Indirectly Aggressive Bullying Behaviors and

Relationship Closeness

by

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A Thesis submitted to the Faculty of Graduate Studies of

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Abstract

The current study examines the relationship between *objective* and *subjective* relationship closeness and the use and experience of *specific* indirectly aggressive behaviors by 119 female first year university students ($M = 18.16$, $SD = 0.41$ years old). Results indicate that while certain behaviors are more commonly used in objectively farther relationships, others are more commonly used in objectively closer relationships. Similar differential trends are found for the subjective closeness of relationships. As such, a behavior-specific approach to the study of "indirect aggression" was supported. Additionally, an analysis of attachment style (Brennan, Snyder, & Omoto, 1998), empathy level (Muncer & Ling, 2006), social intelligence level (Silvera et al., 2001), and social desirability (Strahan & Gerbasi, 1972) suggest that there may exist systematic differences in the profiles of the most common perpetrators and victims of indirect aggression in general. Limitations and implications are discussed.

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CHAPTER I

INTRODUCTION

The impact of indirect aggression in the daily lives of young people is becoming more and more apparent. In the most extreme cases, adolescents have taken their own lives (Flahive & Glazier, 2004; B. Goodwin, personal communication, October, 2006) because of the hardships they have faced at the hands of bullies capable of sneaking their cruelty under the radar. In fact, because of the circuitous and sometimes untraceable nature of their crimes, perpetrators of indirect aggression may even be unaware themselves of the damage they cause until it is too late. With the non-confrontational nature of this type of aggression, victims are not heard and perpetrators are not held accountable. As such, the study of indirect aggression is one area whose emerging popularity is due.

Over the past decade, research in indirect aggression has steadily increased. Since its identification as a distinct form of aggression, independent of the overt physicality of direct aggression (Xie, 2000), it has begun to take shape as a well-developed area of study. Current research has diverged into several important directions. Some research centers are pursuing similar directions as those examined by direct aggression researchers. For example, Coyne and her colleagues have focused on the relationship between viewing indirect aggression on television and subsequent acts of indirect aggression. They have demonstrated both the immediate (Coyne, Archer, & Elsea, 2004) and long-term (Coyne & Archer, 2005) effects of viewing indirect aggression, paralleling direct aggression research findings (e.g., Anderson & Bushman, 2001). Other researchers

are developing intervention strategies (e.g., Dellasega & Nixon, 2003; Sramova, 2004), while others still remain focused on the development of indirect aggression measures (e.g., Björkqvist, Lagerspetz, & Kaukiainen, 1992; Covert, 2005; Coyne, Archer, & Elsea, 2004). While these divergent research avenues are all important and deserving of attention, there is a lack of a consistent and comprehensive definition of "indirect aggression," which is a serious impediment to the research area. Without a clear understanding of the concept of indirect aggression, as well as its behavioral manifestations, the steps being taken along the various research pathways may not, in fact, be leading to an identical phenomenon.

The concept of "indirect aggression" is often broken down into relational, indirect, and social aggression. While different research centers remain faithful to their particular term, each was succinctly summarized by Rachel Simmons in her book *Odd Girl Out* (2002). Specifically, she cites Björkqvist and his colleagues' (1992) definition of "relational aggression", which is an action intending to "harm others through damage to relationships or feelings of acceptance, friendship, or group inclusion"; "indirect aggression" attempts to make it appear as though there has been no intent to harm the victim; finally, "social aggression" damages by targeting "self-esteem or social status within a group" (Simmons, 2002). Though these definitions vary semantically, they have been found to be much more similar than different, and some suggest that they may be considered a single entity (e.g., Archer & Coyne, 2005). Therefore, for the purposes of the current review, "indirect aggression" will refer to all three types of aggression, though other terms will be used where appropriate.

The above definitions, however, neither begin to describe the true complexity of indirect aggression, nor represent the totality of the definitions put forth in this area of research. In addition to those summarized by Simmons (2002), most studies of indirect aggression utilize a variation of these abstract definitions, which usually emphasize motive rather than specific behavioral execution. Additionally, behavioral components of indirect aggression are often listed only as examples, abstract add-ons to this abstract concept. Definitional examples include, but are not limited to, any behavior in which the "aim is to exclude, or harm the social status of, a victim" (Archer & Coyne, 2005); "behaviors that deliberately inflict pain on another person other than through direct or verbal attack" (Feshbach, 2005); and any "attempts to harm and manipulate others via plotting and scheming behind [their] back" (Coyne, 2004). While verbally poetic, each of these definitions relies on knowledge of a perpetrator's internal state while aggressing (or planning to aggress), which is often difficult to discern. Research has consistently emphasized the limited usefulness of self-report indirect aggression measures, as they are rarely sufficiently correlated with peer- and teacher-rated indirectly aggressive behavior due to issues of social desirability (e.g., Peets & Kikas, 2006). As such, the internal states of indirectly aggressive perpetrators are especially difficult to ascertain.

Behavioral examples of indirect aggression – explored in more detail in the subsection below – are even more varied than their definitions, and a consistent list has yet to be generated. Studies often list varying combinations of behaviors (e.g., gossiping, group exclusion) in their descriptions and definitions of indirect aggression, but rarely are the behavioral terms themselves defined, and readers of (and participants in) the studies are left to their own interpretation of the exact meaning of each behavior.

Moreover, it is important to note that even if the combined lists of behaviors from past research were exhaustive, they still may not accurately depict each behavior's true contribution to or function within the phenomenon of indirect aggression. As has been noted by Tanaka (2001), "there is a tendency for researchers to deal with the various types of [indirect] bullying as one phenomenon." This issue comprises the focus of the current project as, to date, it is not known whether all types of indirectly aggressive behaviors are equally likely to be used in a given situation. That is, it has not been explored as to whether certain types of indirectly aggressive behaviors – gossiping, for example – are more likely to be perpetrated against certain individuals than other types of behavior, such as group exclusion. Also, if a differential pattern of perpetrated or experienced behaviors does exist, there may be several additional factors that influence an individual's likelihood of being a perpetrator or target of indirect aggression. For example, one's global attachment style (Bowlby, 1973; Mikulincer et al., 2005; Mikulincer & Shaver, 2006), one's level of social intelligence, one's level of empathy (Björkqvist, et al., 1992; Kaukiainen et al. 1999), and the closeness of one's relationship with their victim or aggressor (e.g., Rowe & Carnelley, 2005) may all be important factors to consider. Any attempts to address this issue, however, must begin with a comprehensive understanding of the specific behaviors involved in "indirect aggression."

Past research has been vague when defining their examples of indirectly aggressive behaviors, and has yet to examine each as they relate to the closeness of the relationship between perpetrators and targets, focusing instead on "indirect aggression" as a whole. Additionally, there has not been much research examining a breadth of potential influencing factors simultaneously. The purpose of the current research is to (a)

provide a more detailed and comprehensive description of the *specific* behaviors involved in indirect aggression, (b) examine the relationship of each of these behaviors with varying degrees of relationship closeness between the victim and the perpetrator, and (c) to consider the influence of three additional variables (namely, attachment style, social intelligence, and empathy) in this relationship. Therefore, I will review the literature in each area, describe a pilot study that was used to generate a list of indirectly aggressive behaviors based on lay-reported experiences, and finally, describe the current study which expanded on the behavioral list generated in the pilot by integrating it with behaviors cited in previous research, to compose the most comprehensive list of specific indirectly aggressive behaviors possible. This list was used to examine whether there existed a difference in the frequency of each specific behavior within the context of relationships with varying degrees of closeness, taking the three aforementioned individual difference factors into consideration.

Specific Indirectly Aggressive Behaviors

Empirical definitions of indirectly aggressive behaviors are not easily presented, as the behaviors cited in this type of research are often given only as examples; rarely are specific behaviors even defined in this type of literature. An important implication of this issue is that it is unlikely, if not defined for their readers, that these researchers would have defined the behaviors included as part of their concept of indirect aggression for their participants. Without providing these definitions, it is not possible to discern whether all participants would have had the same understanding of each behavior. For

example, gossiping is one of the most widely cited behaviors involved in indirect aggression. One definition of "gossiping" is making evaluative (either positive or negative) statements about someone who is not present (Eder & Enke, 1991). There is no way of knowing, however, whether all or any participants in the multitude of studies citing "gossiping" as an indirectly aggressive behavior used this definition. Perhaps some did not consider *positive* evaluative statements about another individual to be gossiping; perhaps some did not feel that they had been gossiping if what they had said about another individual was true. Without providing a clear definition for their subjects, each participant in these studies may have brought their own definition of the term to the research, making comparisons between studies and even between participants problematic at best.

For most indirectly aggressive behaviors, this lack of empirically published behavioral definitions means that the current study had to rely on the insight and consensus of intelligent laypeople to provide definitions for each behavioral term (i.e., the Oxford English Dictionary). Exceptions to this problem, of course, are those behaviors which have been examined independently of indirect aggression; for example, gossiping, rumor spreading, and ostracism. These are three of the most commonly cited behaviors of indirect aggression; accordingly, research centers have responded by studying them in isolation, which makes the task of defining and making more solid predictions regarding their likelihood of being differentially related to relationship closeness easier.

An important note regarding the generation of a complete list of indirectly aggressive behaviors should be added here. As has been touched upon in several reviews

of indirect aggression literature (e.g., Owens et al., 2005), it is not only the subtlety of indirect aggression that makes the task of identifying the breadth of behaviors involved difficult, but also its evolutionary nature. There is no *one* way to aggress indirectly against another, or even one *set* of ways. This was well illustrated in a review by Owens and his colleagues (2005), who cited a newspaper report in which Australian girls had begun buying voodoo dolls to represent disliked female classmates in order to cast spells on them. To put a behavior such as "casting spells on classmates" on an indirectly aggressive behavioral list would set a precedent for an infinitely long and largely inappropriate list for most participants.

Nonetheless, several behaviors are commonly recognized as being indirectly aggressive. Given its prominence and widespread use in this type of research, the behaviors included in the Direct and Indirect Aggression Scale (DIAS; Björkqvist et al., 1992) seemed a logical starting point for the generation of a complete behavioral list of the concept. Previous studies that have also begun with the DIAS have taken liberties with this scale, adding elements in order to update its content, making it more comprehensive and reflective of the changing zeitgeist (e.g., additions of "cyber-bullying," the silent treatment, and dirty looks; Owens et al., 2005). The current study will utilize a similar approach, expanding on the list of indirectly aggressive behaviors in the DIAS, as well as on the extensive list presented by Coyne and Archer (2004) in their review of indirect aggression on television, and supplementing these with behaviors cited in other indirect aggression research and those behaviors generated in the pilot study, which will be discussed in Chapter II.

The DIAS is a product of the Finnish research team of Björkqvist, Lagerspetz, Kaukiainen, and their associates; as a measure of indirect aggression, it is still widely used today (e.g., Björkqvist, Österman, & Kaukiainen, 2000; Kaukiainen et al., 1999; Salmivalli & Kaukiainen, 2004; Toldos, 2005; adapted versions used by Coyne & Archer, 2005; Peets & Kikas, 2006). The DIAS is a self-, peer-, and teacher-rating tool consisting of 24 items, 12 of which pertain to indirect aggression (seven items measure direct physical aggression and five measure direct verbal aggression). The 12 indirect aggression items each refer to a specific indirectly aggressive behavior: shutting a target out of the group, becoming friends with someone else for the purposes of getting revenge against a target, ignoring a target, gossiping about a target, telling bad or false stories about a target, planning to secretly bother a target, saying bad things behind a target's back, telling others not to be friends with a target, telling a target's secrets to a third person, writing notes criticizing a target, criticizing a target's hair or clothing, and finally, trying to get others to dislike a target (Björkqvist et al., 1992).

