have found that instructions to be "as fair as possible" only serve to polarize the views of perspective-takers (Frantz & Janoff-Bulman, 2000). As such, alternative strategies for encouraging perspective-taking, such

as focusing on similarities between the manager and each actor (Parker et al., 2008), may be useful to this end.

Second, the results of this study are encouraging, as they suggest that observers have a drive to 'side' with the target. That is, although observers who took the perspective of the perpetrator did perceive the aggression as more justified, and thus reported more positive attitude change toward the perpetrator and more negative attitude change toward the target, across all of the incidents of aggression, observers were more likely to take the perspective of the target than the perpetrator. Observers who took the perspective of the target perceived the aggression to be less justified, and thus reported more negative attitude change toward the perpetrator and more positive attitude change toward the target. I also found that when the target was more liked than the perpetrator, observers were more likely to take the target's perspective, and also to report more positive attitude change toward the target. However, the reverse was not true for perpetrators; there was no effect of liking the perpetrator more than the target on observer perspective-taking or attitude change toward the perpetrator. Therefore, organizations may be able to promote perspective-taking of the target (which already seems to be observers' preferred perspective) as a means of reducing the negative effects of workplace aggression for targets. Further, to the extent that organizations can facilitate target perspective-taking and thus more positive attitudes toward the target and more negative attitudes toward the perpetrator, the next step is to help observers channel these attitudes towards intervening on behalf of targets. Additional research will be needed to examine the effectiveness of this strategy.

Limitations and future directions

The current study was designed to replicate and extend my lab-based studies in a sample of employees in an actual organization. By using a field design, this study overcomes the limited ecological validity of my previous studies. As such, I can be more confident in the findings that were replicated. Nonetheless, this study does have a few limitations that should be addressed.

First, the hospital emergency unit may be a somewhat unique organizational context to study my research questions, as it is a highly stressful environment that is characterized by a high degree of power stratification. These factors were an advantage for the current study because such workplaces are characterized by high levels of stress and thus aggression (e.g., Einarsen et al., 1994; Tuckey et al., 2009) and because the hierarchical nature of the emergency unit made power distinctions among the target, the perpetrator, and the observer more salient. However, these contextual factors may limit the generalizability of the findings to less similar environments. Nevertheless, this field study increases my confidence in the replicated findings from my prior studies, particularly the null effect of target and perpetrator power on observer perspective-taking of or attitudes toward each actor. Future research will benefit from examining observers of aggression in other organizations.

Secondly, because I collected data in this high-pressure organization, it was important that I keep the event-based surveys as short as possible (i.e., less than five minutes; e.g., Van Zundert, Nijhof, Engels, 2009; see also Beal & Weiss, 2003). As such, I used single item measures for each of my variables. Although this study supports a number of the findings from my previous studies in which I used validated scales, future

research that can incorporate these validated scales into field research will strengthen the conclusions that can be drawn.

Finally, although I attempted to use indices of the relative liking and power of the target and the perpetrator that would be less likely to be influenced by the fact that these actors were involved in an incident of aggression (i.e., the observer's perception of extent to which the actors were liked *in general* rather than the observer's liking of the actors), observers reported their perception of these variables *after* witnessing an aggressive interaction between the actors. Therefore, I cannot be certain that the witnessed incident did not influence the observer's ratings of these general relational variables. Although not possible in the current study due to logistical issues, future research could benefit if observers' perceptions of the target and the perpetrator were measured *before* the aggressive interaction (ideally using other report data, such as the organizational chart). For example, by employing a social network design (see Wasserman & Faust, 1994), observers could rate all of their colleagues on the relational dimensions of interest at the start of the study, and the researchers could ask participants to identify the colleagues involved in each incident using unique identifier codes to match them to their previous ratings. In this way, researchers could temporally separate observers' perceptions of the target and the perpetrator from their perspective-taking behaviour and their attitudinal responses toward each actor, thereby increasing the reliability of the findings.

Conclusion

This study supports a number of the specific findings from my previous research, as well as the general finding that observers are indeed influenced by witnessed aggression. Taken together, these studies highlight the need to consider observers of

aggression—individuals we previously thought to be uninvolved in the aggression—as these individuals appear to be important to both a more complete understanding of how aggression plays out in the workplace, as well as to successful efforts of intervention.

Table 12

Mean, ICC(1), and -2LL of the Null (step 1) unconditional (step 2) models for each dependent variable.

Dependent variable	Relevant hypotheses	<i>M</i>	-2LL		ICC(1)
			Null model	Unconditional model	
Perspective-taking of the target	<i>H19a, H20a, H21a</i>	2.39	1663.16	1525.58	0.34
Perspective-taking of the perpetrator	<i>H19b, H20b, H21b</i>	2.08	1605.29	1444.63	0.40
Attitude change toward the perpetrator relative to the target	<i>H7a, H11a</i>	1.73	1695.45	1611.31	0.27
Perceived justifiability	<i>H12, H15</i>	2.79	1485.02	1415.13	0.16
Attitude change toward the target	<i>H8a, H15a, H15b, H22a, H22b</i>	2.99	1186.09	1135.38	0.18
Attitude change toward the perpetrator	<i>H8b, H12a, H12b, H23a, H23b</i>	2.52	1262.33	1192.41	0.24

Table 13

Overview of the hypotheses investigated in Study 4.

Hypothesis	Supported?	Fixed effect of predictor
<i>H7a: When one actor is liked more than the other actor, observers will report greater positive attitudes toward the actor they liked as compared to the actor they disliked</i>	yes	$B = 0.18, p < .001$
<i>H8a: Observers of aggression will develop greater positive attitudes toward the target when the target has high power than when the target has low power.</i>	no	$B = 0.01, p = .660$
<i>H8b: Observers of aggression will develop greater positive attitudes toward the perpetrator when the perpetrator has high power than when the perpetrator has low power.</i>	no	$B = -0.01, p = .531$
<i>H11a: When the perpetrator has more power than the target, observers will report greater positive attitudes toward the (low powered) target as compared to the (high powered) perpetrator</i>	no	$B = -0.03, p = .172$
<i>H12a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report more positive attitudes towards the perpetrator</i>	yes	Perspective-taking of the perpetrator: $B = 0.06, p = .060$; Justifiability: $B = 0.43, p < .001$
<i>H12b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report less positive attitudes towards the perpetrator</i>	yes	Perspective-taking of the target: $B = -0.10, p < .001$; Justifiability: $B = 0.41, p < .001$
<i>H15a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report more</i>	yes	Perspective-taking of the perpetrator: $B = -0.09, p = .004$;

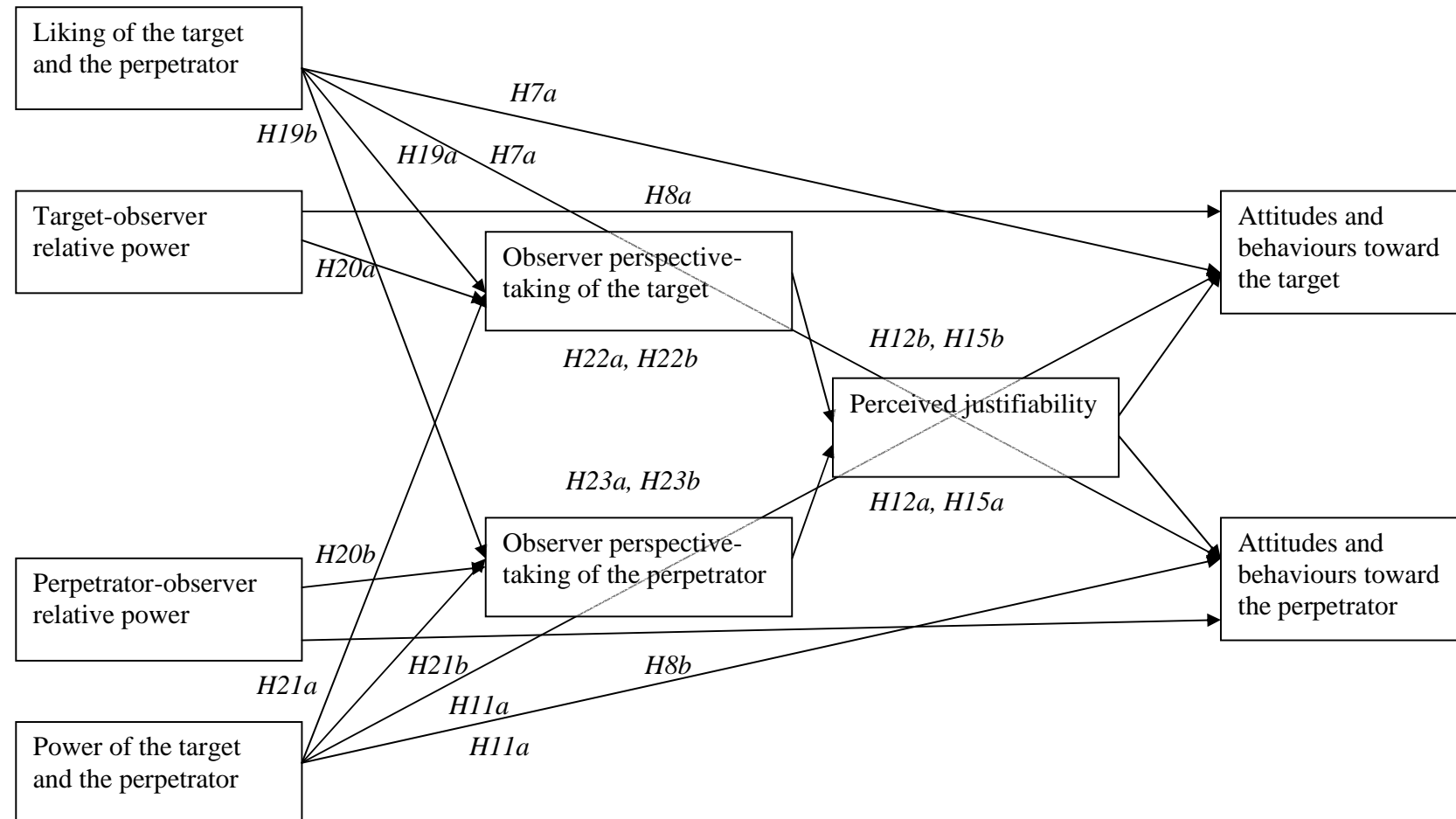
<i>negative attitudes towards the target</i>		Justifiability: $B = -0.23, p < .001$
<i>H15b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report more positive attitudes towards the target</i>	yes	Perspective-taking of the target: $B = 0.23, p < .001$; Justifiability: $B = -0.16, p < .001$
<i>H18: All else equal, observers will be more likely to take the perspective of the target than the perpetrator</i>	yes	n/a
<i>H19a: Observers will be more likely to take the perspective of the target when the target is more liked than the perpetrator</i>	yes	$B = 0.10, p < .001$
<i>H19b: Observers will be more likely to take the perspective of the perpetrator when the perpetrator is more liked than the target</i>	no	$B = -0.02, p = .432$
<i>H20a: Observers will be more likely to take the perspective of the target when the target has high power relative to the observer than when the target has low power relative to the observer</i>	no	$B = -0.02, p = .515$
<i>H20b: Observers will be more likely to take the perspective of the perpetrator when the perpetrator has high power relative to the observer than when the perpetrator has low power relative to the observer.</i>	no	$B = -0.01, p = .559$
<i>H21a: Observers will be more likely to take the perspective of the target when the target has low power relative to the perpetrator than when the target has high power relative to the perpetrator.</i>	no	$B = -0.04, p = .082$
<i>H21b: Observers will be less likely to take the perspective of the perpetrator when the target has low power relative to the perpetrator than when the target has high power</i>	no	$B = 0.01, p = .604$

relative to the perpetrator

<i>H22a: When an observer perceives that the target is more liked than the perpetrator, the observer will be more likely to adopt the perspective of the target, and thus will report more positive attitudes towards the target</i>	yes	Relative liking: $B = 0.04$, $p = .005$; Perspective-taking of the target: $B = 0.28$, $p < .001$
<i>H22b: When the target has high power, the observer will be more likely to adopt the perspective of the target, and thus will report more positive attitudes towards the target</i>	no	H20a not supported
<i>H23a: When an observer perceives that the perpetrator is more liked than the target, the observer will be more likely to adopt the perspective of the perpetrator, and thus will report more positive attitudes towards the perpetrator</i>	no	H19b not supported
<i>H23b: When the perpetrator has high power, the observer will be more likely to adopt the perspective of the perpetrator, and thus will report more positive attitudes towards the perpetrator</i>	no	H20b not supported

Figure 12

A graphical representation of the hypotheses of Study 4.