Many of these behaviors overlap with examples presented in other indirect aggression research. As previously mentioned, "gossiping" is included in virtually every discussion of indirect aggression (e.g., Coyne and Archer, 2004, 2005; Dellasega & Nixon, 2003; Peets & Kikas, 2006; Young et al., 2006). Gossiping has been defined as making positive or negative evaluative statements about a target not in one's presence (Eder & Enke, 1991; Leaper & Holliday, 1995). Several other behaviors on Björkqvist et al.'s (1992) scale have also been routinely included in behavioral definitions of indirect aggression; for example, ostracism (excluding, avoiding, and/or ignoring a target; Williams, 2005) has been cited in research by Coyne (2004), Coyne and Archer (2004,

2005), Dellasega and Nixon (2003), Simmons (2002), Owens et al. (2005), and Young et al. (2006). Rumor spreading (telling bad or false stories about a target behind their back; Coyne & Archer, 2005; Peets & Kikas, 2006) has been cited in Coyne and Archer (2004), Dellasega and Nixon (2003), Owens et al. (2005), and Young et al. (2006). Publicly "making fun" of a target, which combines teasing, criticizing a target *to their face*, intentionally embarrassing a target around others, and name-calling have been cited in Coyne and Archer (2004) and Dellasega and Nixon (2003). Privately making fun of a target, by criticizing their clothes or personality, gesturing, or imitating them *behind their back*, have been cited in Coyne and Archer (2004). Rallying others against or trying to get others to dislike a target has been cited in Coyne and Archer (2004, 2005) and Peets and Kikas (2006). Breaking confidences (disclosing to another something that was told to the perpetrator by the target in confidence) has been cited in Coyne and Archer (2004, 2005) and Owens et al. (2005). Using one's personal relationships as a weapon (i.e., "relational aggression") has also been explored; the behaviors categorized under this heading include manipulating friendships, accomplished by becoming friends with another for purposes other than simply liking them (i.e., to exclude or exact revenge against someone else, to get something in return, or to make someone jealous), trying to break up the friendships of others, or threatening to withhold one's own friendship from another have each been cited in Coyne and Archer (2004, 2005). Finally, passing notes in class has been cited in Owens et al. (2005). Note-passing, however, has been extended beyond the DIAS to telephone harassment (i.e., repeated, unwanted, or prank calling) and three-way calling attacks (in which a third individual is listening to the conversation between the perpetrator and the target without the target's knowledge or consent), and

has been cited in Coyne and Archer (2004), Dellasega and Nixon, 2003, and Owens et al. (2005); additionally, note passing has also been extended to include cyber-bullying, which involves harassing e-mails and instant and text messages, and has been cited in Dellasega and Nixon (2003) and Owens et al. (2005).

In addition to these expanded DIAS items, other commonly cited behaviors include harmful nonverbal behaviors (i.e., dirty looks, rolling one's eyes, derogatory facial expression, and negative body language) cited in Coyne and Archer (2004, 2005), Owens et al. (2005), and Young et al. (2006). And finally, "backbiting," defined as "malicious talk about an absent other" (Oxford Dictionary) is often cited apart from the seemingly similar behaviors of gossiping and rumor spreading, as it is in Coyne (2004), Coyne & Archer (2005), Simmons (2002), and Young et al. (2006).

Given the exemplary nature of these behaviors, however, none of these aforementioned studies have offered an encompassing list of indirectly aggressive behaviors; as such, the development of such a list was one of the goals of the current research project. One exception may be Coyne and Archer's (2004) comprehensive review of indirect aggression on television; however, definitions of their cited behaviors were not provided, and the generated list was intended for descriptive purposes rather than for use in any subsequent analysis. As such, in addition to a review of the available literature, a pilot study was conducted in which participants were asked open-endedly about the specific indirectly aggressive behaviors they had perpetrated, experienced, or witnessed. Many of the cited behaviors fell into the categories listed above; however, several "new" behaviors were also identified. The entirety of these behaviors are reported and explored in the results and discussion section of the pilot study presented in Chapter

II, and those behaviors that seemed to represent an important category of indirectly aggressive behavior not covered in the list above will be discussed.

Global Attachment Style

The current study was primarily interested in the relationship between specific indirectly aggressive behaviors and varying degrees of relationship closeness. However, there are several factors that were also considered, as they may play an important role in this potential relationship. Given its pervasiveness in relationship research literature, one such variable may be one's global attachment style. Bowlby's (1973) and Ainsworth et al.'s (1978) theories of attachment style refer to the form of affect regulation that is established in young children in response to their relationship to their primary caregiver (Rholes et al., 1998). Initially, attachment style was divided into three categories: avoidant, anxious-ambivalent, and secure. Each of these attachment styles corresponded with a different cognitive, affective, and behavioral pattern that has been found to be relatively stable across the lifespan. Avoidant individuals tend to be uncomfortable being close to others and strive for independence, while anxious-ambivalent individuals tend to desire more closeness than they receive from others or that a given situation will afford. Secure individuals, on the other hand, tend to be relatively comfortable with closeness and with depending on and being depended on by others (Brennan et al., 1998). These cognitive, affective, and behavioral patterns were initially observed in infants in their reactions to the departure and eventual return of their primary caregiver in the "Strange Situation" paradigm (for a complete review see Ainsworth, 1978). However, as

previously mentioned, these patterns have been found to remain more or less stable across the lifespan; accordingly, they have significant implications for adult interpersonal relationships (Brennan et al., 1998).

In recent years, the categorical nature of these attachment styles has been replaced by a dimensional index such that, rather than assigning individuals to the abovementioned categories, they are given scores on two scales (or "dimensions") of attachment: their level of anxiety (Dimension 1) and their level of avoidance (Dimension 2). Secure individuals are those who receive low scores on both of these scales, while anxious individuals receive high anxiety scores and low avoidance scores. This two dimensional classification, however, has left room for a forth category of attachment (as a grid plotting each of these dimensions on a two-axial graph would have four quadrants), which has led to the division of the avoidant group into dismissively avoidant individuals (low scores on anxiety and high scores on avoidance) and fearfully avoidant individuals (high scores on both anxiety and avoidance; Brennan et al., 1998).

Attachment style may be a relevant factor in the relations between relationship closeness and specific indirectly aggressive behaviors; that is, individuals with different attachment styles (i.e., different anxiety and avoidance score patterns) will tend to have different thoughts and feelings, and exhibit different behaviors regarding their close relationships. For example, due to their belief that their (primary) relationships are stable and supportive, securely attached individuals tend to have positive views of themselves and others and are less concerned about self-protection and self-esteem maintenance than any other group (Brennan et al., 1998). As such, they tend to be more comfortable and confident in their relationships and therefore are better able to be empathetic toward

others (Mikulincer et al., 2005). As empathy and aggression are somewhat competing concepts (Kaukiainen et al., 1999), these individuals may be less inclined to aggress indirectly against others. Empathy and aggression will be addressed in more detail in the following section.

Avoidant individuals (both dismissive and fearful), on the other hand, may be more inclined to *use* indirect aggression, as they tend to be more cynical of the motives of those they are in relationship with, and often prefer to remain emotionally distant from intimate others. Also, they are less warm and supportive toward their friends than their securely or anxiously attached peers (Rholes et al., 1998). Given these characteristics, it may be expected that avoidant individuals (i.e., those with high scores on the avoidance dimension, regardless of their scores on the anxious dimension of attachment) will be more likely to aggress indirectly against others.

Finally, individuals characterized by an anxious attachment style (i.e., those with high scores on the anxious dimension and low scores on the avoidance dimension of attachment) tend to hold negative views of themselves and positive, though guarded views of others. They often have more difficulty trusting that others will be supportive or consistent in their behavior, and often think of themselves as unworthy of love and attention. These individuals often desire more closeness with their relationship partners than would normally be afforded in a given situation, and as such often feel rejected when this need for closeness is not met (Rholes et al., 1998). These characteristics may make anxious individuals more likely to perceive themselves as being a *target* of indirect aggression, as they will likely be more sensitive to the subtle behaviors of rejection than their securely or avoidantly attached peers.

Social Intelligence and Empathy

While clearly overlapping concepts, social intelligence and empathy are conclusively different constructs; however, both have been shown to be significantly related to indirect aggression (Björkqvist et al., 2000; Kaukiainen et al., 1999). As such, they may be important factors to consider in the current study. Like indirect aggression, research on social intelligence can be found under several different terms, such as, interpersonal intelligence and contextual or practical intelligence (see Kaukiainen et al., 1999 for a review). These terms refer to one's ability to accurately read and respond to the social behavior of another in order to accomplish one's own goals. In lay-understanding, social intelligence, or "social skills," often refers to *prosocial* skills; however, these terms are not interchangeable, as social intelligence is needed for purposeful pro- *and* antisocial behavior (Kaukiainen et al., 1999). For example, adequately developed social skills are necessary for the effective use of indirect aggression; a perpetrator must be able to understand the feelings of their target if they are to accomplish their goals using indirectly aggressive means.

Of course, social intelligence is also necessary for prosocial skills, such as empathy. Though often treated as one construct, "empathy" is a skill that is best understood as two parallel concepts: "cognitive empathy" is the ability to read the thoughts and feelings of another individual, whereas "emotional empathy" is the ability to match the emotional state of another (Baron-Cohen & Wheelwright, 2004). In general, empathy has been found to be an important mediating factor between social intelligence

and indirect aggression (Kaukiainen et al., 1999). While social intelligence and empathy are direct correlates of one another, empathy is inversely related to aggression; that is, individuals high in empathy have been found to be less likely to aggress against a target. This finding has led to the development of empathy training as a strategy for violence prevention (e.g., Björkqvist et al., 2000).

Independently, social intelligence is positively related to both empathy and indirect aggression; however, as mentioned, empathy and indirect aggression are negatively related (Björkqvist et al., 2000; Kaukiainen et al., 1999). This seemingly paradoxical relationship is easier to understand when the distinction is made between cognitive and emotional empathy, as defined above. Though it has yet to be thoroughly investigated, it may be that individuals high in both social intelligence and *cognitive* empathy will be most inclined to use indirect aggression, whereas individuals high in both social intelligence and *emotional* empathy will be least inclined to do so; individuals low in social intelligence may make up the midline of the indirect aggression spectrum, regardless of their empathy level.

In line with this reasoning, and given the focus of the current study on female participants, it is important to note that Björkqvist and his colleagues (2000) reported that females were both more indirectly aggressive and more empathic than males at all ages. As mentioned, these findings seem to be in contention with those reported above of the conflict between social intelligence and empathy. However, a study by Salmivalli and Kaukiainen (2004) may help to further clarify this relationship. Salmivalli and Kaukiainen found that 10-, 12-, and 14- year old girls used indirect aggression *proportionately* (as compared with physical and verbal aggression) more than boys of the

same age, but boys were more aggressive (physically, verbally, *and* indirectly) than girls overall. However, in their analysis, they divided participants into specific "aggression profiles" based on their scores on all three types of aggression. They found that while males were overrepresented in the overall "extreme aggression" and "high direct (physical and verbal) aggression" groups, females were overrepresented in the "low aggression" (perhaps reflecting higher levels of social intelligence and emotional empathy) and "high indirect aggression" (perhaps reflecting higher levels of social intelligence and cognitive empathy) groups. Given these findings, it may be that levels of social intelligence and empathy will be important factors to consider in the study of indirect aggression.

At this point, a note should be made regarding the gender exclusivity of the current project. The current study focused exclusively on female participants, which is in line with evidence presented by several researchers that females are more inclined to employ and to be the target of indirect aggression than males (e.g., Björkqvist et al., 2000; Coyne & Archer, 2005; Owens et al., 2005). Challenges to this assertion have begun to be presented, as some research has suggested that there exists either no gender difference in indirect aggression (e.g., Archer, 2004), or even that males use indirect aggression more often than females (e.g., Peets & Kikas, 2006). While important to mention these conflicting gender-related issues, the current study maintained a focus on females, as any gender difference was beyond the scope of the current project.

Relationship Closeness

Finally, and most importantly for the current study, the closeness of the relationship between the perpetrator and the target may be another important consideration in the study of indirect aggression, one which has yet to be addressed. Indirect aggression is an aggressive strategy that is used most effectively within the context of relationships (e.g., Simmons, 2002); however, not all relationships are created equally (i.e., "acquaintances" versus "friends" versus "close friends" versus "best friends;" Fehr, 1996). As such, it is possible that some types of relationships may be more vulnerable to indirect aggression. Moreover, given the aforementioned behavioral complexities of this type of aggression, it may also be that the specific indirectly aggressive behaviors employed may vary across relationship type, which will be defined as "relationship closeness" for the purposes of the current study. For example, perhaps gossiping about an acquaintance is more common than gossiping about one's best friend, because of the physical distance required (i.e., an acquaintance may spend less time in a perpetrator's presence as compared to a best friend). Such a differential relationship would be an important addition to the current understanding of indirect aggression, and would lend itself greatly to future intervention endeavors in which at risk relationships could be identified and targeted for specific violence prevention strategies.

To the end of discovering a possible differential relationship between the closeness of inter-female relationships and the specific types of indirectly aggressive behaviors perpetrated or experienced, the current study utilized two techniques: the "Duration" and "Frequency of Interaction" subscales of the Personal Acquaintance Measure (PAM; Starzyk, Holden, Fabrigar, & MacDonald, 2006) and the Hierarchical Mapping Technique (Antonucci, 1986). The Duration and Frequency of Interaction

subscales of the PAM are a measure of actual (or "objective") closeness (Starzyk et al., 2006); that is, they are an index of *physical* closeness based on the length of time one has known another individual ("Duration") and the amount of time spent with that individual on a regular basis ("Frequency of Interaction"). These subscales have been shown to correlate significantly with the Relationship Closeness Index (RCI; Bersheid et al., 1989), a much longer self-report scale which measures the number hours spent with a particular individual in a given time frame, the range of activities engaged in with the individual, and the influence the individual carries in one's life.

The Hierarchical Mapping Technique, on the other hand, is a measure of perceived (or "subjective") closeness; that is, one's *felt* closeness to another individual. This scale was adapted slightly from its original form for use in the current study (Antonucci, 1986; Rowe & Carnelley, 2005). The hierarchical mapping technique utilizes a bull's eye diagram to represent one's social network and his or her understanding of it. The center of the bull's eye represents the "core self" and participants are instructed to place stickers representing the individuals that comprise their social world in varying positions and distances from their core selves in a way that is *meaningful to them*. Research of this technique has indicated that this type of social mapping is an easy but accurate means of assessing one's *perceived* closeness to other individuals (Rowe & Carnelley, 2005).

Using these techniques, it may be possible to assess whether, in general, individuals who are objectively and/or subjectively closer to (or conversely, farther away from) the core self are more likely to be the target of or to aggress against the self in an indirectly aggressive manner. In addition, it is of interest whether *specific* indirectly

aggressive behaviors are more likely to be perpetrated by or used against individuals who are closer to (or farther away from) the core self.

While any kind of differential relationship between objective and subjective relationship closeness and type of indirectly aggressive behavior used would lead to a better understanding of indirect aggression and, consequently, to more successful intervention practices, specific hypotheses regarding each behavior are not easy to formulate. Nonetheless the proposed study based many of its predictions on Björkqvist's (1994) effect/danger ratio to formulate specific hypotheses regarding each behavior and the closeness of the relationship it may be more likely to be found in. The effect/danger ratio suggests that individuals will attempt to maximize the effect of their behavior while minimizing the danger to themselves. When an individual is engaged in conflict, indirect aggression is an effective means of relationally or socially harming a target while remaining out of physical proximity to them; a feat not easily achieved using direct or verbal aggression. In fact, due to its elusive nature, an indirectly aggressive attack may occur without anyone but the perpetrator and their target knowing that an offence has been committed. Given that women are, on average, physically weaker than men, indirect aggression may have evolved as a means for them to both safely express their anger and frustration (Björkqvist, 1994), as well as maintain a demure female stereotype in a largely male-dominated society (Hines & Fry, 1994).

While as a theory of aggression Björkqvist's effect/danger ratio has its strengths, it may not be able to sufficiently explain subsequent findings of indirect aggression studies. For example, women have been shown to be much more aggressive (though indirectly) toward other women than toward men (Burbank, 1987). The argument that

women are physically weaker than men would not hold if their opponents are of relatively equal strength. Additionally, sex differences in the use of indirectly aggressive strategies are not innate, as they are not distinguishable until language is developed (Björkqvist, 1994). Also, in cultures in which females are free to physically express aggression toward each other, such as on the Polynesian island of Bellona, women expressed their aggression directly towards other females and indirectly toward males (i.e., by composing humiliating songs about them; Kuschel, 1992).

Nonetheless, the effect/danger ratio presented a potential basis for formulating expectations of the relations between relationship closeness and specific indirectly aggressive behaviors. While all types of indirectly aggressive behavior pose, in general, a decreased physical risk to their employers than direct physical or even verbal aggression, they are arguably not equal in the amount of required distance from the target for their desired effect. For example, to offer negative evaluative statements (i.e., negative gossiping) about an individual not in one's presence would not require that the perpetrator be physically/objectively close to the target; in fact, it is necessary to meet the definitional requirements of the term that the target not be in one's presence. As such, gossiping is expected to be an indirectly aggressive strategy more commonly perpetrated against a target who is objectively farther away from the perpetrator, as compared with someone who spends more time in the perpetrator's physical presence. Additionally, gossiping has been demonstrated to function as a way of establishing social norms, as well as promoting in-group unity by generating consensus among members (Eder & Enke, 1991). As such, it would be expected that, as an indirectly aggressive behavior, its specific targets would be out-group members (those who were objectively farther away).

Additional research has suggested that gossiping (specifically negative gossiping) has more to do with the perpetrators than the victims, as it may improve self-esteem through downward comparison, and promote interpersonal chemistry (Bosson et al., 2006). This promotion of interpersonal chemistry would likely serve to bring perpetrators of negative gossip closer together, while pushing victims (subjectively) farther away.

On the other hand, research has shown that the initial reaction to ostracism (i.e., exclusion, ignoring, and/or avoiding) is pain, regardless of any mediating factors such as relationship closeness or perceived motivation (Williams, 2005). However, it is likely that such an exclusionary behavior would be more effectively used to target an in-group member, someone with whom a perpetrator was subjectively closer to. For example, "shunning," a behavior closely related to ostracism, in that it is the "collective exclusion of an individual by being ignored by their peers," is a common form of bullying in Japan that targets in-group members who do not fit into the mold of the group (Tanaka, 2001). Due to the immense pressure to fit in with one's peer group in this classically collective society (for a review of collective versus individualist cultures, see Triandis, 2005), students who have been shunned by their classmates have been found to suffer considerable psychological difficulties, sometimes leading to suicide.

An out-group member, on the other hand, who may be in one's physical proximity (objectively closer) may not be as affected by their continued non-inclusion in a group. As such, ostracism is predicted to be an indirectly aggressive strategy more commonly (or more effectively) perpetrated against a target that is perceived to be closer to the core self than against one who is subjectively father away from the perpetrator.

Predictions regarding relationship closeness and the remaining specific indirectly aggressive behaviors will be explored in more detail in Chapter III.

CHAPTER II

PILOT STUDY

Method

Participants

Sixty-six female participants were recruited from the first year psychology course at the University of Manitoba as part of their course requirements; $M = 18.82$ years old, $SD = 1.31$ years. Participants ranged in age between 18 and 26 years old, and primarily identified themselves as being of Caucasian (65.2%) and Asian (21.2%) ethnicity. Only female participants were recruited for this study, as its focus was on the indirectly aggressive experiences of women in their relationships with other women. While it is becoming increasingly clear that males also engage in indirect aggression (e.g., Archer, 2004; Salmivalli & Kaukiainen, 2004; Xie, 2000), the complexities of male relational interactions were beyond the scope of the current research project. Participants completed the questionnaires independently in one of several group data collection sessions.

Materials

Participants completed an open-ended 3-item questionnaire (Appendix A) in which they were asked to (1) list as many indirectly aggressive behaviors that they had either experienced or performed from the perspective of the bully, the bullied, or the

bystander (Coloroso, 2002), or any combination of the three, (2) list their perceptions of the motivations for this type of behavior; and (3) recall and describe a positive friendship experience that they had had with a female friend. This final item was intended to ensure that participants left the study in a positive state and to alleviate any negative emotions that may have been aroused by the first two questions. The order of the questions was identical for all participants.

The instructional page of the questionnaire defined indirect aggression as being "characterized by social manipulation (enticing someone to do something they otherwise might not), rumor spreading, gossiping, excluding someone from a group, or any other subtle behavior that is perceived as intentionally hurtful" (parentheses in original; Appendix A). Participants were also asked to include their age and to select the ethnicity they most identified themselves with. Finally, each participant was provided with a letter-sized envelope, for anonymous submission of their completed questionnaires.

Procedure

Once informed consent had been collected from all participants (Appendix B) and instructions had been read aloud, participants were asked to review the written instructions, identify their age and ethnicity for descriptive purposes, and complete the three-item questionnaire. Participation in the study rarely took longer than 20 minutes.

When each participant had completed her questionnaire, she was asked to place it into a letter-sized envelope that was provided to assure anonymity and bring it to the researcher. Each participant was then debriefed, thanked for their participation, and given

counselling and contact information should they have any lingering negative feelings

regarding the study or wish to know more about the research project (Appendix C).

Results

The current analysis is limited to the first item of the questionnaire, as only the

participant-generated behavioral list was relevant to the current study. From this item,

participants recalled episodes of indirect aggression from the perspective of the bully, the

bullied, or the bystander (Coloroso, 2002) – that is, behaviors they had perpetrated,

experienced, or witnessed, respectively – or any combination of the three (See Figure 1

for an overview of the proportion of episodes told from each perspective). Collectively,

the 66 participants recalled 174 separate experiences of indirect aggression, and reported

an average of 2.64 incidents each ($SD = 1.98$). From these responses, a general outline of

the types of behaviors that comprise indirect aggression – or at least the participants'

impression of the encompassment of these behaviors – began to take shape (See Figure

2).

Figure 1. Proportion of episodes of indirect aggression told from the perspective of the bully, the bullied, the bystander, or any combination of the three.
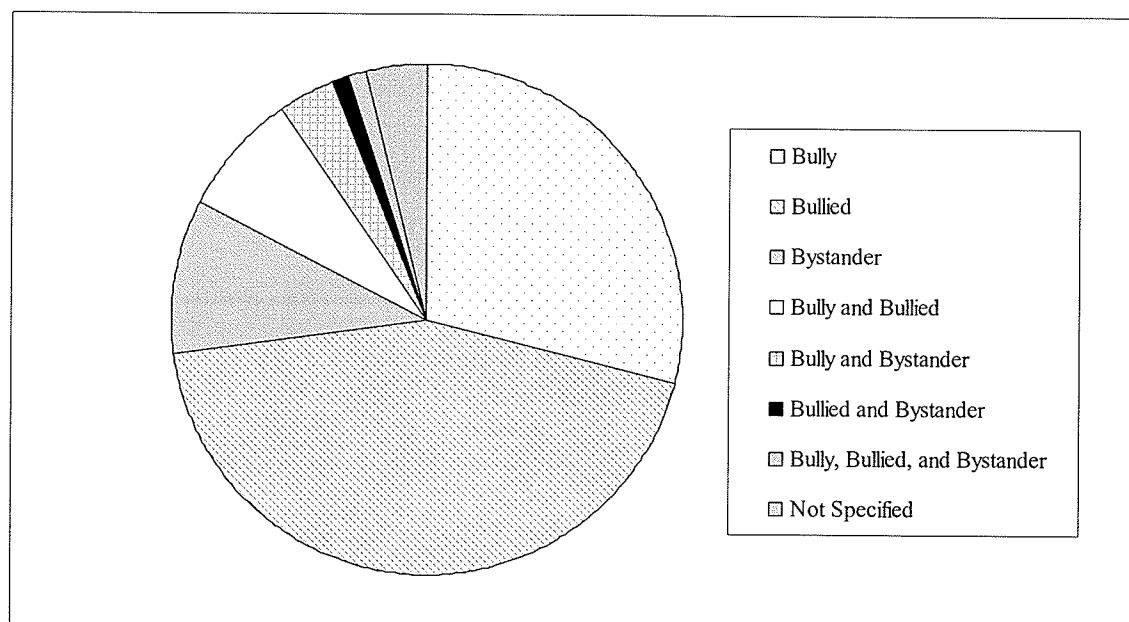
Each story was analyzed and the type(s) of behaviors involved were coded (1 for present, 0 for absent). Working from the framework of the behaviors listed in previous indirect aggression research (see subsection "Specific Indirectly Aggressive Behaviors" reviewed above), each account was analyzed to determine the types of behaviors included. If the story mentioned a behavior that did not clearly fit into the behavioral list generated from the review of previous indirect aggression research, a new category was created. All of the incidents reported by each participant were coded by the researcher. An additional coder examined 20 of the 66 questionnaires, and an acceptable interrater agreement was achieved for this section ($PA = 0.94$).