Chapter VI

General Discussion

An estimated 57% of aggression in the workplace occurs in the presence of others (Glomb, 2002). However, research on workplace aggression has yet to consider how witnessing aggression affects observers' perceptions of and reactions to the actors involved. In my dissertation, I aimed to address this gap in the literature by first examining how observers' attitudes and behaviours toward a previously unknown target and perpetrator are affected by witnessed aggression (Study 1). I then considered how observers' preexisting perceptions of and relationship with the target and the perpetrator influenced these reactions (Study 2). Next, I examined how observer perspective-taking influenced observer perceptions of the justifiability of the aggression, as well as observers' attitudinal and behavioural responses (Study 3). Finally, I examined the influence of all of these elements in a field sample (Study 4).

Across my four dissertation studies, I found that observer attitudes and behaviours toward targets and perpetrators are indeed affected by a witnessed incident of aggression (see Table 14 for an overview of all of the hypotheses in my dissertation). In Study 1, I found that, when all else was equal, observers responded more negatively toward individuals who were involved in an incident of aggression as compared to those who were not, regardless of whether they were the target or the perpetrator of the aggression. Specifically, I found that observers who witnessed an incident of aggression reported more negative attitudes toward perpetrators, and engaged in more deviant behaviour toward both targets *and* perpetrators as compared to observers who did not witness

aggression. I also found that observers reported more negative attitudes and were less likely to help a perpetrator of aggression than a target.

In Studies 3 and 4, I found that observers' active perspective-taking behaviour influenced observer attitudes and behavioural intentions toward both the target and the perpetrator via its influence on observers' perception of the justifiability of the aggression. Observers who took the perspective of the perpetrator to a greater degree were more likely to perceive the aggression as justified, which in turn predicted more positive attitudes toward the perpetrator (Studies 3 and 4), more negative attitudes toward the target (significant in Study 4 only), greater helping intentions toward the perpetrator (Study 3), and more deviant intentions toward *both* the target and the perpetrator (Study 3). In contrast, observers who took the perspective of the target to a greater degree were less likely to perceive the aggression as justified, which in turn predicted more negative attitudes toward the perpetrator (Studies 3 and 4), more positive attitudes toward the target (significant in Study 4 only), fewer helping intentions toward the perpetrator (Study 3), and fewer deviant intentions toward *both* the target and the perpetrator (Study 3). I also found that observers were more likely to take the perspective of the target than the perpetrator (Studies 3 and 4).

In Studies 2 and 4, I expanded beyond the "all else equal" condition to consider how observers' preexisting relationships with and perceptions of the target and the perpetrator influenced observer attitudes and behavioural intentions (Studies 2 and 4), as well as observer perspective-taking (Study 4). Regardless of whether the actor was a target or a perpetrator of aggression, observers in both Studies 2 and 4 reported more positive attitudes (Studies 2 and 4) and behavioural intentions (Study 2) toward each

actor when he or she was liked than when he or she was disliked. Liking also influenced observer perspective-taking of the target (Study 4). That is, when the target was more liked than the perpetrator, observers took the perspective of the target to a greater degree, and thus reported more positive attitude change toward the target. Interestingly, however, the same was not true for observer perspective-taking of or attitudes toward perpetrators, as there was no effect of liking on observer perspective-taking of the perpetrator.

I found mixed support for the influence of target and perpetrator power on observer reactions. In Study 2, I found that observers reported more positive behavioural intentions (i.e., fewer deviant and more helping intentions) toward the target when the target had high power than when the target had low power. However, power did not influence observer behavioural intentions toward the perpetrator. In addition, although observers in Study 2 reported more positive attitudes toward both the target and the perpetrator when each actor had high power as compared to when they had low power, I did not replicate this finding in Study 4 as I did not find any significant effect of power on observer attitudes or perspective-taking behaviour. This may have been because the influence of target and perpetrator power is more complex in an actual organization than in a lab-setting, because power dynamics in an organization are more clearly tied to the observers' own experience (e.g., aggression perpetrated by someone with high power may be perceived as a violation of the observer's own psychological contract with his or her organization).

Theoretical Implications

My findings have important implications for our current understanding of workplace aggression and suggest a number of important avenues for future research.

Specifically, my finding—supported across all four studies—that observer attitudes and behaviours toward targets and perpetrators are influenced by witnessed aggression suggests that research that has only considered the target and/or the perpetrator of aggression may be limited in scope. That is, most research to date has not considered the effects of aggression on those beyond the target-perpetrator dyad; however, my findings suggest that a single incident of aggression can have far-reaching consequences if observers are present. By excluding observers from our models of workplace aggression, researchers have left out a significant category of outcome variables (i.e., the attitudinal and behavioural responses of observers). As such, future research on workplace aggression will likely benefit from considering the outcomes for targets, perpetrators, and observers.

Interestingly, as I noted in Chapter I, some forms of aggression (e.g., social undermining) have assumed that the attitudes and possibly behaviours of individuals who are not involved in an incident of aggression (e.g., observers) are affected by the aggressive behaviour of a perpetrator. Specifically, social undermining assumes that perpetrators are able to influence targets' relationships with and reputation as held by others (e.g., observers). My findings partially support this assumption, as observers did engage in higher levels of deviance toward targets of aggression than non-targets (Study 1). In addition, observers who took the perspective of the perpetrator were more likely to perceive that the aggression was justified, and thus reported more deviant intentions (Study 3) and more negative attitudes (Study 4) toward the target. However, when observers took the perspective of the target, these negative outcomes appeared to be attenuated. That is, observers who took the perspective of the target were more likely to

perceive the aggression as unjustified, and thus reported fewer deviant intentions (Study 3) and more positive attitudes (Study 4) toward the target. Therefore, the manner in which observers process information about an aggressive incident appears to moderate the extent to which the perpetrator is able to “undermine” the target. As such, the definition of social undermining may need to be revised to incorporate the contingent effect of the perpetrator’s aggressive behaviour on observer reactions.

In addition to developing negative attitudes and engaging in negative behaviours toward targets, my findings suggest that observers may have a negative reaction against perpetrators as well. I found that observers reported more negative attitudes and were more likely to engage in deviant behaviour toward a perpetrator than a non-perpetrator (Study 1). Further, observers reported more negative attitudes and were less likely to help the perpetrator as compared to the target (Study 1). I also found that observers who took the perspective of the target were more likely to perceive that the aggression was *unjustified*, and thus reported more negative attitudes (Studies 3 and 4) and fewer helping intentions (Study 3) toward the perpetrator. In addition, observers who took the perspective of the perpetrator and perceived the aggression as more justified also reported more deviant intentions toward the perpetrator (Study 3). Therefore, by behaving aggressively, perpetrators may be opening *themselves* to the negative reactions of observers as well. This finding is relevant to the group-value model (Lind & Tyler, 1988; Tyler & Lind, 1992), which I introduced in Chapter II. That is, according to the group-value model, individuals infer their own value, as well as the value of others, to a group by the way they are treated by the groups’ members. However, observers’ negative attitudinal and behavioural reactions against perpetrators suggests that these observers

also infer information about (e.g., the value of) individuals from the way these individuals treat others.

Practical Implications

In addition to the theoretical implications of my findings discussed above, my dissertation studies also speak to practice. At the broadest level, my finding that observers' attitudes and behaviours toward targets and perpetrators are influenced following a witnessed incident of aggression suggests that traditional intervention approaches in workplace aggression that focus on the target and/or the perpetrator may be unsuccessful if observers are not included in relationship repair. That is, if observers are excluded from the intervention process, their attitudes and behaviours toward the target and the perpetrator are unlikely to be changed. As such, observers who developed negative attitudes or behavioural intentions toward either the target or the perpetrator may continue to hold these even after managers have intervened. Further, it may be less risky for observers to intervene on behalf of targets than it is for targets to stand up for themselves. Research has found that targets who speak up may endure further victimization in the form of retaliation from already hostile perpetrators (Cortina & Magley, 2003). Therefore, intervention efforts that *include* those who witnessed the aggression may find more success.

My findings also suggest that managers who encourage observer perspective-taking of the target may buffer the negative outcomes experienced by targets of aggression—outcomes that are also costly for the organization (e.g., decreased job satisfaction, increased intentions to quit, and negative physical and mental health; Bowling & Beehr, 2006; Hershcovis & Barling, 2010). That is, given that observers who

took the perspective of the target to a greater degree reported more positive attitudes toward the target (study 4) and fewer deviant intentions toward *both* the target and the perpetrator (Study 3), observer perspective-taking of the target may be a cost-effective way to mitigate the negative outcomes for targets. Further, this may be a relatively easy tactic to put into practice, because observers in both Studies 3 and 4 were more inclined to take the target's perspective than they were to take the perpetrator's perspective.

Finally, my findings highlight a potential limitation of current intervention strategies that rely on managers to make judgment calls about what constitutes aggression and how it should be dealt with. Specifically, although I found that power did not consistently affect observer reactions, I did find that observers were more likely to develop positive attitudes toward (Studies 2 and 4) and to engage in more perspective-taking of (Study 4) the actor who was more liked, regardless of whether the liked actor was the target or the perpetrator of the aggression. Managers may not be aware of the extent to which their preexisting relationships with and perceptions of their employees affect their judgment regarding an incident of aggression; therefore, they may support employees they like to the detriment of those they don't, even when those they like perpetrate aggression. Although instructing managers to try to overcome this tendency themselves is unlikely to be successful (Frantz & Janoff-Bulman, 2000), encouraging perspective-taking of the target—for example, by asking managers to focus on the similarities between the manager and the target (Parker et al., 2008)—may be effective to this end. Future research will be needed to examine the relative merit of these recommendations for workplace interventions.

Methodological Implications

Studying observers of aggression is an important avenue for future research, but it is not without difficulties. For example, although I was able to manipulate whether participants witnessed an aggressive or a neutral interaction in a lab setting (Study 1), as well as their relationship with each of the target and the perpetrator (Study 2), there are certainly logistical and ethical limitations on manipulating witnessed aggression and observer relationships outside of a controlled laboratory experiment. In a field setting, researchers are not able to assign individuals to the role of observer or non-observer of aggression or to control the observer's relationships. As such, although lab-based experiments and vignette designs are a useful starting point for establishing that observer responses are affected by witnessed aggression (i.e., internal validity), researchers will need to employ different techniques to study how observers *actually* perceive and respond to witnessed aggression outside of the lab (i.e., ecological validity).

I attempted to address this issue in Study 4 by using an event-based diary design in which observers reported their relationship with and perceptions of each actor involved in each particular incident of witnessed aggression. This design allowed me to examine observers' actual experiences witnessing aggression among people that they work with on a regular basis (i.e., rather than among individuals they did not know [Studies 1 and 3] or among hypothetical others [Study 2]). Another alternative for future research may be to use a critical incident unit of analysis for interview and questionnaire designs (Flanagan, 1954), where participants can be asked to recount a specific event in detail (e.g., a specific incident of witnessed workplace aggression). Both the event-based diary design and the critical incident technique will allow researchers to assess the observer's

perception of a specific incident of witnessed aggression, as well as the observer's relationship with and response to each actor.