Each behavior cited in the reported indirectly aggressive episodes is listed below, followed by the percentage of episodes citing the behavior; for those behaviors not previously listed, a description is also provided. The most commonly reported behaviors

included ostracizing (28.2%), gossiping (20.9%), publicly criticizing or making fun of a target (i.e., criticizing a target's clothes or personality *to their face*, or intentionally embarrassing a target in front of others; 17.1%), privately criticizing or making fun of a target (i.e., criticizing a target's clothes or personality, gesturing, or imitating a target *behind their back*; 9.6%), audible non-verbal behaviors (e.g., whispering, laughing for the purpose of getting the attention of and upsetting a target; 8.5%), passing notes about a target (7.9%), silent non-verbal behaviors (e.g., giving a target dirty looks, rolling one's eyes, derogatory facial expression, negative body language; 6.8%), "cyber-bullying" (i.e., sending harassing e-mails and/or instant and/or text messages to a target, or writing unsolicited and negative messages about a target on a webpage; 4%), backbiting (i.e., malicious talk about an absent other; Oxford Dictionary; 3.4%), involving males (i.e., pursuing, dating, or sleeping with a target's current or former boyfriend; 3.4%), breaking confidences (i.e., telling another something that was told by a target in secret; 2.8%), rallying (i.e., encouraging others to dislike a target; 2.3%), lying (i.e., misrepresenting the truth in order to make another feel foolish or small; 2.3%), telephone harassment (i.e., repeated and unsolicited telephone calls to a target, prank calling a target, and/or using the three-way calling feature to allow someone else to listen in on a conversation with a target without the target's knowledge or consent; 1.7%), withholding one's friendship from a target (1.1%), and trying to break up a target's friendships with others (0.6%). Any additional behaviors were classified under the heading of "other" (e.g., forming clubs, stealing a target's belongings; 14.7%). See Figure 2 for a graphic representation of these data.

Figure 2. Proportion of reported indirectly aggressive bullying behaviors.
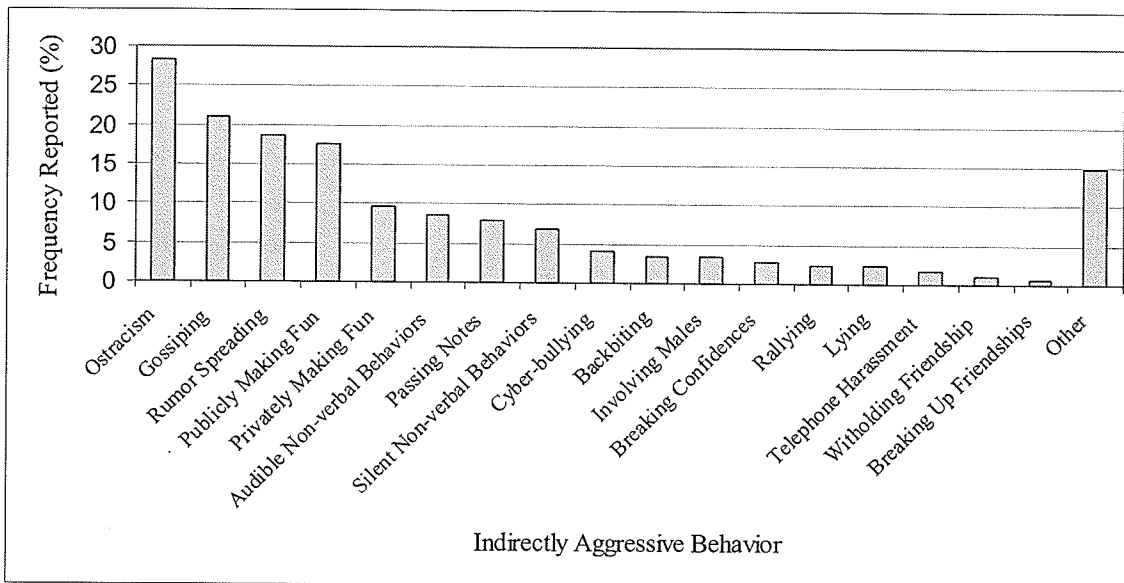
Discussion

Because definitions and behavioral listings abound in the study of indirect

aggression, the current research began with a pilot study to identify the language with

which laypeople understand indirect aggression and the behaviors that they associate with

it. The behavioral list generated in the pilot study overlapped greatly with previous

research in this area, particularly the most popular responses (i.e., ostracism, gossiping,

and rumor spreading). However, it also identified several behaviors that are not often

included in empirical definitions of indirect aggression, such as rallying, whispering,

timed laughing, lying, and using males as a weapon against a target.

Of course, this pilot study suffered from the same important limitation that has

plagued previous research in indirect aggression; that is, because participants were asked

open-endedly about the behaviors they associated with indirect aggression – without

providing or asking for any behavioral *definitions* – there is no way of knowing whether

one individual's perception of a given behavior was identical to that of any other participant. Further, one cannot be sure that each individual's behavioral definition was comparable with the definition of each term in the research community (for those few areas in which consensus exists).

Nonetheless, the expanse of behaviors identified by the participants in the pilot study was a necessary first step in determining the breadth of those actually perceived to comprise indirect aggression (i.e., its "behavioral definition"). This generated behavioral list was also necessary before each specific indirectly aggressive behavior could be analyzed to determine whether any are differentially related to the types of relationships (i.e., the closeness of the relationships) females have with one another. That is, whether certain behaviors are more likely to be perpetrated by (or to victimize) certain individuals varying in objective and subjective relationship closeness to the perpetrator.

CHAPTER III

THE CURRENT STUDY

Recall that one purpose of the current study was to examine whether indirect aggression *in general* is more common within the context of certain inter-female relationships (i.e., those varying in objective and subjective closeness to the self). In addition, however, the main purpose of this study was also to examine the possibility that certain *specific* indirectly aggressive behaviors are more common within the context of certain relationships. Table 1 presents a complete list of the specific behaviors included in the current study, as well as the type of relationship closeness (both objective and

subjective) each is predicted to be more commonly found within (i.e., "closer" to or "farther" away from the self). Predictions were based primarily on the publicity of the behavior (reflecting the effect/danger ratio; Björkqvist, 1994), the availability of the target (e.g., ostracism may require action by a group, and as such, the target should be known to all members), and the closeness of the relationship required to aggress (e.g., the importance of the relationship to the target or the ability of the perpetrator to access information about the target). Based on these factors, those behaviors that were expected to be more common in *objectively* closer relationships are: ostracism, privately making fun of a target, breaking confidences, using one's personal relationships as a weapon, threatening to withhold one's own friendship from another, *silent* nonverbal behaviors, involving males, and lying.

Those behaviors that were expected to be more common in *objectively* farther relationships are: gossiping, rumor spreading, publicly making fun of a target, rallying others against a target, trying to break up the friendships of others, passing notes, telephone harassment, "cyber-bullying," *audible* nonverbal behaviors, and backbiting.

Those behaviors that were expected to be more common in *subjectively* closer relationships are: gossiping, ostracism, rumor spreading, privately making fun of a target, using one's personal relationships as a weapon, threatening to withhold one's own friendship from another, passing notes, *silent* nonverbal behaviors, and backbiting.

Those behaviors that were expected to be more common in *subjectively* farther relationships are: publicly making fun of a target, rallying others against a target, breaking confidences, trying to break up the friendships of others, telephone harassment, "cyber-bullying," *audible* nonverbal behaviors, involving males, and lying.

Table 1.

Predictions table, justification, and behavioral definition for each specific indirectly

aggressive behavior.

Behavior	Definition	Objective Closeness Prediction	Justification	Subjective Closeness Prediction	Justification
Gossiping	Making negative evaluative statements regarding a target not in one's presence	Farther	Definitional requirement stipulates distance from target	Farther	Lack of interpersonal chemistry
Ostracism	Excluding, ignoring, and/or avoiding a target	Closer	Strong relationship required for maximal effect of exclusion	Closer	Strong relationship required for maximal effect of exclusion
Rumor Spreading	Telling bad/false stories behind a target's back	Farther	Can be transmitted without physical closeness	Closer	More likely to be known by the group
Publicly "making fun" of a target	Teasing, criticizing a target to their face, intentionally embarrassing a target around others	Farther	Increased risk as a more public behavior	Farther	Increased risk as a more public behavior
Privately making fun of a target	Criticizing a target's clothes/ personality; gesturing, or imitating a target behind their back	Closer	Reduced risk as a more private behavior	Closer	Reduced risk as a more private behavior

Behavior	Definition	Objective Closeness Prediction	Justification	Subjective Closeness Prediction	Justification
Rallying others against a target	Trying to get others to dislike a target	Farther	Easier to get support if target is not in in-group	Farther	Reducing chance of being asked to justify behavior
Breaking a confidence	Telling another something that was told to the aggressor by the target in secret	Closer	Must have closer relationship to gain access to information/secrets	Farther	Requires decreased feelings of loyalty
Using one's personal relation-ships as a weapon	Becoming friends with a target for purposes other than simply liking them	Closer	Relationship must be valuable (to target) to be effective	Closer	Relationship must be valuable (to target) to be effective
Trying to break up the friendships of others		Farther	Avoid the implications of the network	Farther	To avoid the implications of the network
Threat-ening to withhold one's own friendship from another		Closer	Close friendship may be needed for its withdrawal to be adequately aversive	Closer	Close friendship may be needed for its withdrawal to be adequately aversive
Passing notes	i.e., in class	Farther	Can be transmitted without physical closeness	Closer	More likely to be known by the group

Behavior	Definition	Objective Closeness Prediction	Justification	Subjective Closeness Prediction	Justification
Telephone harassment	Repeated, unwanted, and prank calling; three-way calling attacks	Farther	Increased risk as a more public behavior	Farther	Increased risk as a more public behavior
Cyber-bullying	Harassing e-mails and instant and text messages	Farther	Key component of anonymity	Farther	Key component of anonymity
Silent nonverbal behaviors	Dirty looks, rolling one's eyes, derogatory facial expression, and negative body language	Closer	Reduced risk as a more private behavior	Closer	Reduced risk as a more private behavior
Audible nonverbal behaviors	Whispering, "timed" laughing (i.e., laughing to upset a target)	Farther	Increased risk as a more public behavior	Farther	Increased risk as a more public behavior
Backbiting	Malicious talk about an absent target	Farther	Can be transmitted without physical closeness	Closer	More likely to be known by the group

Behavior	Definition	Objective Closeness Prediction	Justification	Subjective Closeness Prediction	Justification
Involving males	Pursuing, dating, or sleeping with a target's boyfriend / girlfriend (either current or former)	Closer	Access to the male in question	Farther	Likely requires decreased feelings of loyalty
Lying	Being untruthful in order to make another feel foolish/small	Closer	Need base of friendship for lie to be sufficiently hurtful	Farther	Likely requires decreased feelings of loyalty

See Table 1 for a complete list of these behaviors, along with their descriptions, and predictions, as well as justifications for those predictions.

Method

Participants

One hundred and fifty-two female participants were recruited from the first year psychology course at the University of Manitoba as part of their course requirements. Participation was restricted to female students who graduated from high school in the previous academic year (i.e., June 2006). The gender requirement was necessary given that the current study was concerned exclusively with female participants, as the hypotheses under investigation related specifically to relationships between young women. The latter requirement was included given that the current study was interested

in the social networks of females in their final year of high school. It was important that this final year be as close to questionnaire completion as possible, in an effort to maximize the accuracy of participants by minimizing the time lag between the event (i.e., their final year of high school) and their report. Of the original sample, only 123 met the eligibility criteria and provided usable data. Further, four participants were excluded from additional analysis due to social desirability scores greater than two standard deviations above the mean. Therefore, the final sample was composed of 119 participants, with a mean age of 18.16 years old ($SD = 0.41$ years; range = 17 to 20 years old), most of whom identified themselves as Caucasian (82.5%). The questionnaire packages were completed independently by participants in several group data collection settings.

Materials

Each participant was given a questionnaire package in an unsealed letter-sized envelope. The package contained a short demographic questionnaire (asking participants about their age, ethnicity, and the year of their high school graduation; Appendix D), an instruction page for Antonucci's (1986) hierarchical map, which also asked participants to list the initials of their social network members in categories (i.e., liked well-known other, disliked well-known other, like acquaintance, and disliked acquaintance; Sande, Goethals, & Radloff, 1988). Participants were instructed to remove the map from the package to facilitate completion of the Personal Acquaintance Measure (PAM; Starzyk et al., 2006) and the indirect aggression behavioral measure (Appendix E). In addition to the map, participants also received 10 copies of the Duration and Frequency of Interaction subscales of the PAM (Appendix F), two versions (victim and perpetrator) of the indirect

aggression behavioral list (Appendices G and H, respectively), the Experience in Close

Relationships scale (ECR; Brennan et al., 1998; Appendix I), the Tromsø Social

Intelligence Scale (TSIS; Silvera et al., 2001; Appendix J), the short version of the

Empathy Quotient scale (Short EQ; Muncer & Ling, 2006 derived from Baron-Cohen &

Wheelwright, 2004; Appendix K), and the M-C 2, a shortened version of the Marlowe-

Crowne Social Desirability Scale (Crowne & Marlowe, 1960; shortened version by

Strahan & Gerbasi, 1972; Appendix L). Each measure is described in detail below.

Subjective Closeness. The current study utilized Antonucci's (1986) hierarchical

mapping technique to assess perceived (subjective) relationship closeness between each

participant and the members of their respective social networks. This technique required

participants to complete a map composed of three concentric circles (a "bull's eye"

diagram) about a central circle containing the word "YOU," in which participants placed

up to 10 small circular stickers, each representing a member of their social network

(Rowe & Carnelley, 2005).

The instructions for the mapping technique followed Rowe and Carnelley's

(2005) method, which was adapted from Antonucci (1986). Using the 10 circular stickers

provided, participants were asked to identify up to 10 female classmates in their final

year of high school who were members of their social networks by writing the initials of

each individual on one of the stickers provided. They were asked to include members

who were liked well-known others, disliked well-known others, like acquaintances, and

disliked acquaintances, and space was provided for up to three social network members

for each of these categories (however, as mentioned, participants were asked to keep their

total number of social network members to a maximum of 10; see Rowe & Carnelley,

2005, Study 1). Asking participants to classify individuals according to these categories was intended to ensure that the social network members included in their maps represented their true social world, and not just their close friends (procedure taken from Sande et al., 1988; Experiment 4). Participants were instructed to place a number following the initials of any social network members that had the same initials, (e.g., JD1, JD2, JD3).

Departing slightly from Antonucci's (1986) initial procedure in which participants are asked to include "people who are important in your life right now," participants in the current study were asked to include only female classmates that they could recall from their final year of high school; as such, all instructions were put in the past tense. Additionally, Antonucci's mapping system made no use of the space outside the largest circle. That is, participants in his initial design were told that the central circle containing the word "YOU" was to represent the participant's core self; the first concentric circle encircling the core self was to be reserved for "people to whom you feel so close that it is hard to imagine life without them;" the second circle was to be for "people to whom you may not feel quite that close but who are still important to you;" finally, in the outermost circle, participants were to include "people whom you haven't already mentioned but who are close enough and important enough in your life that they should be placed in your social network." While these directions were not notably altered, an important addition for the current study was that participants were asked to identify individuals to whom they did not feel close with. As such, they were told to include people who were not a part of their extended group of friends in the space outside the concentric circles. To construct their social maps, participants were asked to place each of their initial-identified

stickers into the bull's eye map in a position and at a distance from their core self that was "meaningful to them" (Rowe and Carnelley, 2005).

Objective Closeness. Objective relationship closeness was measured using 10 copies of the "Duration" and "Frequency of Interaction" subscales of the Personal Acquaintance Measure (PAM; Starzyk et al., 2006), one for each social network member identified in each participant's hierarchical map. In its entirety, the PAM is an 18-item self-report questionnaire composed of six subscales (three items per subscale): Duration, Frequency of Interaction, Knowledge of Goals, Physical Intimacy, Self-Disclosure, and Social Network Familiarity. In its inception and evaluation, Starzyk and her colleagues theorized that acquaintance was best measured by considering both the quantity and quality of the relationship in question. They found that the Duration and Frequency of Interaction subscales were a measure of the former, whereas the Knowledge of Goals, Physical Intimacy, Self-Disclosure, and Social Network Familiarity subscales were a measure of the latter. In order to measure *objective* closeness, relationship quantity rather than quality was of greater relevance for the current study. As such, only the Duration and the Frequency of Interaction subscales were used.

The Duration and Frequency of Interaction subscales of the PAM have been found by Starzyk et al. (2006) to have good internal consistency (Coefficient α's = .96 and .89, respectively, in Study 1; and α's = .95 and .85, respectively, in Study 2) and test-retest reliability (α's = .97 and .90, respectively). Each of these subscales is composed of three items for which participants rate the degree to which they agree with each statement, on a scale of 0 ("*Definitely False/Strongly Disagree*") to 4 ("*Definitely True/Strongly Agree*"), giving each participant a possible range of scores from 0 to 12 on

each subscale. In the current study, Cronbach α's = .94 and .91 for Duration and Frequency of Interaction, respectively. Both the Duration and the Frequency of Interaction subscales were found by Starzyk et al. to correlate significantly (r = .47 and .16, respectively) with the Relationship Closeness Inventory (RCI; Bersheid et al., 1989), another, much longer measure of objective closeness.

Indirectly Aggressive Behavioral List. Participants were provided with two copies of the list of indirectly aggressive behaviors generated from the review of previous indirect aggression research and supplemented with items from the pilot study. The wording of the behaviors was adapted from the labels assigned in Table 1 in order to make them sound less socially undesirable. Working from the set of female classmates they identified in their social network map, participants were instructed to identify those in their high school social network who had aggressed indirectly *against them* on the first copy of the indirect aggression behavioral list; additionally, participants were to identify those in their high school social network *they had victimized* using each behavior, on the second copy of this list. The order of these two measures was randomized across participants. Addressing one of the major limitations of previous research and the pilot study, the current study also provided brief descriptions of each behavior to reduce the interpretational variability across subjects. The descriptions, as well as space to include the initials of those identified as members of each participant's social network, appeared next to each listed behavior. Additionally, the lists left space for participants to include other behaviors they may have felt had been overlooked, and asked them to define any and all additional behaviors they chose to include. In order to keep the behavioral list

manageable and appropriate to more than one cohort, several (three per scale) categories of "Other" behaviors, with space for participants to define such behaviors, were provided.

An example of how the indirectly aggressive behavioral list was to be used was also provided in the instructions: that is, a participant who had known classmates "Jane Doe" and "Sally Sun" in her final year of high school would have included stickers labeled J.D. and S.S. in her social network map and would have completed separate copies of the Duration and Frequency of Interaction subscales of the PAM for each. If, in her final year of high school, Jane had told bad or false stories about the participant, J.D. would be written beside this description on the victim version of the indirect aggression behavioral list. Conversely, if the participant had excluded Sally from her group of friends in high school, S.S. would be written beside "Didn't include me in an activity or conversation when others around me (i.e. friends of mine) were" on the perpetrator version of the indirect aggression behavioral list. It was expressed to participants in the instructions of the questionnaire package that any member of their social network could be included under as many behavioral headings (in either Appendix G or H) as applied.

Attachment Style. Global attachment style was measured using Brennan, Snyder, and Omoto's Experience in Close Relationships scale (ECR; 1998), a 36-item self-report scale. This scale gives an index of each participant's attachment style on the two dimensions of attachment: anxiety and avoidance (Cronbach α's = .91 and .94). All questions were answered on a 7-point scale indicating the extent to which participants' agreed with each statement, ranging from 1 ("*Disagree Strongly*") to 7 ("*Agree Strongly*").

Social Intelligence. The Tromsø Social Intelligence Scale (TSIS; Silvera et al., 2001) was used to measure social intelligence. The TSIS is the only published self-report scale of social intelligence currently available and has been validated in an independent sample of Italian adolescents (Gini, 2006). The TSIS is a 21-item self-report scale containing three subscales (Social Information Processing, Social Skills, and Social Awareness), each composed of 7 items. Each item asked participants to rate, on a 7-point scale, the extent to which a given statement described them, with higher scores indicating greater social intelligence (Cronbach $\alpha = .81$).

Empathy. Empathy was measured using the short version of the Empathy Quotient scale (Short EQ; Muncer & Ling, 2006; derived from Baron-Cohen & Wheelwright, 2004), a 15-item self-report questionnaire in which participants indicated the extent of their agreement with each statement on a 4-point scale, ranging from "*Strongly Agree*" to "*Strongly Disagree*". The values associated with each point, however, varied depending on the direction of the question; less empathic responses ("*Agree/Disagree*" and "*Strongly Agree/Disagree*") were coded as "0" and more empathic responses ("*Disagree/Agree*" and "*Strongly Disagree/Agree*") were coded as a "1" or "2", depending on the degree of empathy implied. The 15 items on the Short EQ were derived from Baron-Cohen and Wheelwright's (2004) original EQ scale which consists of 60 items, 40 of which make up the three factor model of empathy of the scale and are scored in the same way as the short version; while the remaining 20 questions are filler items. The Short EQ is composed of five items chosen for their high loadings on their respective factors from each of the three factors of the original EQ; namely, cognitive empathy, emotional empathy, and social skills (Muncer & Ling, 2006). The

original EQ has been shown to be a valid and reliable self-report measure of both cognitive and emotional empathy (as well as social skills), and it is moderately correlated with the Hogan Empathy Scale (Hogan, 1969) and the Interpersonal Reactivity Index (Davis, 1983), two common measures of empathy (Lawrence, Shaw, Baker, Baron-Cohen, & David, 2004). The Short EQ, while still in its exploratory phase, appears to be a parallel measure of empathy to the original three-factor EQ. In its initial creation and analysis, the Short EQ revealed higher goodness of fit and comparative fit indices than the original scale (.95 versus .71 and .92 versus .57, respectively) and a lower root mean square error of approximation than the original scale (.045 versus .068), all of which indicated that the Short EQ is at least as good as the original EQ at conceptualizing the three factors (Muncer & Ling, 2006). For the purposes of the current study's interest in empathy, however, a general measure of cognitive and emotional empathy which can be administered to participants quickly was ideal; hence the Short EQ. Higher scores on this scale indicated greater overall empathy (Cronbach α = .75).

Social Desirability. Finally, a shortened version of Crowne and Marlowe's 33-item social desirability scale (MCSDS; 1960) was included in the questionnaire package. The shortened version, the M-C 2, is composed of 10 true/false items from the original scale, and has been recommended for use when administration time is limited and a drop in reliability is acceptable (from .87 to .75, as compared with the original MCSDS; Strahan & Gerbasi, 1972). This measure of social desirability was intended to identify and control for those participants that may have been more inclined to present themselves in an especially positive light. As previously discussed, because of the negative connotation of indirect aggression, research in this area using self-report measures has

been fraught with issues of social desirability (e.g., Peets & Kikas, 2006). Nonetheless, the logistics of the current study constrained the researcher to the use of self-reports, as the social network members participants identified, as well as their teachers, from the year *before* their participation in the current study were not accessible, making the attainment of peer- and teacher-reports of indirectly aggressive behavior unreasonable.

Participants received one point for each item they endorsed on the M-C 2, giving a possible range of scores from 0 to 10, with higher scores indicating higher tendencies to present the self positively (Cronbach α = .42). Participants' social desirability scores were entered into the first step of all conducted regression analyses to control for its influence. Additionally, for the Chi-squared analyses, participants scoring above two standard deviations above the mean were excluded from these analyses.