Unfortunately, both of these approaches may suffer from a retrospective bias. That is, because participants rate their relationships with the target and the perpetrator *after* the witnessed incident of aggression, observers' perception of their preexisting relationships with each actor could have been altered by the witnessed aggression (i.e., observers may be motivated to alter their perceptions of their relationships with someone who they now perceive to be aggressive [the perpetrator] or worthy of being aggressed against [the target]). Therefore, methodological approaches that measure observers' relationships with the colleagues who may become targets and/or perpetrators of aggression *before* the aggression occurs (either using self- or other-reports) may be very useful. Social network research methods may be ideally suited to this task (see Wasserman & Faust, 1994). Specifically, social network analysis allows researchers to consider how an observer's relationship with each of their colleagues predicts or is affected by other variables of interest. Therefore, this method could be used in three important ways. First, social network analysis could be used to establish observers' preexisting relationships with individuals who may become targets and/or perpetrators of aggression and used to examine how these relationships influence observer perspective-taking as well as observer attitudinal and behavioural reactions. Second, observers' relationships could be repeatedly measured over time to examine whether observers' relationships with targets and perpetrators of aggression change over time (i.e., in concert with their perspective-taking and attitudinal and behavioural reactions). Finally, social networks analysis could be used to identify targets and perpetrators of particular incidents

of aggression (as reported by observers), so that any changes in these individuals' outcomes (e.g., targets' and perpetrators' well-being and work-related success) could be examined following the aggression.

Some Next Steps for Research on Observers of Aggression

As I discussed in Chapter I, there are a number of next steps that emerge from the finding that observers' attitudes and behaviours toward targets and perpetrators are affected following a witnessed incident of aggression. For example, given that observers are more likely to engage in deviance toward targets of aggression than non-targets (Study 1) and that observers who take the perspective of the perpetrator are more likely to perceive the aggression as justified and thus report more deviant intentions (Study 3) and more negative attitudes (Study 4) toward the target, the presence of observers may exacerbate the negative outcomes of workplace aggression for targets. Therefore, future research examining how target outcomes (e.g., targets' relationship quality, well-being, and work-related success) may differ depending on whether observers were present, as well as on observer perspective-taking and attitudinal and behavioural responses toward the target, will be important. We already know that workplace aggression has significant negative effects for targets; such research would shed light on whether these negative effects are further magnified by the presence of observers.

Similarly, I found that observers reported more negative attitudes and were more likely to engage in deviance toward perpetrators of aggression than non-perpetrators (study 1) and that observers who took the perspective of the target were more likely to perceive the aggression as unjustified and thus reported more negative attitudes (Studies 3 and 4) and fewer helping intentions (Study 3) toward the perpetrator. As such, it

appears that observers' perception of and relationships with perpetrators are also negatively affected by witnessing aggression. Therefore, in addition to considering how the presence of observers affects target outcomes, future research will likely benefit from examining how perpetrators' relationships, well-being, and work-related outcomes are affected as well. As I discussed in the Methodological Implications section above, social network research methods may be an tool to this end (see Wasserman & Faust, 1994). For example, participants could be asked to identify the target and the perpetrator of each aggressive event they witnessed (as well as their attitudinal and behavioural response to each). Researchers could then use this information to predict changes in the relationships, well-being, and/or work-related success of both the target and the perpetrator as a result of others witnessing an aggressive interaction between them.

In addition to examining how observer reactions to witnessed aggression influence target and perpetrator outcomes, there are a number of additional research questions concerning observers of aggression I was not able to address in my dissertation, but that I believe warrant future study. I discuss some key future research questions below.

The present research suggests that whose perspective an observer takes influences the observer's subsequent evaluation of the target and the perpetrator (Studies 3 and 4). Therefore, what predicts perspective-taking seems to be an important research question for further study. Although I considered the relational variables of liking and power as potential predictors of perspective-taking, other factors may influence perspective-taking as well, and these may be more directly influenced by the organization.

For example, as I discussed in Chapters IV and V, individuals need to be both motivated and cognitively able to engage in perspective-taking for this behaviour to occur (Parker et al., 2008). Therefore, motivational factors such as the perceived importance of perspective-taking may influence the extent to which the observer takes the perspective of the target and/or the perpetrator (Parker et al., 2008). Organizational practices that stress the importance of perspective-taking for effective interpersonal management—for example, by providing direct perspective-taking training to employees—may increase the likelihood that employees will be motivated to perspective-take. Given that observer perspective-taking of the target is associated with positive (i.e., potentially buffering) outcomes for the target, organizations may be well-advised to stress the importance of taking the target's perspective to their managers. Research will be needed to examine the effectiveness of each of this potential strategy.

In addition to the motivational antecedents of perspective-taking, personal factors may also increase the likelihood that observers will attempt to take the perspective of the target and the perpetrator. For example, observers should feel better able to understand (i.e., be cognitively able to take) the perspective of another individual when they feel they have something in common with him or her (Parker et al., 2008). Researchers have found that individuals are more likely to empathize with those who share their salient characteristics than with those who do not (Ashforth & Mael, 1989; Gurin & Townsend, 1986). Therefore, observers who share an identity with the target or the perpetrator should be more likely to take the similar actor's perspective. Although individuals have many social identities, each of these identities may be primed by certain contexts (Brewer & Gardner, 1996). For example, in the context of the workplace, one's organizational or

team membership may be the dominant identity. In contrast, in a social environment, one's social group or club membership may become the dominant identity. However, when the context is ambiguous (e.g., when both the target and the perpetrator are members of one's organizational group), individuals may identify with a broader identity, such as their gender or ethnic group. Indeed, Montgomery (1997) notes that, when additional information is not available, individuals use the race and gender of other individuals as a heuristic for identification. In my dissertation studies, I purposefully excluded a consideration of gender in order to establish a baseline effect of witnessed aggression (i.e., in Studies 1 and 3, I matched participants by gender to conditions so that male observers witnessed a male perpetrator aggressing against a male target and female observers witnessed a female perpetrator aggressing against a female target and in Study 2 I used gender neutral names for the target and the perpetrator). I believe this approach was appropriate given the preliminary nature of research on observers of aggression. However, because observers should be more likely to take the perspective of an actor when he or she shares a gender identity with the observer, examining how gender diversity in the target-perpetrator-observer triad influences observer perspective-taking will be important to consider as research on observers moves forward.

Another reason that I excluded gender from my dissertation studies is due to the potential confound between gender and power. Specifically, the socio-historical context of the relationship between men and women is one of male dominance over females (Cleveland & Kerst, 1993; Cortina et al., 2002; Koss, Goodman, Browne, Fitzgerald, Keita, & Russo, 1994). In addition, although women have been gaining status in organizations, the majority of high power organizational roles are still occupied by men

(Berdahl, Magley, & Waldo, 1996; see also EEOC, 2009 Table 3). As such, observers may infer that male actors have more power than female actors. This potential confound may account for the inconsistency in the effect of power on observer attitudes, which was supported in Study 2 (i.e., when I controlled for gender by using gender neutral names for the hypothetical target and perpetrator) but was not supported in Study 4 (i.e., when I was not able to control gender because observers reported on their actual experiences witnessing aggression among their colleagues). As such, it will be important to examine how the gender of the target and the perpetrator, as well as the gender *similarity* between the observer and each of the target and the perpetrator influence observer attitudes and behaviours toward each actor. Given that I investigated observed aggression completely devoid of gender, a next important step will be to examine how gender effects play into observer reactions to workplace aggression.

Finally, in my dissertation I considered observers' perception of the justifiability of the aggression as a cognitive mediator of perspective-taking on observer attitudes and behaviours toward the target and the perpetrator. I chose to focus on perceptions of justifiability because it is related to the locus dimension of Weiner's (1985, 1986) attribution theory. That is, according to Weiner, individuals attribute blame for a (negative) event or outcome based on their perception of whether the locus (or source) of the event or outcome was internal or external to the focal individual. However, there are two additional dimensions to attribution theory that I did not consider: stability (i.e., does the event/outcome occur the time [stable] or only once in a while [unstable]?) and controllability (i.e., was the event/outcome under the control of the individual [controllable] or was it beyond his or her control [uncontrollable]). Weiner has argued

that the controllability dimension in particular is associated with predictable emotional responses (e.g., pity, anger, guilt, shame). For example, targets who perceive that their mistreatment was beyond their control are likely to feel anger toward the perpetrator whereas targets who perceive that they were in control are likely to feel guilt or shame. On the other hand, *observers* who perceive that an incident of mistreatment was under the target's control are likely to feel anger toward the target, whereas attributions of uncontrollability should elicit pity (see Weiner, 1980a, 1980b, 1985; Weiner, Graham, & Chandler, 1982). Similarly, observers who perceive that the perpetrator's aggressive behaviour was under the perpetrator's control are likely to feel anger toward the perpetrator, whereas attributions of uncontrollability to the perpetrator may elicit indifference. These different emotional responses to witnessed aggression will likely elicit different patterns of attitudinal and behavioural responses from observers (see Weiss & Cropanzano, 1996). As such, future research will likely benefit from considering both cognitive and emotional mediators of perspective-taking on observer responses to witnessed aggression.

Conclusion

Considering the social context in which dyadic incidents of aggression occur is crucial to the continued study of workplace aggression, not only because the context influences the dyadic interaction, but because the interaction influences the context. By broadening the scope of workplace aggression research to include all those individuals who may be affected (i.e., targets, perpetrators, and observers), we will better understand how aggression persists in organizations and thus will be in a better position to effectively intervene.

Table 14

Overview of all of the hypotheses from Studies 1, 2, 3, and 4.

Hypothesis	Study 1	Study 2	Study 3	Study 4
<i>H1a: All else equal, observers will report greater negative attitudes toward an actor when he or she is the target of aggression than when he or she is not the target of aggression</i>	No <i>No difference between observer attitudes toward targets compared to non-targets</i>	n/a	n/a	n/a
<i>H1b: All else equal, observers will report greater negative attitudes toward an actor when he or she is the perpetrator of aggression than when he or she is not the perpetrator of aggression</i>	Yes	n/a	n/a	n/a
<i>H1c: All else equal, observers will report greater negative attitudes toward a perpetrator than toward a target of aggression</i>	Yes	n/a	n/a	n/a
<i>H2a: All else equal, observers will enact more deviance toward an actor when he or she is the target of aggression than when he or she is not the target of aggression</i>	Yes	n/a	n/a	n/a
<i>H2b: All else equal, observers will enact more deviance toward an actor when he or she is the perpetrator of aggression than when he or she is not the perpetrator of aggression</i>	Yes	n/a	n/a	n/a

<i>Hypothesis continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H2c: All else equal, observers will enact more deviance toward a perpetrator than toward a target of aggression</i>	No	n/a	n/a	n/a
	<i>No difference in observer deviance toward the target and perpetrator in the aggression condition</i>			
<i>H3: All else equal, observers will enact less helping toward the perpetrator than toward the target of aggression</i>	Yes	n/a	n/a	n/a
<i>H4a: Observers will report greater positive attitudes toward the target when the observer liked the target before they witnessed the aggression than when the observer disliked the target</i>	n/a	Yes	n/a	n/a
<i>H4b: Observers will report greater positive attitudes toward the perpetrator when the observer liked the perpetrator before they witnessed the aggression than when the observer disliked the perpetrator</i>	n/a	Yes	n/a	n/a
<i>H5a: Observers will report fewer deviant intentions toward the target when the observer liked the target before they witnessed the aggression than when the observer disliked the target</i>	n/a	Yes	n/a	n/a

<i>Hypothesis continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H5b: Observers will report fewer deviant intentions toward the perpetrator when the observer liked the perpetrator before they witnessed the aggression than when the observer disliked the perpetrator</i>	n/a	Yes	n/a	n/a
<i>H6a: Observers will report more helping intentions toward the target when the observer liked the target before they witnessed the aggression than when the observer disliked the target</i>	n/a	Yes	n/a	n/a
<i>H6b: Observers will report more helping intentions toward the perpetrator when the observer liked the perpetrator before they witnessed the aggression than when the observer disliked the perpetrator</i>	n/a	Yes	n/a	n/a
<i>H7a: When one actor is liked more than the other actor, observers will report greater positive attitudes toward the actor they liked as compared to the actor they disliked</i>	n/a	Yes	n/a	Yes
<i>H7b: When one actor is liked more than the other actor, observers will report fewer deviant intentions toward the actor they liked as compared to the actor they disliked</i>	n/a	No <i>No interaction between target liking and perpetrator liking</i>	n/a	n/a
<i>H7c: When one actor is liked more than the other actor, observers will report more helping intentions toward the actor they liked as compared to the actor they disliked</i>	n/a	Yes	n/a	n/a