Procedure

Once informed consent had been collected from all participants (Appendix M) and instructions had been read aloud, participants were asked to review the written instructions and then to complete their questionnaire package. This package included: the demographic questionnaire, the adapted hierarchical map and 10 circular stickers, 10 copies of the Duration and Frequency of Interaction subscales of the PAM, two versions (victim and perpetrator) of the indirect aggression behavioral list, the ECR, the TSIS, the Short EQ, and the M-C 2. All scales were counterbalanced across participants to ensure that order effects did not contribute to systematic error; however, Antonucci's hierarchical map (along with its instructions), the 10 copies of the Duration and the Frequency of Interaction subscales of the PAM, and the indirectly aggressive behaviors

list were treated as one scale in this package, and as such, were always completed together (while the hierarchical map was always presented first in this section, the remaining scales were presented in randomized order).

When each participant had completed their questionnaire package, they were asked to place it back into the provided envelope, seal it (to assure anonymity), and bring it to the researcher. Each participant was then debriefed, thanked for their participation, and given counselling and contact information should they have had any lingering negative feelings regarding the study or wish to know more about the research project (Appendix N).

Results

Regressions with Individual Difference Variables

Initial regression analyses were conducted to determine the relative contribution of each of the individual difference variables (i.e., attachment, empathy, and social intelligence) to the total number of indirectly aggressive behaviors participants reported perpetrating and being victimized by. As noted earlier, self-report measures of indirect aggression are generally less reliable than peer- and teacher-reports (e.g., Peets & Kikas, 2006). Therefore, these analyses controlled for participants' social desirability scores, by entering them into the first step of all regression analyses.

Separate analyses were conducted for the total number of behaviors participants reported perpetrating and the total number of behaviors participants reported being victimized by. Additionally, separate regressions were conducted for (1) the two dimensions of attachment (i.e., avoidance and anxiety; Brennan et al., 1998) and (2)

empathy and social intelligence because of the interactions expected between these pairs of variables (see Brennan et al., 1998, and Björkqvist et al., 2000; Kaukiainen et al., 1999, respectively). However, no interactions were expected between empathy/social intelligence and avoidance/anxiety.

As such, four regression analyses were conducted, each controlling for participants' social desirability scores (by entering them into step 1). The first two regressions predicted (1) the total number of behaviors participants reported perpetrating and (2) the total number of behaviors participants reported being victimized by from participants' avoidance and anxiety scores from the ECR (Brennan et al., 1998) in step 2, as well as from an interaction between avoidance and anxiety in step 3. The interaction variable entered into step 3 was computed by first creating standardized scores (i.e., z-scores) for both the avoidance and anxiety subscales, and multiplying these together.

The second set of regressions predicted (3) the total number of behaviors participants reported perpetrating and (4) the total number of behaviors participants reported being victimized by from participants' empathy and social intelligence scores from the Short EQ and the TSIS (Muncer & Ling, 2006 derived from Baron-Cohen & Wheelwright, 2004 and Silvera et al., 2001, respectively) in step 2, as well as from an interaction between empathy and social intelligence in step 3. Again, this interaction variable was computed by first creating standardized scores (i.e., z-scores) for both empathy and social intelligence, and multiplying these together.

Results from these regression analyses revealed that once social desirability scores were accounted for, participants' avoidance and anxiety scores did not significantly add to the prediction of the total number of behaviors participants reported

perpetrating. Additionally, the interaction between avoidance and anxiety did not add significantly to this prediction. This trend was also found for the total number of behaviors participants reported being victimized by. See Table 2 for a summary of these findings.

Table 2

Predicting the total number of behaviors perpetrated by and victimizing participants from their social desirability, avoidance, and anxiety scores.

	Number of perpetrated behaviors				Number of victimizing behaviors			
	ΔF	B	ΔR^2	R^2	ΔF	B	ΔR^2	R^2
Step 1	28.50***		0.19	0.19	9.19***		0.07	0.07
Social Desirability		-0.44***				-0.27**		
Step 2	0.47		0.01	0.20	0.24		0.00	0.08
Social Desirability		-0.46***				-0.29**		
Avoidance		-0.01				-0.01		
Anxiety		-0.08				-0.06		
Step 3	0.06		0.00	0.20	0.13		0.00	0.08
Social Desirability		-0.46***				-0.28**		
Avoidance		-0.02				-0.01		
Anxiety		-0.09				-0.07		
Avoidance x Anxiety		-0.02				-0.04		

** $p < .01$, *** $p < .001$; $N = 123$

When the total number of behaviors participants reported perpetrating was predicted from their empathy and social intelligence scores, these variables also did not significantly add to the prediction from the social desirability scores alone. Also, adding the interaction between empathy and social intelligence did not add significantly to this prediction. This trend was also found for the total number of behaviors participants

reported being victimized by; however, the contribution of participants' empathy scores was marginally significant; see Table 3 for a summary of these findings. Higher empathy scores were marginally associated with reporting being victimized by more behaviors.

Table 3

Predicting the total number of behaviors perpetrated by and victimizing participants from their social desirability, empathy, and social intelligence scores.

	Number of perpetrated behaviors				Number of victimizing behaviors			
	ΔF	β	ΔR^2	R^2	ΔF	B	ΔR^2	R^2
Step 1	28.94***		0.19	0.19	9.53***		0.07	0.07
Social Desirability		-0.44***				-0.27**		
Step 2	1.32		0.02	0.21	2.76		0.04	0.12
Social Desirability		-0.47***				-0.32***		
Empathy		0.10				0.21[a]		
Social Intelligence		0.05				-0.01		
Step 3	0.30		0.00	0.21	0.24		0.00	0.12
Social Desirability		-0.47***				-0.32**		
Empathy		0.11				0.22[a]		
Social Intelligence		0.05				0.00		
Empathy x Social Intelligence		0.05				0.04		

[a] $p < .07$ ** $p < .01$, *** $p < .001$; $N = 123$

Intercorrelations among Individual Difference Variables

As mentioned, social desirability appeared to be the only "individual difference variable" addressed in the current study related to the number of indirectly aggressive behaviors participants reported perpetrating and being victimized by. Given this

unexpected finding, a correlational analysis was conducted to examine the nature of the

relationships between participants' mean scores on the avoidance, anxiety, empathy,

social intelligence, and social desirability scales, as well as the total number of behaviors

participants reported perpetrating and being victimized by; see Table 4.

Table 4

Intercorrelations between all individual difference measures and total number of

perpetrated and victimizing indirectly aggressive behaviors.

	Anxiety	Empathy	Social Intelligence	Social Desirability	Perpetrated Behaviors	Victimized Behaviors
Avoidance	0.15	-0.21*	-0.17	-0.03	0.01	0.01
Anxiety		-0.13	-0.31**	-0.30**	0.07	0.03
Empathy			0.66***	0.24**	0.02	0.13
Social Intelligence				0.16	0.03	0.08
Social Desirability					-0.44***	-0.27**
Perpetrated Behaviors						0.79***

$* \, p < .05, ** \, p < .01, *** \, p < .001; N = 123$

The significant negative correlations between social desirability scores and both

the total number of behaviors participants reported perpetrating and the total number of

behaviors participants reported being victimized by indicates that higher scores on the

social desirability scale (i.e., individuals especially concerned with presenting the self

positively) were related to fewer reported indirectly aggressive behaviors, from the

perspective of both the perpetrator and the victim of such behaviors. This is consistent

with previous research that has emphasized that, given the socially undesirable nature of

indirect aggression, self-reports are not usually ideal. As such, those scoring above two

standard deviations above the mean on the social desirability scale were removed from further analysis ($N = 4$).

It is also interesting to note that, aside from social desirability's significant relationship with half of the individual difference variables (i.e., anxiety and empathy), the only other significant relationships were between the total number of behaviors participants perpetrating and being victimized by, participants' scores on avoidance and empathy, participants' scores on anxiety and social intelligence, and participants' scores on empathy and social intelligence. The first of these indicates that individuals who reported using more indirectly aggressive behaviors also reported being victimized by more behaviors. This particular correlation will be addressed further in the discussion section. The significant correlations between avoidance and empathy and between anxiety and social intelligence were unexpected; since these variables were not expected to interact, they will not be investigated further in the current project (however, future research examining the interaction between avoidance/anxiety and empathy/social intelligence may yield interesting results). The final significant correlation between empathy and social intelligence is consistent with previous research, as well as the hypotheses of the current project; as such, a possible interaction between these variables was examined further, and is reported in the "Empathy and Social Intelligence" subsection which follows.

Social Network Member Classification and Relationship Closeness

Preliminary analysis continued with an investigation of the effect of social network member classification (i.e., liked well-known other, liked acquaintance, disliked

well-known other, disliked acquaintance; Sande et al., 1988) on social network members'
reported objective and subjective closeness scores. This was intended to determine
whether the instructions given to participants to include social network members that they
both liked and disliked and both knew well and did not know well actually led them to
include individuals of varying degrees of closeness; that is, that they included a range of
individuals and not only their close friends. This manipulation did appear to have the
intended effect, as significant main effects for social network member classification were
found for both objective and subjective closeness measures; $F(3, 1003) = 819.06$, $p <$
.001 and $F(3, 999) = 186.52$, $p < .001$, respectively. That is, social network members that
were identified as "liked well-known others" received significantly higher scores on the
PAM subscales (indicating greater objective closeness) and were placed significantly
closer to participants' "core selves" in the hierarchical map (indicating significantly
greater subjective closeness) than all other social network member groups. All of the
mean closeness scores were significantly different from all others, with the exception of
"liked acquaintances" and "disliked well-known others" for objective closeness, and
"disliked well-known others" and "disliked acquaintances" for subjective closeness. A
summary of the means and standard errors of each social network member group for both
objective and subjective closeness measures is presented in Table 5.

Table 5

Means and standard errors for the measures of both objective and subjective closeness

for each class of social network member.

	Objective Closeness		Subjective Closeness	
	M	*SE*	*M*	*SE*
Disliked Well-Known Other	19.35[b]	0.35	60.87[a]	1.01
Disliked Acquaintance	14.96[a]	0.39	63.27[a]	1.10
Liked Well-Known Other	25.80[c]	0.29	7.28[c]	0.84
Liked Acquaintance	19.60[b]	0.32	28.62[b]	0.92

Notes: Higher scores on "Objective Closeness" indicate closer relationships, while higher scores on "Subjective Closeness" indicate farther relationships; Within a column, means having different superscripts are significantly different from one another.

Attachment Style

Recall that the hypotheses of the current study predicted that individuals reporting low levels of avoidance and anxiety (i.e., those who were securely attached) would report the fewest number of indirectly aggressive behaviors, from the perspective of both the perpetrator and the victim. Further, individuals reporting high levels of avoidance (i.e., those with fearfully and dismissively avoidant attachments styles) were predicted to report *perpetrating* the greatest number of indirectly aggressive behaviors. Finally, individuals reporting high levels of anxiety and low levels of avoidance (i.e., those who were anxiously attached) were predicted to report being *victimized by* the greatest number of indirectly aggressive behaviors.

As the above mentioned regression analyses examined anxiety, avoidance, and social desirability only as predictors of the total number of indirectly aggressive

behaviors, additional analyses were conducted to determine whether attachment style interacted with relationship closeness to predict these behaviors. Therefore, participants were identified as "secure," "anxious," "fearfully avoidant," or "dismissively avoidant," according to the procedure outlined by Brennan and her colleagues (1998). Also, since the social network member classifications appeared to be a sufficient measure of relationship closeness, these classifications were maintained for this analysis. As such, each social network member was identified by the participant as liked well-known, liked acquaintance, disliked well-known, or disliked acquaintance (Sande et al., 1988). With these classifications, a 4 (attachment style) x 4 (social network member classification) analysis of variance (ANOVA) was conducted. To control for the effects of social desirability, this variable was included as a continuous covariate. The first ANOVA examined these variables with relation to the total number of behaviors participants reported perpetrating. Social desirability was found to be a significant covariate, $F(1, 1086) = 51.50$, $p < .001$, $partial$ $\eta^2 = .05$. Additionally, the analysis revealed a significant main effect for social network member classification, $F(3, 1086) = 78.00$, $p < .001$, $partial$ $\eta^2 = .18$, as each class of social network member was significantly different from all others; see Table 6 for a summary of these findings. However, there was no effect for attachment style, so the hypothesis that individuals with certain styles of attachment are more or less likely to perpetrate indirectly aggressive behaviors was not supported.

Table 6

Mean number of behaviors perpetrated by participants against four types of social network members.