<i>Hypothesis continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H8a: Observers of aggression will develop greater positive attitudes toward the target when the target has high power than when the target has low power</i>	n/a	Yes	n/a	No <i>Fixed effect of target-observer relative power was not significant</i>
<i>H8b: Observers of aggression will develop greater positive attitudes toward the perpetrator when the perpetrator has high power than when the perpetrator has low power</i>	n/a	Yes	n/a	No <i>Fixed effect of perpetrator-observer relative power was not significant</i>
<i>H9a: Observers of aggression will report fewer deviant intentions toward the target when the target has high power than when the target has low power.</i>	n/a	Yes	n/a	n/a
<i>H9b: Observers of aggression will report fewer deviant intentions toward the perpetrator when the perpetrator has high power than when the perpetrator has low power</i>	n/a	No <i>No significant main effect of perpetrator power</i>	n/a	n/a
<i>H10a: Observers of aggression will report more helping intentions toward the target when the target has high power than when the target has low power</i>	n/a	Yes	n/a	n/a
<i>H10b: Observers of aggression will report more helping intentions toward the perpetrator when the perpetrator has high power than when the perpetrator has low power</i>	n/a	No <i>No significant main effect of perpetrator power</i>	n/a	n/a

<i>Hypothesis continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H11a: When the perpetrator has more power than the target, observers will report greater positive attitudes toward the (low powered) target as compared to the (high powered) perpetrator</i>	n/a	No <i>No interaction between target power and perpetrator power</i>	n/a	No <i>Fixed effect of perpetrator-target relative power was not significant</i>
<i>H11b: When the perpetrator has more power than the target, observers will report fewer deviant intentions toward the (low powered) target as compared to the (high powered) perpetrator</i>	n/a	No <i>Observers reported significantly fewer deviant intentions toward the high-powered perpetrator than the low-powered target</i>	n/a	n/a
<i>H11c: When the perpetrator has more power than the target, observers will report more helping intentions toward the (low powered) target as compared to the (high powered) perpetrator</i>	n/a	No <i>There was no significant difference between observers' helping intentions of the high-powered perpetrator as compared to the low-powered target</i>	n/a	n/a

Hypothesis <i>continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H12a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report more positive attitudes towards the perpetrator</i>	n/a	n/a	Yes	Yes
<i>H12b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report less positive attitudes towards the perpetrator</i>	n/a	n/a	Yes	Yes
<i>H13a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report fewer deviant intentions towards the perpetrator</i>	n/a	n/a	No <i>The indirect effect of observer perspective-taking of the perpetrator was positive and significant</i>	n/a
<i>H13b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report greater deviant intentions towards the perpetrator</i>	n/a	n/a	No <i>The indirect effect of observer perspective-taking of the target was negative and significant</i>	n/a

<i>Hypothesis continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H14a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report greater helping intentions towards the perpetrator</i>	n/a	n/a	Yes	n/a
<i>H14b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report fewer helping intentions towards the perpetrator</i>	n/a	n/a	Yes	n/a
<i>H15a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report more negative attitudes towards the target</i>	n/a	n/a	No <i>The indirect effect of observer perspective-taking of the perpetrator was not significant</i>	Yes
<i>H15b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report more positive attitudes towards the target</i>	n/a	n/a	No <i>The indirect effect of observer perspective-taking of the target was not significant</i>	Yes
<i>H16a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report greater deviant intentions towards the target</i>	n/a	n/a	Yes	n/a

Hypothesis continued	Study 1	Study 2	Study 3	Study 4
<i>H16b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report fewer deviant intentions towards the target</i>	n/a	n/a	Yes	n/a
<i>H17a: When an observer adopts the perspective of a perpetrator, the observer is more likely to perceive the perpetrator's aggression as justifiable and hence report fewer helping intentions towards the target</i>	n/a	n/a	No <i>The indirect effect of observer perspective-taking of the perpetrator was not significant</i>	n/a
<i>H17b: When an observer adopts the perspective of a target, the observer is more likely to perceive the perpetrator's aggression as unjustifiable and hence report greater helping intentions towards the target</i>	n/a	n/a	No <i>The indirect effect of observer perspective-taking of the target was not significant</i>	n/a
<i>H18: All else equal, observers will be more likely to take the perspective of the target than the perpetrator</i>	n/a	n/a	Yes	Yes
<i>H19a: Observers will be more likely to take the perspective of the target when the target is more liked than the perpetrator</i>	n/a	n/a	n/a	Yes
<i>H19b: Observers will be more likely to take the perspective of the perpetrator when the perpetrator is more liked than the target</i>	n/a	n/a	n/a	No <i>Fixed effect of relative liking was not significant</i>

Hypothesis <i>continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H20a: Observers will be more likely to take the perspective of the target when the target has high power relative to the observer than when the target has low power relative to the observer</i>	n/a	n/a	n/a	No <i>Fixed effect of target-observer relative power was not significant</i>
<i>H20b: Observers will be more likely to take the perspective of the perpetrator when the perpetrator has high power relative to the observer than when the perpetrator has low power relative to the observer</i>	n/a	n/a	n/a	No <i>Fixed effect of perpetrator-observer relative power was not significant</i>
<i>H21a: Observers will be more likely to take the perspective of the target when the target has low power relative to the perpetrator than when the target has high power relative to the perpetrator</i>	n/a	n/a	n/a	No <i>Fixed effect of perpetrator-target relative power was not significant</i>
<i>H21b: Observers will be less likely to take the perspective of the perpetrator when the target has low power relative to the perpetrator than when the target has high power relative to the perpetrator</i>	n/a	n/a	n/a	No <i>Fixed effect of perpetrator-target relative power was not significant</i>
<i>H22a: When an observer perceives that the target is more liked than the perpetrator, the observer will be more likely to adopt the perspective of the target, and thus will report more positive attitudes towards the target</i>	n/a	n/a	n/a	Yes

<i>Hypothesis continued</i>	Study 1	Study 2	Study 3	Study 4
<i>H22b: When the target has high power, the observer will be more likely to adopt the perspective of the target, and thus will report more positive attitudes towards the target</i>	n/a	n/a	n/a	No <i>Fixed effect of target-observer relative power (i.e., H20a) was not significant</i>
<i>H23a: When an observer perceives that the perpetrator is more liked than the target, the observer will be more likely to adopt the perspective of the perpetrator, and thus will report more positive attitudes towards the perpetrator</i>	n/a	n/a	n/a	No <i>Fixed effect of relative liking (i.e., H19b) was not significant</i>
<i>H23b: When the perpetrator has high power, the observer will be more likely to adopt the perspective of the perpetrator, and thus will report more positive attitudes towards the perpetrator</i>	n/a	n/a	n/a	No <i>Fixed effect of target-observer relative power (i.e., H20b) was not significant</i>

Chapter VII

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Appendix B

Informed Consent



Department of Business Administration
 428 or 426 Drake Centre
 181 Freedman Crescent
 Winnipeg, Manitoba
 Canada R3T 5V4
 Telephone (204) 474-9672 or 474-8370
 Fax (204) 474-7545

Hello, my name is Tara Reich, and I would like to invite you to participate in two studies. The first study is intended to examine how lighting affects mood, creativity, and productivity. The second study is intended to examine the relationship between personality and taste preferences. Please read the following consent form and indicate whether you are willing to participate.

This consent form, a copy of which you will be provided for your records, is only part of the process of informed consent. It should give you a basic idea of what the studies are about and what your participation will involve. If you would like more information, please feel free to contact Tara at the email address or phone number provided below. Please take the time to read this carefully.

By signing your name below, you are consenting to participate in the studies (1) "Lighting in the Workplace," which is being conducted by Tara Reich, a PhD candidate at the University of Manitoba and (2) "Personality and Taste Preferences," which is being conducted by Dr. Raj Manchanda, a professor at the University of Manitoba. These studies have been approved by the Joint Faculty Research Ethics Board at the University of Manitoba.

Your participation in study 1 will involve brainstorming ideas in a small group to improve interfaculty communication at the University of Manitoba, and then completing a sorting task, either in bright (i.e., overhead) lights or in low (i.e., lamp) light. You will also be asked to complete a number of short questionnaires about the exercise, about the people you worked with, and about yourself. Your participation in study 2 will involve completing a number of questionnaires and then tasting and evaluating a series of sauces.

Please note that we will be videotaping the group discussion task so that we have a record of the ideas generated. If you do not want your video to be retained, you will have the option of deleting your group's video at the conclusion of Study 1.

Study 1 will take approximately 25 minutes to complete, and study 2 will also take approximately 25 minutes. Your entire participation will take no more than one hour.

There are no known risks associated with these studies. Please understand that you don't have to answer any questions that make you uncomfortable or that you just don't want to

answer. All personal information will be kept in the strictest of confidence, and all data will be kept under lock and key.

If you are interested in receiving a copy of the results of the survey, which will be available in June, 2011, please contact Tara Reich at the email address or phone number provided below.

If you have any questions about this study, please contact Tara Reich in Room 371F Drake Centre at the Asper School of Business, (204) 474-8793, or at umreich@cc.umanitoba.ca. Alternatively, you may contact Dr. Sandy Hershcovis in Room 424 Drake Centre, (204) 474-9951, or at Sandy_Hershcovis@umanitoba.ca. If you have any concerns about this study, please contact Laurine Harmon at the Human Ethics Secretariat at the University of Manitoba at (204) 474-8872, or at lharmon@cc.umanitoba.ca. Finally, please understand that your answers will be kept by the researchers for 5 years after they have been published, and then the data file will be deleted.

By signing this form, you are indicating that you understand to your satisfaction the information regarding your participation in these studies and agree to participate. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from either study at any time and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Signature: _____ Date: _____

Appendix C

Positive and Negative Affect Scale

Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then indicate the appropriate answer on the scale next to the word. Indicate to what extent you feel this way right now, that is, at the present moment.

Please note: There are NO RIGHT OR WRONG answers to these questions; your responses are confidential and anonymous! To match your responses throughout this study, this sheet will be stapled to the questionnaire you will complete following the group discussion task.

	<i>Very slightly or not at all</i>	<i>A little</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
a. Interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Distressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Excited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Strong	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Guilty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Hostile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Enthusiastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Proud	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Irritable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Alert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Ashamed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Inspired	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Determined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Attentive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r. Jittery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s. Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t. Afraid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix D

Confederate Script: Brainstorming Task

Target: Okay... what about holding some kind of speaker night where instructors talk about highlights of their faculty and students can ask questions

Perpetrator: Or we could do something *fun*... like organizing a pool tournament at IQs for different faculties to play each other?

Target: Oh, how about doing something with like a reality show theme? Like organizing an American Idol/So You Think You Can Dance-type event so that students and faculty can show off their talents?

Perpetrator: For faculty maybe we'd need something more formal. We could maybe organize a university-wide wine and cheese.

Target: Or for faculty we could organize an interfaculty mixer, where faculty members could meet and plan research collaborations.

Perpetrator: [AGGRESSION ONLY: mutter sarcastically and make a face] that sounds like fun. How about doing an inter-faculty 20 questions game where you have to answer questions like which faculty am I in?

Target: For students we could get them together to do a team ice breaker, like getting them to build something together or something like that.

Perpetrator: [AGGRESSION ONLY: say something snide] We could maybe create an inter-faculty sports team where instead of one faculty playing against another, we could get members from different faculties on one team playing together. Both students and instructors could be on the teams.

Target: We could hold monthly movie nights and each time a different faculty gets to choose the movie.

Perpetrator: [AGGRESSION ONLY: snide] How would sitting in dark watching a movie help people to get to know each other?

Target: Well maybe we could have some kind of meet and mingle before the movie starts.

Perpetrator: [AGGRESSION ONLY: rolling his/her eyes] How about organizing a karaoke night on campus and kick the night off by getting faculties to create their own "faculty song".

Target: We could maybe organize some kind of treasure hunt where teams from different faculties to get together and search for things all around campus. Each team has to include at least one faculty member [**Keep rambling until the perpetrator cuts you off**]

Perpetrator: *Sure, okay...* we could organize inter-faculty fund raisers that get people to work together for a local cause.

Target: How about if we could arrange for students in one faculty to give tours of their faculty to students from other faculties who were interested...

Perpetrator: How about like a big Wii tournament where people compete against each other on Wii sports.

Target: That would be fun, but I guess it would be hard to get too many people involved in that.

Perpetrator: I don't know, I think we could do it.

Appendix E

Attitudes toward the Confederates

Please use the scales below to answer the following questions. Choose the selection that best corresponds with your opinion.

a) Please evaluate each of your group members on the following scale:

	<i>Pleasant</i>						<i>Unpleasant</i>
The person to your left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The person to your right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Please evaluate each of your group members on the following scale:

	<i>Active</i>						<i>Passive</i>
The person to your left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The person to your right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c) Please evaluate each of your group members on the following scale:

	<i>Good</i>						<i>Bad</i>
The person to your left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The person to your right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

d) Please evaluate each of your group members on the following scale:

	<i>Honest</i>						<i>Dishonest</i>
The person to your left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The person to your right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) Please evaluate each of your group members on the following scale:

	<i>Strong</i>						<i>Weak</i>
The person to your left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The person to your right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

f) Please evaluate each of your group members on the following scale:

	<i>Valuable</i>		<i>Worthless</i>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix F

Taste Preferences Inventory

NAME: _____

Please note: Your name will be removed from this sheet once this part of the study is over to protect your anonymity.

Using the following scales, please rate the extent to which you like each of the following flavours:

Sweet

No liking at all Extreme liking
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Salty

No liking at all Extreme liking
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Spicy

No liking at all Extreme liking
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Sour

No liking at all Extreme liking
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Appendix G

Second Experimenter Script

[At 539] Hi. My name is J.P. and I'll be taking you the next study. Please grab your name cards and come with me.

[At 663] So this study is called 'Personality and Taste Preferences'. We are looking at the relationship between personality traits and people's taste preferences, in terms of what they think they like and what they actually like. I am going to ask you to fill out a short 'taste preferences' questionnaire, which is going to ask how much you like each of a series of flavours. Then I am going to pick one of you to help me prepare some sauces that are an example of some of these flavours in another room. In the meantime, the other two will fill out a personality questionnaire. Then you'll actually taste the sauces and rate how much you like or don't like it.

So first, I will get you all to do the 'taste preferences' survey **[hand out 'taste preferences' survey and wait for them all to finish them; then take all three]**

Okay, now I just need to select one of you to help me in the other room... **[ask each P to select a slip of paper; the true P's will say 'Sauce pourer'; ask him/her to come with you to 657]**

[BEFORE LEAVING WITH THE TRUE P] While you wait, can you guys fill in this quick personality survey?

[Walk true P to 657; when in room:] Thank you for helping with pouring the sauces! Your job is pretty easy; you just need to pour the two sauces – they're labeled 'Sauce A' and 'Sauce B' – that the other participants are going to taste in this room and then bring them into them in the other room. Today we are doing 'spicy'; Sauce A is *really* spicy

and Sauce B is pretty mild [**glance at taste preferences sheet of confederates**], and that's too bad, since neither of these guys likes spicy at all... oh well, you'll get to decide who gets that one...

There is an order to how the sauces need to be poured: [**review with the recording sheet**] in the first taste test, you will pour Sauce *A* into one of the red bowls and Sauce *B* into a blue bowl, then weigh each bowl and record how much it weighs (in grams) [**point to where**]. You can use these measuring spoons to put in however much you want – they will have to eat all you give them – but try to put in anywhere between 1 and 10 teaspoons.

Once you've weighted them, put one bowl on each tray for each participant – the trays are labeled with the name of the person who is going to get each sauce – and bring them in to the other room for the other participants, then head back in here to set up for the next taste test.

In the second taste test, both participants will try Sauce *A*, so pour Sauce *A* into two red bowls; put different amounts of the sauce into each bowl, just for variety. Then, again, you weigh each bowl and record its weight (in grams) [**point to where**]. Put the bowls on the trays for each participant to eat – I will bring the trays back for you – and bring them in to the other room.

In the last taste test, you do the same as taste test 2, but with Sauce *B*; so pour Sauce *B* into two blue bowls, weigh each bowl and record the weight [**point to where**]. Put the bowls on the trays and bring them in to the other room.

[**Hand participant the other Ps' 'taste inventories'**] Here are the taste preference inventories of the other participants, you can use them to help you decide how much each

gets if you want. All of these instructions are at the sauce pouring station, but do you have any questions? ... Just feel free to ask me if anything isn't clear at any point!

Go ahead and set up for the first taste test – Sauce A in the red bowl and Sauce B in the blue – and bring them in whenever you are ready!

Appendix H



Department of Business Administration
428 or 426 Drake Centre
181 Freedman Crescent
Winnipeg, Manitoba
Canada R3T 5V4
Telephone (204) 474-9672 or 474-8370
Fax (204) 474-7545

DEBRIEFING SHEET

Thank you for your participation in the studies “Lighting in the Workplace” and “Personality and Taste Preferences.” The time you have taken and the information you have provided is greatly appreciated. The study “Lighting in the Workplace” asked you to evaluate the quality of ideas that were generated by two other participants, and also gave you an opportunity to make some additional money by stuffing a certain number of envelopes. You were told that some groups would work in low light, while others would work in bright light. The study “Personality and Taste Preferences” asked you to administer sauces, one spicy and one mild, to the two other participants in a series of taste trials.

In actuality, the other participants you worked with are study confederates; they are actors who work for the primary researcher. The ideas they came up with in the “Lighting in the Workplace” study were scripted.

What we are really interested in across both studies is how people react when they witness aggression; that is, how observers’ attitudes and behaviours toward both the perpetrator and the target of the aggression are influenced. Some people who participate in the study saw one of the study confederates behave aggressively toward the other participant (Aggression Condition) in the idea generating task, while others saw the two confederates behaving civilly toward one another (Neutral Condition). You were given opportunities over the course of the study to evaluate each of the confederates (i.e., in the questionnaire booklet), to help each of the confederates (i.e., to finish stuffing their envelopes so they could be paid), and to punish each of the confederates (i.e., with the amount of spicy sauce you gave them to eat). We want to understand how witnessing aggression between two people the observer doesn’t know affects their attitudes and behaviours toward both the perpetrator and the target. To examine this question, we will compare participants’ attitudes and behaviours toward each confederate in the Aggression Condition with participants’ attitudes and behaviours toward the same confederates in the Neutral Condition.

We used a cover story in this study because, if participants knew that we were interested in how witnessing aggression affects their attitudes and behaviours, they may not behave naturally in the study. We hope you understand the need to maintain this cover story, and will ask you to sign a confidentiality agreement stating that you will not reveal the true nature of this study to anyone until the study ends (September 30, 2010). Your continued participation in keeping this information to yourself will be greatly appreciated, and is necessary to maintain the integrity of the study.

Your responses in all parts of this study will be kept entirely confidential. All data is numerically coded and for research use only. Your name will never be associated with your responses, and all data will be kept under lock and key. You will be asked to sign a confidentiality agreement as

well as a log to confirm that you received payment for this study; this information will be kept separate from your data.

Thank you again for your participation. If you have any questions regarding this study or would like to request a copy of the results (available in June 2011), please contact researchers Tara Reich (umreich@cc.umanitoba.ca, 474-8793). Please direct ethical concerns to Laurine Harmon at the Human Ethics Secretariat (lharmon@cc.umanitoba.ca, 474-8872).

If you experience any emotional distress after completing this study,
please do not hesitate to contact one of the following sources:

Student Counseling and Career Centre	474-8592
Psychological Service Centre	474-9222

Appendix I

Informed Consent

Hello, my name is Tara Reich, and I would like to invite you to participate in a study on multitasking at work. Please read the following consent form and indicate whether you are willing to participate.

This consent form, a copy of which you may pick up from the researcher at the end of this study, is only part of the process of informed consent. It should give you a basic idea of what the research is about and what your participation will involve. If you would like more information, please feel free to contact the researcher at the email address or phone number provided below. Please take the time to read this carefully.

By selecting "I agree" below, you are consenting to participate in the study "Multitasking at Work" which is being conducted by Tara Reich, a PhD candidate at the University of Manitoba, under the supervision of Dr. Sandy Hershcovis. This study has been approved by the Joint Faculty Research Ethics Board. Please be aware that the goal of this study is to examine individuals' ability to respond to multiple e-mail requests. Your participation will involve reading and responding to a number of "e-mailed" requests. We will be recording the time you take to address these e-mails. Some people who complete this study will be given many e-mail requests to respond to while others will only have a few. We will also ask a few questions about yourself (specifically, we will ask you to indicate your age, gender, first language and ethnicity). Your participation will take approximately 30 minutes.

There are no known risks associated with this research. Please understand that you don't have to answer any questions that make you uncomfortable or that you just

don't want to answer. All personal information will be kept in the strictest of confidence, and all data will be kept under lock and key.

If you are interested in receiving a copy of the results of the study, which will be available in April, 2009, please contact Tara Reich at the e-mail address or phone number provided below.

If you have any questions about this study, please contact Tara Reich in Room 371F Drake Centre at the Asper School of Business, (204) 474-8793, or at umreich@cc.umanitoba.ca. Alternatively, you may contact Dr. Sandy Hershcovis in Room 424 Drake Centre, (204) 474-9951, or at Sandy_Hershcovis@umanitoba.ca. If you have any concerns about this study, please contact Margaret Bowman at the Human Ethics Secretariat at the University of Manitoba at Margaret_Bowman@umanitoba.ca, or at (204) 474-7122. Finally, please understand that your answers will be kept by the researchers for 5 years after they have been published, and then the data file will be deleted.

By clicking "I agree", you are indicating that you understand to your satisfaction the information regarding participation in the research project and agree to participate. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this study at any time and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

I AGREE (continue to survey)

I DISAGREE

Appendix J

Overall Instructions

WELCOME TO THIS STUDY OF MULTITASKING AT WORK

On the next page, you will find information about this survey and about your participation. The survey will take about 30 minutes.

You may choose to exit the survey at any time.

In order to ensure you receive course credit for participating in this study, please enter your student number in the box below.

Your student number will only be used to assign your course credit, and will **not** be associated with your responses.

Student number (7 digits): _____

PLEASE READ THESE INSTRUCTIONS CAREFULLY

In this study, you will be asked to reply to several e-mails that an employee working in a **furniture design and manufacturing company** might be sent.

In many jobs today, employees have to deal with e-mailed requests throughout the day.

The current study is interested in employees' ability to deal with multiple types of emails while performing their work. Some people who complete this study will be sent **many** e-mails, while others will only be sent **a few**. Also, some of these e-mails will be on-task (i.e., will have to do with work) while others will be off-task (i.e., will not have to do with work). Your task in this study will be to write a short reply to each of the e-mails

you receive from your "colleagues". Please write your reply **in the space provided** and please **address your colleague by their name**.

Please note that your replies will be TIMED, so reply to the e-mails as quickly and accurately as possible. You will receive a warning before the timed section begins.

Please respond to each question to the best of your ability, even if you do not feel you have enough information to make a judgment or if you feel that you have already answered the question.

When reading the following pages, please imagine that you are an employee of “**Collins Furniture and Design**” (CFD), which is a furniture design and manufacturing company.

Your e-mail address is **r.asper@CFD.ca**. Imagine that you have worked as a design technician at CFD for the past 5 years.

At CFD, you have several colleagues:

Jaime is the **vice president of sales [a design assistant]** at CFD. You have **liked [disliked]** Jaime since you started working at CFD.





Your co-worker, **Casey**, works as a **design technician (at the same level as you)**.