Social Network Member Classification	M	SE
Disliked Well-Known Other	3.60^a	0.14
Disliked Acquaintance	2.13^b	0.15
Liked Well-Known Other	1.47^c	0.13
Liked Acquaintance	0.67^d	0.14

Note: Within a column, means having different superscripts are significantly different from one another.

Another 4 (attachment style) x 4 (social network member classification) ANOVA was conducted to examine the total number of behaviors participants reported being victimized by. Once again, social desirability was included as a continuous covariate and was found to be significant, $F(1, 1086) = 4.61, p < .05, partial \eta^2 = .00$. This analysis revealed significant main effects for attachment style and social network member classification; $F(3, 1086) = 4.03, p < .01, partial \eta^2 = .02$ and $F(3, 1086) = 65.51, p < .001, partial \eta^2 = .15$, respectively. The main effect for attachment style supported the hypothesis that individuals who are classified by high levels of anxiety and low levels of avoidance (i.e., those who were anxiously attached) would report being *victimized by* the greatest number of indirectly aggressive behaviors, as they reported being victimized by significantly more behaviors than any other group. See Table 7 for a summary of these findings.

Table 7

Mean number of behaviors participants, classified by attachment style, reported being

victimized by.

Attachment Style	M	SE
Anxious	2.44^a	0.19
Dismissively Avoidant	$2.19^{a,b}$	0.19
Fearfully Avoidant	$1.82^{b,c}$	0.16
Secure	1.68^c	0.16

Note: Within a column, means having different superscripts are significantly different

from one another.

Additionally, the main effect for social network member classification paralleled

the effect observed for the total number of behaviors participants reported perpetrating, as

each class of social network member was significantly different from all others; see Table

8.

Table 8

Mean number of behaviors participants reported being victimized by, perpetrated by four

types of social network members.

Social Network Member Classification	M	SE
Disliked Well-Known Other	3.90^a	0.18
Disliked Acquaintance	2.90^b	0.19
Liked Well-Known Other	1.55^c	0.16
Liked Acquaintance	0.59^d	0.17

Note: Within a column, means having different superscripts are significantly different

from one another.

Social Intelligence and Empathy

Recall that the hypotheses of the current study predicted that individuals reporting high levels of social intelligence would report perpetrating greater numbers of indirectly aggressive behaviors than those reporting low levels. In addition, individuals reporting high levels of empathy were predicted to report perpetrating fewer numbers of indirectly aggressive behaviors than those reporting low levels. However, these variables were predicted to interact, such that those reporting high levels of social intelligence *and* high levels of empathy would report perpetrating the *fewest* number of indirectly aggressive behaviors, whereas individuals reporting high levels of social intelligence *and* low levels of empathy would report perpetrating the *greatest* number of indirectly aggressive behaviors.

As with the regression analyses which examined anxiety, avoidance, and social desirability, the regressions which examined social intelligence, empathy, and social desirability also used these variables only as predictors of the total number of indirectly aggressive behaviors participants reported perpetrating and being victimized by. As such, additional analyses were conducted to determine whether social intelligence and empathy interacted with relationship type (i.e., social network member classification) to predict these behaviors. Therefore, a tertiary split identified participants as "high," "moderate," or "low" on the measures of both social intelligence and empathy. Once these groups had been identified, two 3 (social intelligence) x 3 (empathy) x 4 (social network member classification) ANOVAs were conducted. The first ANOVA examined these variables with relation to the total number of behaviors participants reported perpetrating. Once

again, social desirability was included as a continuous covariate, and was found to be significant, $F(1, 1076) = 71.11, p < .001, partial$ $\eta^2 = .06$. Additionally, this analysis revealed significant main effects for social intelligence and social network member classification; $F(2, 1076) = 6.18, p < .01, partial$ $\eta^2 = .01$ and $F(3, 1076) = 29.84, p < .001, partial$ $\eta^2 = .08$, respectively. However, these were qualified by a significant interaction between social intelligence and empathy, $F(4, 1076) = 6.58, p < .001, partial$ $\eta^2 = .02$.

To further investigate this interaction, separate 3 (social intelligence) x 4 (social network member classification) ANOVAs were conducted for each level of empathy. A main effect for social network member classification was found for all three levels of empathy; low: $F(3, 300) = 4.77, p < .01, partial$ $\eta^2 = .05$, moderate: $F(3, 423) = 41.29, p < .001, partial$ $\eta^2 = .23$, and high: $F(3, 351) = 12.22, p < .001, partial$ $\eta^2 = .10$. These trends are illustrated in Figure 3.

Figure 3. Mean number of indirectly aggressive behaviors perpetrated by four types of social network members against participants who report each level of empathy.
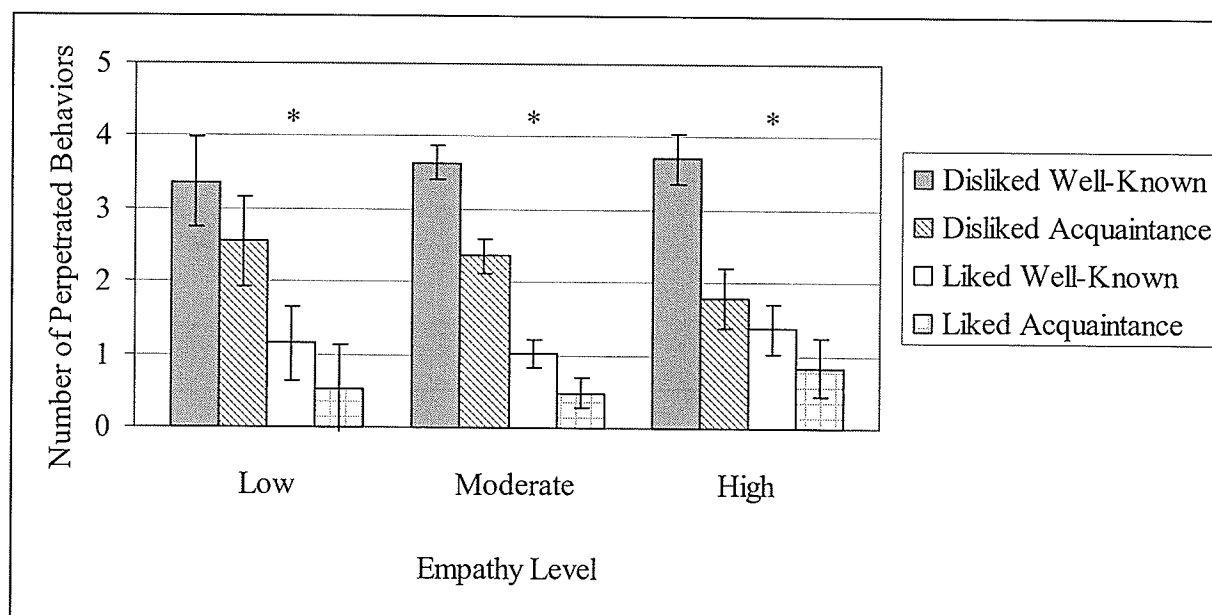
In addition, a main effect for social intelligence was found for individuals characterized by low and high levels of empathy; $F(2, 300) = 8.04$, $p < .001$, *partial* $\eta^2 =$ .05 and $F(2, 351) = 3.77$, $p < .05$, *partial* $\eta^2 = .02$, respectively. However, there was no effect for social intelligence found for those reporting moderate levels of empathy. These results are illustrated in Figure 4. These trends partially support the hypothesized relationship between social intelligence and empathy, as individuals reporting high levels of social intelligence *and* low levels of empathy reported perpetrating the greatest number of indirectly aggressive behaviors, though not significantly so.

Figure 4. Mean number of indirectly aggressive behaviors perpetrated by participants who report different levels of empathy and social intelligence.
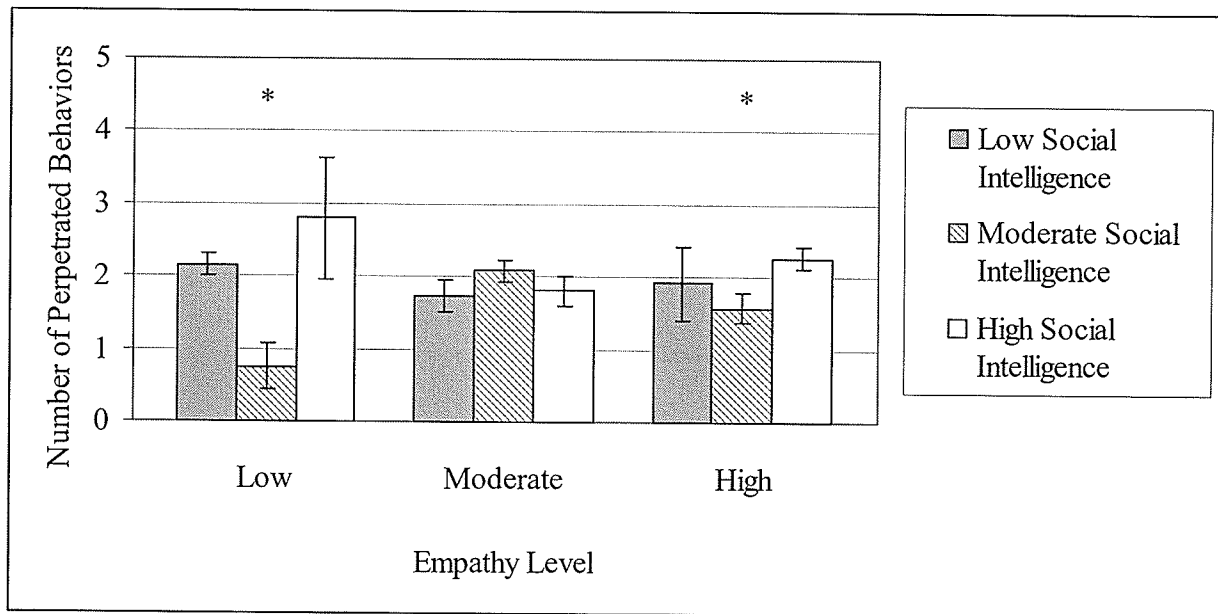
When these variables were used to predict the total number of behaviors participants reported being victimized by, once again, social desirability was found to be a significant covariate, $F(1, 1076) = 18.02$, $p < .001$, *partial* $\eta^2 = .02$. This analysis revealed significant main effects for social intelligence, empathy, and social network

member classification; $F(2, 1076) = 11.51$, $p < .001$, *partial* $\eta^2 = .02$, $F(2, 1076) = 8.86$, $p < .001$, *partial* $\eta^2 = .02$, and $F(3, 1076) = 39.11$, $p < .001$, *partial* $\eta^2 = .10$, respectively. Also, there were two significant two-way interactions; the first between social intelligence and empathy, and the second between social intelligence and social network member classification; $F(4, 1076) = 6.47$, $p < .001$, *partial* $\eta^2 = .02$ and $F(6, 1076) = 4.34$, $p < .001$, *partial* $\eta^2 = .02$, respectively. However, all of these effects were qualified by a significant three-way interaction, $F(12, 1076) = 3.16$, $p < .001$, *partial* $\eta^2 = .03$. Therefore, the three-way interaction was further investigated by conducting separate 3 (social intelligence) x 4 (social network member classification) ANOVAs for participants reporting each level of empathy. Main effects for social network member classification were found for participants at all three levels of empathy; low: $F(3, 300) = 5.10$, $p < .01$, *partial* $\eta^2 = .05$, moderate: $F(3, 423) = 29.50$, $p < .001$, *partial* $\eta^2 = .17$, and high: $F(3, 351) = 28.61$, $p < .001$, *partial* $\eta^2 = .20$. There was also a main effect for social intelligence for both the low empathy group and the high empathy group; $F(2, 300) = 3.81$, $p < .05$, *partial* $\eta^2 = .03$ and $F(2, 351) = 13.61$, $p < .001$, *partial* $\eta^2 = .07$, respectively. However, the main effects for both social network member classification and social intelligence for the *high* empathy group were qualified by a two-way interaction between these variables, $F(6, 351) = 5.04$, $p < .001$, *partial* $\eta^2 = .08$, and will therefore be discussed further in the following paragraph. The results of these main effects, however, suggest that individuals reporting *low* or *moderate* levels of empathy felt victimized by significantly more behaviors perpetrated by disliked well-known others than by any other group. See Figure 5 for a summary of these two groups (i.e., participants reporting low and moderate levels of empathy). Further, participants

reporting low levels of empathy *and* moderate social intelligence levels reported being

victimized by significantly fewer behaviors ($M = 0.80$, $SE = 0.35$) than those reporting

low empathy and low social intelligence ($M = 1.84$, $SE = 0.16$); the low empathy and

high social intelligence group did not differ significantly from either of these groups ($M = 2.30$, $SE = 0.93$).