Robin is the **vice president of marketing [your subordinate (at a level below you)]** at CFD. You have **liked [disliked]** Robin since you started working at CFD.

Appendix K

Design E-mail 1

The following e-mail is from your **co-worker, Casey**, who you have worked with at “Collins Furniture and Design” for the past five years.

To:	r.aspen@CFD.ca
Subject:	Design question
From:	casey.smith@CFD.ca
	<p>Hey,</p> <p>I was wondering if you could let me know which of the chair designs below you like best.</p> <p>Thanks, Casey</p> <p>---</p> <p>C. Smith Design Technician Collins Furniture & Design, Ltd.</p>
	<p>Option #1</p> 
	<p>Option #2</p> 
	<p>Option #3</p>

To: casey.smith@CFD.ca

Subject: RE: Design question

From: r.asper@CFD.ca

Dear: _____

Message: _____

R. Asper

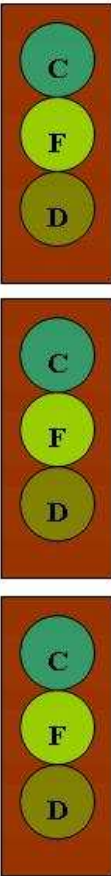



Design Technician

Collins Furniture & Design, Ltd.

Appendix L

Design E-mail 2

The following e-mail is from the **vice president of sales [your subordinate], Jaime**, who you have **liked [disliked]** since you started working at “Collins Furniture and Design” five years ago.

To:	r.aspen@CFD.ca
Subject:	Designs
From:	jaimie.green@CFD.ca
	<p>Hey,</p> <p>I am looking for a second opinion - do you like or dislike any of the coffee table designs below?</p> <p>Thanks, Jaime</p> <p>---</p> <p>J. Green Vice President of Sales Collins Furniture & Design, Ltd.</p> <p>Option #1</p>  <p>Option #2</p>  <p>Option #3</p> 

Note: The signature for this e-mail was altered in the low power condition to read “Design Assistant” instead of “Vice President of Sales.”

To: jaime.green@CFD.ca
Subject: RE: Design question

From: r.asper@CFD.ca

Dear: _____

Message: _____

- - -

R. Asper

Design Technician

Collins Furniture & Design, Ltd.

Appendix M

Design e-mail 3

The following e-mail is from the **vice president of marketing [your subordinate]**, **Robin**, who you have **liked [disliked]** since you started working at “Collins Furniture and Design” five years ago.

To:	r.aspen@CFD.ca
Subject:	footstools
From:	robin.wright@CFD.ca

C

F

D


Hey,

I was asked to choose between the footstool designs that are copied below. I think I like the first one – what do you think?


Thanks,
Robin

R. Wright
Vice President of Marketing
Collins Furniture & Design, Ltd.


Option #1



Option #2



Option #3



Note: The signature for this e-mail was altered in the low power condition to read “Design Assistant” instead of “Vice President of Marketing.”

To: robin.wright@CFD.ca

Subject: RE: Design question

From: r.asper@CFD.ca

Dear: _____

Message: _____

R. Asper

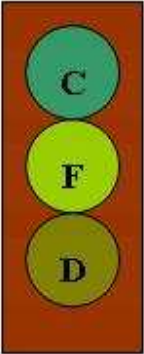
Design Technician

Collins Furniture & Design, Ltd.

Appendix N

BBQ e-mail

The following e-mail is from the **vice president of sales [your subordinate], Jaime**, who you have **liked [disliked]** since you started working at “Collins Furniture and Design” five years ago.

To:	ALL@CFD.ca
Subject:	BBQ
From:	jaime.green@CFD.ca
	<p>Hi all,</p> <p>This is just a quick reminder about the CFD barbeque next week.</p> <p>If you haven't done so already, please let me know if you can attend as soon as possible.</p> <p>Jaime --- J. Green Vice President of Sales Collins Furniture & Design, Ltd.</p>

Note: The signature for this e-mail was altered in the low power condition to read “Design Assistant” instead of “Vice President of Sales.”

To: jaime.green@CFD.ca

Subject: RE: Design question

From: r.asper@CFD.ca

Dear: _____

Message: _____

R. Asper

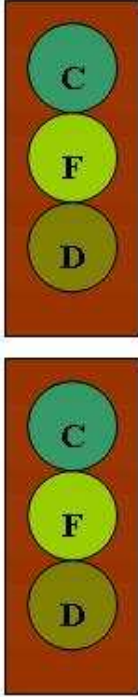
Design Technician

Collins Furniture & Design, Ltd.

Appendix O

Aggressive e-mail

The following e-mail is from the **vice president of sales [your subordinate], Jaime**, who you have **liked [disliked]** since you started working at “Collins Furniture and Design” five years ago.

To:	r.aspen@CFD.ca
Subject:	Advice...
From:	jaime.green@CFD.ca
	<p>Hello,</p> <p>Could you give me your advice on the content of the following email? I plan to send it to Robin who can't seem to find 30 seconds to email me back about the staff BBQ (I can't stand Robin)! Anyway, do you think the email is too aggressive?</p> <p>Thanks, Jaime</p> <p>---</p> <p>J. Green Vice President of Sales Collins Furniture & Design, Ltd.</p> <p>Dear Robin,</p> <p>I sent an email to everyone about the staff BBQ last week and asked for everyone to RSVP. I haven't heard from you yet. I don't care whether you come or not, but I need to know how much food to order. Respond by 5pm today or I'll mark you down as not attending. I don't have time to be chasing you about this.</p> <p>Jaime</p> <p>---</p> <p>J. Green Vice President of Sales Collins Furniture & Design, Ltd.</p>

Note: The signature for this e-mail was altered in the low power condition to read “Design Assistant” instead of “Vice President of Sales.”

To: jaime.green@CFD.ca

Subject: RE: Design question

From: r.asper@CFD.ca

Dear: _____

Message: _____

R. Asper

Design Technician

Collins Furniture & Design, Ltd.

Appendix P

Attitudes

Use the scales below to answer the following questions. Choose the selection that best corresponds with your opinion.

Please evaluate each of your colleagues on the following scale:

There are no right or wrong answers.

	Pleasant						Unpleasant
Casey	1	2	3	4	5	6	7
Jaime	1	2	3	4	5	6	7
Robin	1	2	3	4	5	6	7

Please evaluate each of your colleagues on the following scale:

There are no right or wrong answers.

	Active						Passive
Casey	1	2	3	4	5	6	7
Jaime	1	2	3	4	5	6	7
Robin	1	2	3	4	5	6	7

Please evaluate each of your colleagues on the following scale:

There are no right or wrong answers.

	Good						Bad
Casey	1	2	3	4	5	6	7
Jaime	1	2	3	4	5	6	7
Robin	1	2	3	4	5	6	7

Please evaluate each of your colleagues on the following scale:

There are no right or wrong answers.

	Honest						Dishonest
Casey	1	2	3	4	5	6	7
Jaime	1	2	3	4	5	6	7
Robin	1	2	3	4	5	6	7

Please evaluate each of your colleagues on the following scale:

There are no right or wrong answers.

	Strong						Weak
Casey	1	2	3	4	5	6	7
Jaime	1	2	3	4	5	6	7
Robin	1	2	3	4	5	6	7

Please evaluate each of your colleagues on the following scale:

There are no right or wrong answers.

	Valuable						Worthless
Casey	1	2	3	4	5	6	7
Jaime	1	2	3	4	5	6	7
Robin	1	2	3	4	5	6	7

Appendix Q

Helping Intentions

Use the scales below to answer the following questions. Choose the selection that best corresponds with your opinion.

Please indicate how likely you would be to engage in each of the following behaviors toward Casey, your co-worker who sent you the chair designs:

There are no right or wrong answers.

	Very unlikely						Very likely
Help Casey with work-related problems	1	2	3	4	5	6	7
Help Casey when Casey has been absent	1	2	3	4	5	6	7
Adjust your work schedule to accommodate Casey's requests for time off	1	2	3	4	5	6	7
Show genuine concern and courtesy towards Casey even in trying circumstances	1	2	3	4	5	6	7
Assist Casey with work duties	1	2	3	4	5	6	7
Share your personal property with Casey	1	2	3	4	5	6	7

Please indicate how likely you would be to engage in each of the following behaviors toward Jaime, the vice president of sales [your subordinate] whom you like [dislike] who sent you the BBQ e-mail and the coffee table designs:

There are no right or wrong answers.

	Very unlikely						Very likely
Help Jaime with work-related problems	1	2	3	4	5	6	7
Help Jaime when Jaime has been absent	1	2	3	4	5	6	7
Adjust your work schedule to	1	2	3	4	5	6	7

	Very unlikely						Very likely
accommodate Jaime's requests for time off							
Show genuine concern and courtesy towards Jaime even in trying circumstances	1	2	3	4	5	6	7
Assist Jaime with work duties	1	2	3	4	5	6	7
Share your personal property with Jaime	1	2	3	4	5	6	7

Please indicate how likely you would be to engage in each of the following behaviors

toward Robin, the vice president of marketing [your subordinate] whom you like [dislike]

who sent you the footstool designs:

There are no right or wrong answers.

	Very unlikely						Very likely
Help Robin with work-related problems	1	2	3	4	5	6	7
Help Robin when Robin has been absent	1	2	3	4	5	6	7
Adjust your work schedule to accommodate Robin's requests for time off	1	2	3	4	5	6	7
Show genuine concern and courtesy towards Robin even in trying circumstances	1	2	3	4	5	6	7
Assist Robin with work duties	1	2	3	4	5	6	7
Share your personal property with Robin	1	2	3	4	5	6	7

Appendix R

Interpersonally Deviant Intentions

Use the scales below to answer the following questions. Choose the selection that best corresponds with your opinion.

Please indicate the likelihood that you would engage in each of the following behaviors toward Casey, your co-worker who sent you the chair designs:

There are no right or wrong answers.

	Very unlikely						Very likely
Make fun of Casey	1	2	3	4	5	6	7
Say something hurtful to Casey	1	2	3	4	5	6	7
Make an ethnic, religious, or racial remark toward Casey	1	2	3	4	5	6	7
Curse at Casey	1	2	3	4	5	6	7
Play a mean prank on Casey	1	2	3	4	5	6	7
Act rudely toward Casey	1	2	3	4	5	6	7
Publicly embarrass Casey	1	2	3	4	5	6	7

Please indicate the likelihood that you would engage in each of the following behaviors toward Jaime, the vice president of sales [your subordinate] whom you like [dislike] who sent you the BBQ e-mail and the coffee table designs:

There are no right or wrong answers.

	Very unlikely						Very likely
Make fun of Jaime	1	2	3	4	5	6	7
Say something hurtful to Jaime	1	2	3	4	5	6	7
Make an ethnic, religious, or racial remark toward Jaime	1	2	3	4	5	6	7
Curse at Jaime	1	2	3	4	5	6	7
Play a mean prank on Jaime	1	2	3	4	5	6	7
Act rudely toward Jaime	1	2	3	4	5	6	7
Publicly embarrass Jaime	1	2	3	4	5	6	7

Please indicate the likelihood that you would engage in each of the following behaviors toward Robin, the vice president of marketing [your subordinate] whom you like [dislike] who sent you the footstool designs:

There are no right or wrong answers.

	Very unlikely						Very likely
Make fun of Robin	1	2	3	4	5	6	7
Say something hurtful to Robin	1	2	3	4	5	6	7
Make an ethnic, religious, or racial remark toward Robin	1	2	3	4	5	6	7
Curse at Robin	1	2	3	4	5	6	7
Play a mean prank on Robin	1	2	3	4	5	6	7
Act rudely toward Robin	1	2	3	4	5	6	7
Publicly embarrass Robin	1	2	3	4	5	6	7

Appendix S

Manipulation check 1

Based on the description of your colleagues at CFD that you just read, please answer the following questions:

Based on the description of your colleagues, rank order the relative power of each of the following people in this organization with 1 being the lowest level of power and 4 being the highest level of power (you may use each number more than once)

You	1	2	3	4
Jaime	1	2	3	4
Casey	1	2	3	4
Robin	1	2	3	4

Based on the description of your colleagues, please indicate how much you like each of the following employees:

	Don't like						Like very much
How much do you like Casey?	1	2	3	4	5	6	7
How much do you like Robin?	1	2	3	4	5	6	7
How much do you like Jaime?	1	2	3	4	5	6	7

Manipulation check 2

Please describe your impressions of this study, including what you believe it to have been about:

Use the scales below to answer the following questions. Choose the selection that best corresponds with your opinion.

Rank order the relative power of each of the following people in this organization with 1 being the lowest level of power and 4 being the highest level of power

You	1	2	3	4
Jaime	1	2	3	4
Casey	1	2	3	4
Robin	1	2	3	4

Please indicate how much you like each of the following employees:

	Don't like						Like very much
How much do you like Robin?	1	2	3	4	5	6	7
How much do you like Jaime?	1	2	3	4	5	6	7
How much do you like Casey?	1	2	3	4	5	6	7

Appendix T

Demographics

What is your gender:

Male

Female

What is your age in years:

Years: _____

What ethnicity do you most identify with yourself (please select all that apply):

Australian

European/Caucasian

Polynesian

Asian

East Indian

Native American Aboriginal

Middle Eastern

Central American

South American

African

Other

Appendix U

Informed Consent

Hello, my name is Tara Reich, and I would like to invite you to participate in a study on perceptions of interpersonal interactions in the workplace. Please read the following consent form and indicate whether you are willing to participate.

This consent form, a copy of which you may print out for your records, is only part of the process of informed consent. It should give you a basic idea of what the research is about and what your participation will involve. If you would like more information, please feel free to contact the researcher at the email address or phone number provided below. Please take the time to read this carefully.

By selecting "I agree" below, you are consenting to participate in the study "Office Interactions" which is being conducted by Tara Reich, a PhD candidate at the University of Manitoba, under the supervision of Dr. Sandy Hershcovis. This study has been approved by the Joint Faculty Research Ethics Board. Please be aware that the goal of this study is to examine individuals' reactions to an observed interaction in a workplace. Your participation will involve watching a five-minute videotaped interaction and then completing a number of brief scales about the people in the video. I will also ask a few questions about yourself (e.g., gender, age). Your participation will take approximately **15 minutes** (excluding software download, if required). Please note that you will not be able to go back once you have submitted each page of the survey.

To thank you for your time, you will receive a \$5.00 gift certificate to Amazon.com, which will be administered by Study Response. To ensure you receive your gift certificate, you will be asked to enter your Study Response number.

There are no known risks associated with this research. Please understand that you don't have to answer any questions that make you uncomfortable or that you just don't want to answer. All personal information, including your IP address, will be kept in the strictest of confidence, and all data will be kept under lock and key.

If you are interested in receiving a copy of the results of the study, which will be available in January, 2011, please contact Tara Reich at the e-mail address or phone number provided below.

If you have any questions about this study, please contact Tara Reich in Room 371F Drake Centre at the Asper School of Business, (204) 474-8793, or at umreich@cc.umanitoba.ca. Alternatively, you may contact Dr. Sandy Hershcovis in Room 424 Drake Centre, (204) 474-9951, or at Sandy_Herscovis@umanitoba.ca. If you have any concerns about this study, please contact Laurine Harmon at the Human Ethics Secretariat at the University of Manitoba at lharmon@cc.umanitoba.ca, or at (204) 474-8872. Finally, please understand that your answers will be kept by the researchers for 5 years after they have been published, and then the data file will be deleted.

By clicking "I agree", you are indicating that you understand to your satisfaction the information regarding participation in the research project and agree to participate. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this study at any time and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

I AGREE (continue to survey)

I DISAGREE

Appendix V

Video Script

Scene: Alex and Taylor are sitting at a table in an office. Each has a laptop computer and a cup of coffee in front of them. Alex and Taylor are each working hard on their respective computers in silence. The tenor of the scene is that Alex is legitimately working hard on his/her own work and really doesn't want to/have time to be interrupted (he/she is resisting task switching). Taylor, however, needs feedback from Alex on a few work-related issues..

[about 5 seconds of silent, independent work]

Taylor *[appearing to remember something]*: Do you have a few minutes to talk about the Anderson project. I have a few ideas that I am having trouble nailing down...

Alex *[cutting Taylor off and looking slightly exasperated but still civil and slightly apologetic]*: Honestly, I don't. Not today

[Silence for about 5 seconds]

Taylor: Well, it's a project that we need to get done together... can you give me a sense of when you might have time to talk it out?

Alex: *[irritated]* Really, no. And I am not going to do your work for you; I am busy with something else and I think you should be able to work through whatever it is on your own. *[sarcastically]* Do you need me to hold your hand? *[under breath]* ... Idiot

[Taylor appears hurt, with slumped shoulders and a lowered gaze, not typing but looking at her/his computer. After a few seconds, Taylor appears to move on to a new file on his/her computer]

[Silence for 5 seconds; Alex's cell phone rings and she/he answers it]

Alex *[to the caller, professionally and somewhat cheerfully]*: Hello, this is Alex?...

Yes... oh right; let me get those for you know.... You know what? I can e-mail them, I just need to open the file to make sure I have updated to the current projection... ok, I have it... yup, I will send it off now. Thanks!

[Silence for 3 seconds; Taylor's cell phone rings and she/he answers it]

Taylor *[to the caller, professionally and somewhat cheerfully]*: Hello? ... Yes, this is Taylor.... Oh hi there! ... Yes! ... *[goes through papers and notices a small problem with a form; glancing at Alex]* I will actually just need to check something with my partner... Yes, I will call you right back! Thanks!

Taylor *[to Alex]*: ... Listen, I am sorry to interrupt, but could I ask you a quick question about this t-form?

[Silence from Alex; Alex is clearly ignoring Taylor's request]

Taylor: If you could just look at this quickly, you have an entry in this t-form that I can't understand; to me it doesn't add up, and I can't enter it if I don't know what you have written

[Silence from Alex; Taylor continues to look in Alex's direction, but Alex is busy doing his/her own work. After 10 seconds, Alex sticks her/his hand out to take the form from Taylor, but does not turn to look at her/him. Alex puts the form on her/his desk, but does not fill it out. After several more seconds, Alex looks at the form and writes in a correction. Alex leaves the form on her/his desk for another few seconds before passing it back to Taylor, who has been watching Alex out of the corner of her/his eye]

Taylor: Thank you.

Appendix W

Scales

Use the scales below to answer the following questions. Choose the selection that best corresponds with your opinion.

Perspective-taking

To what extent do you disagree or agree with each of the following statements about

Taylor:

1. I tried to imagine what Taylor was thinking or feeling

1	2	3	4	5
Strongly disagree				Strongly agree

2. I tried to understand Taylor's point of view

1	2	3	4	5
Strongly disagree				Strongly agree

3. I tried to put myself in Taylor's shoes

1	2	3	4	5
Strongly disagree				Strongly agree

To what extent do you disagree or agree with each of the following statements about

Alex:

1. I tried to imagine what Alex was thinking or feeling

1	2	3	4	5
Strongly disagree				Strongly agree

2. I tried to understand Alex's point of view

1	2	3	4	5
Strongly disagree				Strongly agree

3. I tried to put myself in Alex's shoes

1	2	3	4	5
Strongly disagree				Strongly agree

Justifiability

1. I can imagine that Alex had good reason for treating Taylor the way he (she) did

1	2	3	4	5
Strongly disagree				Strongly agree

2. Alex's behavior toward Taylor was justified

1	2	3	4	5
Strongly disagree				Strongly agree

3. Alex treated Taylor the way he (she) probably deserved to be treated

1	2	3	4	5
Strongly disagree				Strongly agree

Attitudes

Please indicate your impression of Taylor on each of the following scales:

- | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|----------|
| 1. Bad | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Good |
| 2. Dishonest | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Honest |
| 3. Worthless | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Valuable |

Please indicate your impression of Alex on each of the following scales:

- | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|----------|
| 1. Bad | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Good |
| 2. Dishonest | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Honest |
| 3. Worthless | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Valuable |

Deviant intentions

If you were to work with Taylor in the future, please indicate the likelihood that you would engage in each of the following behaviors toward Taylor.

1. Make fun of Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

2. Say something hurtful to Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

3. Make an ethnic, religious, or racial remark toward Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

4. Curse at Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

5. Play a mean prank on Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

6. Act rudely toward Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

7. Publicly embarrass Taylor

1	2	3	4	5	6	7	
Very unlikely							Very likely

If you were to work with Alex in the future, please indicate the likelihood that you would engage in each of the following behaviors toward Alex.

1. Make fun of Alex

- | | | | | | | | | |
|--|---------------|---|---|---|---|---|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |
| 2. Say something hurtful to Alex | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |
| 3. Make an ethnic, religious, or racial remark toward Alex | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |
| 4. Curse at Alex | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |
| 5. Play a mean prank on Alex | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |
| 6. Act rudely toward Alex | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |
| 7. Publicly embarrass Alex | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very unlikely | | | | | | | Very likely |

Helping intentions

If you were to work with Taylor in the future, please indicate the likelihood that you would engage in each of the following behaviors toward Taylor.

1. Help Taylor with work-related problems

	1	2	3	4	5	6	7	
	Very unlikely							Very likely

2. Help Taylor when she [he] has been absent

- Very unlikely Very likely
5. Assist Alex with work duties
- 1 2 3 4 5 6 7
 Very unlikely Very likely
6. Share your personal property with Alex
- 1 2 3 4 5 6 7
 Very unlikely Very likely

Demographics

What is your gender?

Male Female

What is your age?

Years: _____

How would you describe yourself (please select all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Australian | <input type="checkbox"/> Middle Eastern |
| <input type="checkbox"/> European/Caucasian | <input type="checkbox"/> Central American |
| <input type="checkbox"/> Polynesian | <input type="checkbox"/> South American |
| <input type="checkbox"/> Asian | <input type="checkbox"/> African |
| <input type="checkbox"/> East Indian | <input type="checkbox"/> Other |
| <input type="checkbox"/> Native American Aboriginal | |

Appendix Y

Recruitment Memo

TO: ALL Barnsley Hospital Emergency Department Staff
 RE: Survey about your work experiences

Staff members from the University of Manitoba in Winnipeg, Canada, and the University of Sheffield are **recruiting participants for a survey** on observed interpersonal interactions at work. This survey is not affiliated with the Barnsley Hospital or the National Health Service, though management at Barnsley endorse the survey and encourage your participation.

Participation will involve completion of a number of short surveys over a three week period. Surveys will ask questions about your experiences at work, as well as about the behavior you observe among your colleagues each day.

All surveys will be completely anonymous; participants will never be asked to identify themselves or their colleagues.

Participants will be compensated £50.00 for their time – we only have space for 60 participants (first come first serve, please sign up with Tara or Sandy from the University of Manitoba)

The lead investigators, Sandy Hershcovis and Tara Reich will be on site to describe the survey to any interested participants for several days over the coming week. If you would like more information on this survey, please see them during one of the times below. They will be available near the **coffee room** during the following times:

November 24, 5pm -10pm
 November 25, 11am – 4pm
 November 30, 6pm - 10pm
 December 1, 11 – 4pm
 December 3, 6pm – 10pm
 December 4, 11 - 4pm

If you are unable to attend one of these sessions but would still like information about this survey, please contact Sandy or Tara directly at:

Sandy Hershcovis, PhD
 hershcov@cc.umanitoba.ca
 114 222 3260

Tara Reich, MA
 umreich@cc.umanitoba.ca
 114 222 3245

Appendix Z

Informed Consent



Department of Business Administration
 428 or 426 Drake Centre
 181 Freedman Crescent
 Winnipeg, Manitoba
 Canada R3T 5V4
 Telephone (204) 474-9672 or 474-8370
 Fax (204) 474-7545

Hello, my name is Sandy Hershcovis, and I would like to invite you to participate in a survey on observing positive and negative interpersonal interactions in the workplace. Please read the following consent form and indicate whether you are willing to participate.

This consent form, a copy of which you will be provided for your records, is only part of the process of informed consent. It should give you a basic idea of what the project is about and what your participation will involve. If you would like more information, please feel free to contact Sandy at the email address or phone number provided below. Please take the time to read this carefully.

By signing your name below, you are consenting to participate in the survey “Observing Interpersonal Interactions in the Workplace” which is being conducted by Dr. Sandy Hershcovis and Tara Reich, a PhD candidate at the University of Manitoba. This survey has been approved by the Joint Faculty Research Ethics Board at the University of Manitoba. Please be aware that the goal of this survey is to examine the impact of observed interpersonal interactions at work. The various forms these interactions may take will be reviewed in this introductory session; you will be asked to be aware of any incidents that you *witness* over the course of your work day for a three week period.

Your participation in this survey will involve responding to an initial questionnaire which will ask questions about you (e.g., your personality traits, job attitudes, and demographics). In addition, you will be sent three surveys (once per week) asking you to report on such factors as your general health, and workplace policies. Finally, over the three week survey period, you will also be asked to be aware of both positive and negative interpersonal interactions among your colleagues and to answer—in your survey booklet as soon as possible after the interaction—a number of questions regarding the incident

The initial survey will take approximately 20 minutes to complete, the three weekly surveys will each take approximately 15 minutes to complete, and each event-based survey will take no more than five minutes to complete.

There are no known risks associated with this survey. Please understand that you don’t have to answer any questions that make you uncomfortable or that you just don’t want to answer. All personal information will be kept in the strictest of confidence and will never be available to anyone outside the immediate investigation team, who are in no way affiliated with Barnsley Hospital; all data will be kept under lock and key.

If you are interested in receiving a copy of the results of the survey, which will be available in June, 2010, please contact Sandy Hershcovis at the email address or phone number provided below.

If you have any questions about this survey, please contact Sandy Hershcovis at hershcov@cc.umanitoba.ca or by phone at 01142223260. If you experience any distress in completing this survey, please contact psychological services at 01226434939.

Finally, please understand that your answers will be kept by the investigators for 5 years after they have been published, and then the data file will be destroyed.

By signing this form, you are indicating that you understand to your satisfaction the information regarding your participation in the project and agree to participate. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this survey at any time and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Signature: _____ Date: _____

Appendix AA

Initial Survey General Instructions

SURVEY BOOKLET

①

Components:

1. Contact information for researchers
2. Information about the survey
3. Initial survey
4. Daily Experience surveys
5. Final survey for Booklet 1

Instructions:

Please complete this booklet first. When finished, please return it to the researchers by placing it in one of the three addressed and stamped envelopes provided and placing it in the post.

**THE VALIDITY OF THE RESULTS DEPENDS
ON HONEST AND COMPLETE ANSWERS.**

THANK YOU FOR YOUR PARTICIPATION

CONTACT INFORMATION

If you are unsure about how to complete this booklet, or have any other questions at all, please contact the researchers by email at:

Sandy Hershcovis, PhD hershcov@cc.umanitoba.ca
Tara C. Reich, MA umreich@cc.umanitoba.ca

You may also contact the following researchers by phone at:

Peter Totterdell +44 (0) 114 222 3234
Karen Niven +44 (0) 114 222 3268

If you experience any distress over the course of this survey or at any time, please contact the Barnsley Occupational Health Department:

118 Gawber Road
Barnsley
S75 2PS
(01226) 434939
Fax (01226) 434941
Internal Extension 4939/4930

Opening hours are: 8.30am - 4.30pm Monday – Friday

IMPORTANT NOTE: IF YOU MISS COMPLETING A SURVEY FOR ANY REASON, PLEASE FILL IT OUT ON THE FOLLOWING DAY.

A SURVEY ON EMPLOYEE BEHAVIOUR AT WORK

What is this survey?

This is a survey of your views and opinions about yourself, the job that you do, and the experiences you have at work. This is not a test. There are no right or wrong answers.

Please read each question carefully, but give your immediate response by ticking the box that best matches your views or experience.

Who will see my answers?

The information you give is totally confidential. General findings will be made available to all who participate and wish to learn about the findings. However, the findings will be aggregated in such a way that it is not possible for any individuals to be identified. The Trust will **at no time** have access to any of the questionnaires completed by individuals. Only the primary investigators at the University of Manitoba and Sheffield will have access to individual responses.

How do I fill in this survey?

Please complete each questionnaire and indicate the date and time of completion. Please complete the survey booklets in the order indicated (there are **three** booklets); as you complete each booklet, please seal it in the addressed and stamped envelope and place it in the post to be returned to the investigators.

What is covered by this survey?

The survey consists of three booklets, which include three different kinds of surveys. Each survey type is described below:

The Initial Survey: This survey asks for background details about you and your perceptions about your work. You will be asked to complete this survey only once (at the beginning of the survey period).

Daily Experiences Surveys: These surveys are concerned with your daily experiences witnessing either a positive or a negative interaction **between your colleagues**. You will be asked to complete two short surveys each shift about these interactions. The focus of these surveys will change after each 5-shift cycle (instructions are included in the respective survey booklets). Please note, you will NEVER be asked to identify the colleagues whose interaction you witnessed. ALL data is confidential.

How should I respond?

For each statement you are asked to tick one response, which best fits your views. Please answer all the questions as openly and honestly as possible. Respond according to your first reaction. Do **not** spend too long on one question.

For example, the question below about who plans your work. If you plan quite a lot of your work, you would answer like this:

	<i>Not at all</i>	<i>Just a little</i>	<i>Moderate amount</i>	<i>Quite a lot</i>	<i>A great deal</i>
To what extent do you plan your own work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please read every question carefully before responding and answer every question. Thank you.

Appendix BB

Demographics (Initial Survey)

Age:years
-------------------	------------

Are you:	Male <input type="checkbox"/>	Female <input type="checkbox"/>
-----------------	-------------------------------	---------------------------------

What is your first language?

What is your ethnic background? <i>(Please tick as many boxes as appropriate)</i>					
European/ Caucasian	<input type="checkbox"/>	East Indian	<input type="checkbox"/>	Australian Native American	<input type="checkbox"/>
Middle Eastern	<input type="checkbox"/>	African Central American	<input type="checkbox"/>	Aboriginal	<input type="checkbox"/>
Asian	<input type="checkbox"/>	South American	<input type="checkbox"/>	Other	<input type="checkbox"/>
Polynesian	<input type="checkbox"/>		<input type="checkbox"/>		

How long have you worked at your current organization? years
---	-------------

What is your job title?

How long have you worked in your current position? years
---	-------------

What is the highest level of education you have received? <i>(Please tick only ONE box)</i>					
GCSE (or equivalent)	<input type="checkbox"/>	Bachelor Degree (or equivalent)	<input type="checkbox"/>	Doctoral/Postd octoral Qualification	<input type="checkbox"/>
A-Level (or equivalent)	<input type="checkbox"/>	Masters Degree (or equivalent)	<input type="checkbox"/>		

ONCE YOU HAVE COMPLETED THIS SURVEY, PLEASE READ THE INSTRUCTIONS FOR “**DAILY EXPERIENCES SURVEYS**” ON PAGE 15.

Appendix CC

Event-based Survey Instructions

DAILY EXPERIENCES SURVEYS - INSTRUCTIONS

This section is concerned with your daily experiences witnessing both positive and negative interactions between your colleagues. You will be asked to complete two short surveys each shift for FIVE shifts about these interactions. Please report on the type of interaction specified on the survey (“positive” or “negative”).

- Over the next FIVE shifts you work, please focus on one positive and one negative interaction that you witness between your colleagues each shift.
- Please select the first positive and the first negative interaction you witness each shift.
- These interactions should **not** be positive or negative interactions directed towards **you**.
- As soon as possible after witnessing each interaction, please complete the appropriate survey labelled “Positive Event” and “Negative Event,” respectively.
- Each survey takes approximately 3-5 minutes.
- Please note the date and time you complete the survey as well as the approximate time of the incident you witnessed.

IF YOU MISS COMPLETING A SURVEY FOR ANY REASON, PLEASE FILL IT OUT ON THE FOLLOWING DAY.

You will NOT be asked to identify the colleagues whose interaction you witnessed.

When thinking about the questions on the next page, here are some definitions:

1. The “initiator”² is the person who instigates the positive or negative interaction
2. The “target” is the person to whom the initiator directs the positive or negative interaction
3. A “Positive interaction” is any nice behaviour, comment, or gesture made from one colleague towards another colleague. This can be “Direct” by occurring in the presence of the colleague (e.g., saying something nice to a person directly), or “Indirect” by occurring in the absence of the colleague (e.g., saying nice about someone to someone else). Examples include but are not limited to, saying nice things about someone’s work effort or performance (e.g., “great job”), or about him/her personally (e.g., “you look nice today”). Or engaging in a helping behaviour that goes beyond the normal job task (e.g., helping someone carry something, opening the door for someone, etc.).
4. A “Negative interaction” is any negative behaviour, comment, or gesture made from one colleague towards another colleague. This can be “Direct”

by occurring in the presence of the colleague (e.g., being rude to someone) or “Indirect” by occurring in the absence of the colleague (e.g., gossiping about someone). Examples include but are not limited to yelling, rude comments or gestures, being uncivil, one person rolling their eyes at another, gossiping, ignoring someone, doing something to undermine someone’s work efforts.

5. **IMPORTANT NOTE:** Please **do not** include interactions observed between staff and patients or family members. **We are only interested in interactions between employees working within the Emergency Department.**

Appendix DD

Event-based Survey

NEGATIVE EVENT

DATE: ____ (DD) / ____ (MM) / 20____)
 TIME OF SURVEY COMPLETION: ____:____
 APPROXIMATE TIME OF EVENT: ____:____

About the incident:

Please place a checkmark indicating your response to each question:

	0	1	2	3	More than 3
a. How many initiators ² of the incident were there?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. How many targets of the incident were there?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. How many other people witnessed the incident?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FOCUSING ON ONLY THE MAIN INITIATOR AND TARGET, PLEASE COMPLETE THE FOLLOWING:

For each pair below, please indicate who, in general, has more formal power (i.e., can formally impact the other's job and his or her job-related outcomes):

	<i>... has more power</i>					<i>... has more power</i>					
	<i>A lot more power</i>	<i>A little more power</i>	<i>Equal power</i>	<i>A little more power</i>	<i>A lot more power</i>	<i>A lot more power</i>	<i>A little more power</i>	<i>Equal power</i>	<i>A little more power</i>	<i>A lot more power</i>	
Initiator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Target
Initiator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	You
Target	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	You

For each pair below, please indicate who, in general, is liked more by your colleagues:

	<i>... is liked more</i>					<i>... is liked more</i>					
	<i>Liked a lot more</i>	<i>Liked a little more</i>	<i>Liked equally</i>	<i>Liked a little more</i>	<i>Liked a lot more</i>	<i>Liked a lot more</i>	<i>Liked a little more</i>	<i>Liked equally</i>	<i>Liked a little more</i>	<i>Liked a lot more</i>	
Initiator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Target

To what extent do you disagree or agree that the interaction was...

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>
... justified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the interaction you witnessed, to what extent did you take the perspective (i.e., imagine yourself in the shoes) of...

	<i>Very slightly or not at all</i>	<i>A little</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
a. ... the initiator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. ... the target?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the interaction you witnessed, to what extent has your attitude changed toward...

	<i>Much more negative now</i>	<i>Slightly more negative now</i>	<i>No attitude change</i>	<i>Slightly more positive now</i>	<i>Much more positive now</i>
a. ... the initiator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. ... the target?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Footnotes

¹ A multigroup analysis revealed that my sample size (after listwise deletion of missing data) was too small to include gender as a grouping variable in the analysis.

² I use the term “initiator” rather than “perpetrator” in Study 4 to ensure that the language is appropriate for both positive and negative interactions.

³ Note that my advisor, Dr. Sandy Hershcovis, was listed as the contact person because she was easier to contact in the United Kingdom.