Figure 5. Mean number of indirectly aggressive behaviors perpetrated against

participants who report low and moderate levels of empathy, perpetrated by four types of

social network members.
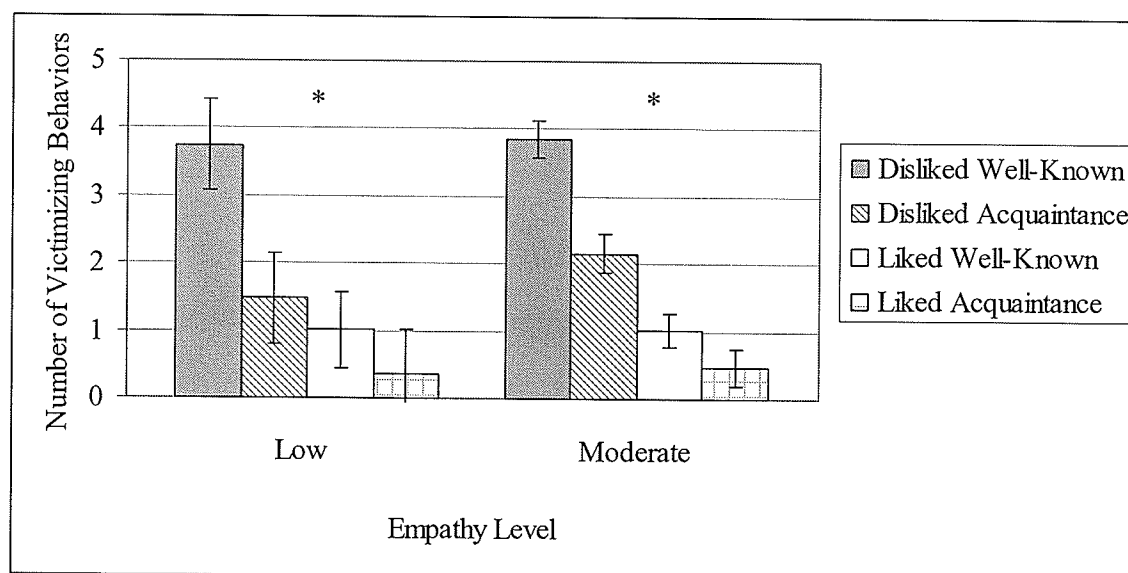
To further investigate the interaction between social intelligence and social

network member classification for the *high* empathy group, a univariate ANOVA was

conducted on social network member classification for each level of social intelligence.

Main effects for social network member classification were found for each level of social

intelligence; that is, for all participants reporting high empathy. A summary of these

findings is presented in Figure 6.

Figure 6. Mean number of indirectly aggressive behaviors perpetrated against

participants who report high levels of empathy and three levels of social intelligence,

perpetrated by four types of social network members.
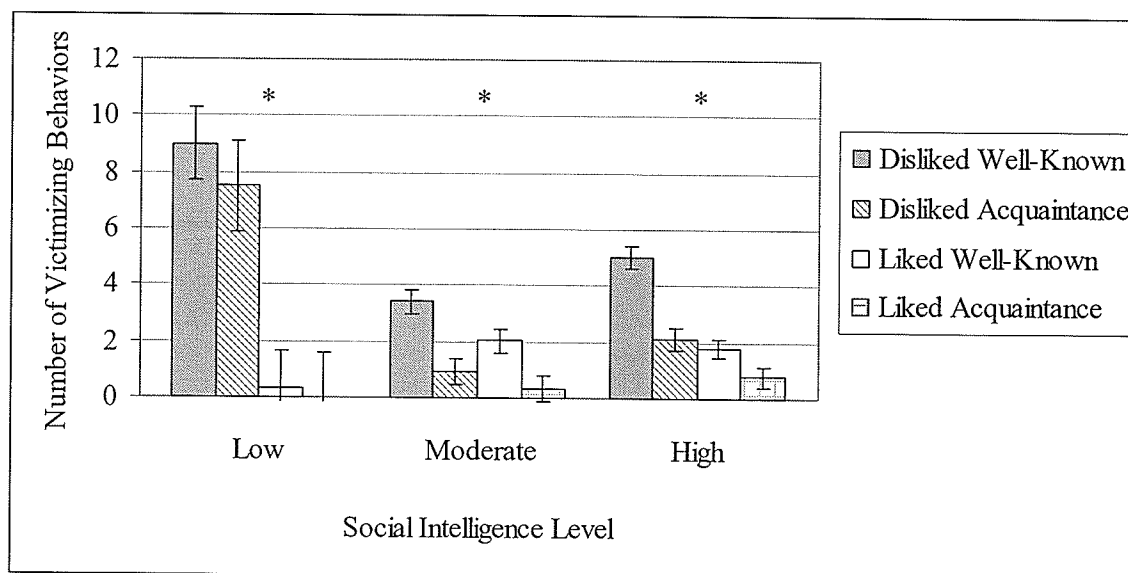
Social Intelligence and Cognitive and Emotional Empathy

As mentioned in Chapter I, the distinction between cognitive and emotional

empathy may be an important consideration when examining the interaction between

social intelligence and empathy. To examine this potential interaction's effect on the total

number of behaviors participants reported perpetrating, the same tertiary split as

previously described identified participants as "high," "moderate," or "low" on social

intelligence, cognitive empathy, and emotional empathy, and a 3 (social intelligence) x 3

(cognitive empathy) x 3 (emotional empathy) ANOVA was conducted. Once again,

social desirability was included as a continuous covariate and was found to be significant,

$F(1, 94) = 19.87$, $p < .001$, *partial* $\eta^2 = .17$. A significant main effect for social

intelligence was found, $F(2, 94) = 5.39$, $p < .01$, *partial* $\eta^2 = .10$; however, this was

qualified by a significant interaction between emotional empathy and social intelligence, $F(4, 94) = 4.19$, $p < .01$, *partial* $\eta^2 = .15$.

To examine this interaction, a follow-up univariate ANOVA was conducted on participants' reported emotional empathy level for each level of social intelligence. A main effect for emotional empathy was found only for participants who also reported high levels of social intelligence. That is, individuals who reported high levels of social intelligence and low levels of emotional empathy reported perpetrating significantly more indirectly aggressive behaviors than any other group, $F(2, 35) = 4.35$, $p < .05$, *partial* $\eta^2 = .20$. See Figure 7 for a summary of this trend.

Figure 7. Mean number of indirectly aggressive behaviors perpetrated by participants characterized by three levels of social intelligence and three levels of emotional empathy.
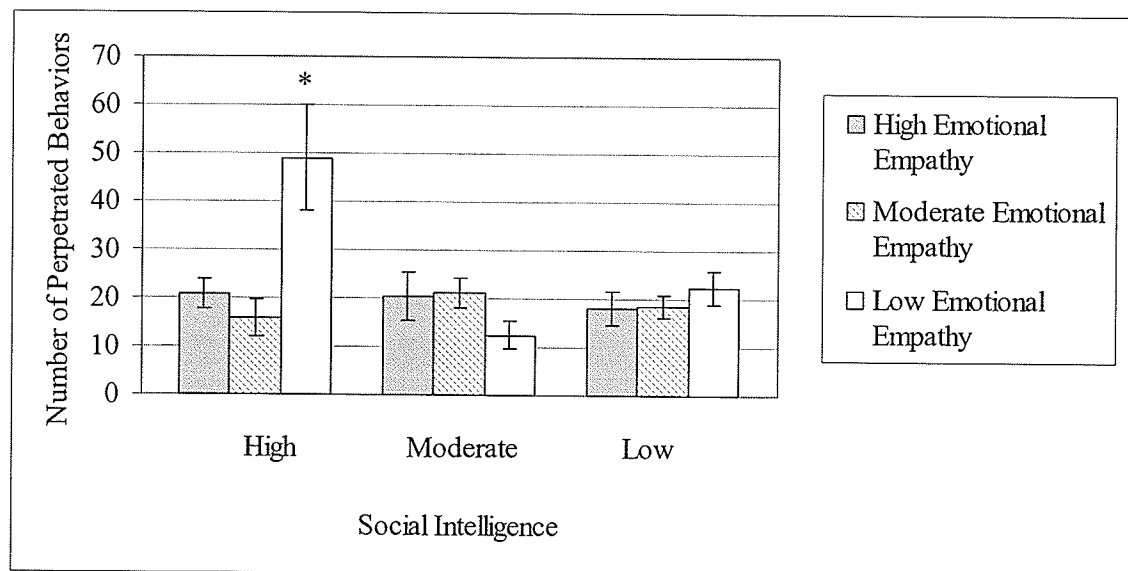
This trend was not observed, however, for participants' cognitive empathy level, as there existed neither a main effect, nor an interaction with social intelligence for this variable, $F(2, 94) = 0.14$, n.s. and $F(2, 94) = 0.58$, n.s., respectively. See Figure 8 for a

summary of these results. While these findings were not precisely in line with the prediction that the most common perpetrators of indirect aggression would be those who reported high levels of social intelligence *and* high levels of cognitive empathy, it is interesting that the most common perpetrators seemed to be individuals reporting high levels of social intelligence *and* low levels of emotional empathy.

Figure 8. Mean number of indirectly aggressive behaviors perpetrated by participants characterized by three levels of social intelligence and three levels of cognitive empathy.
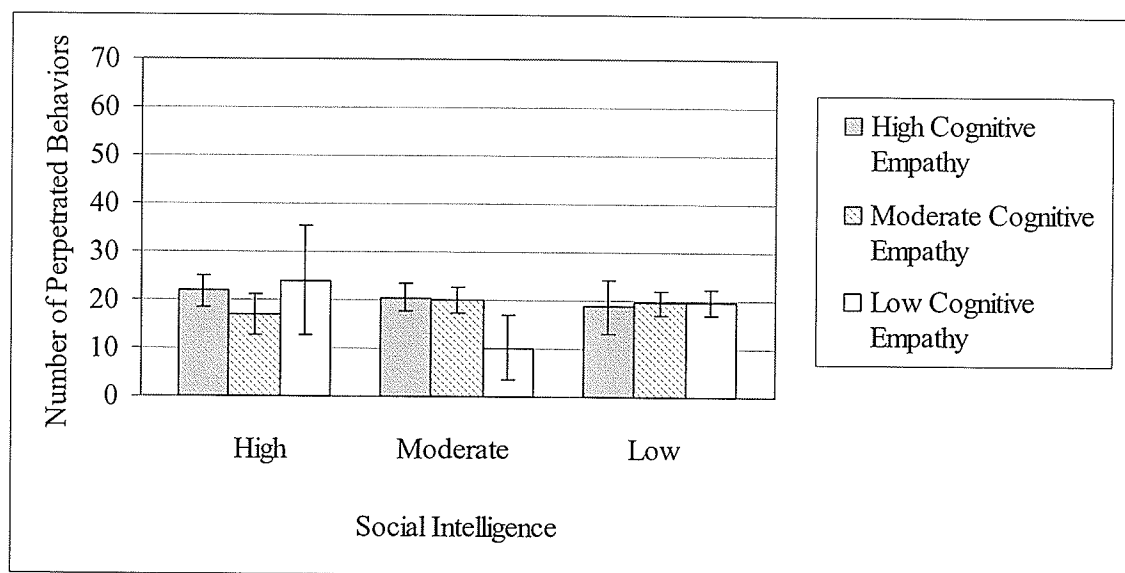
Specific Indirectly Aggressive Behaviors and Relationship Closeness

Recall that the central research question of the current study asked whether any of the specific behaviors that compose "indirect aggression" were differentially related to varying degrees of relationship closeness. That is, whether certain behaviors were more commonly used or experienced within the context of objectively or subjectively closer or farther relationships. If each behavior believed to compose indirect aggression were as

likely within the context of closer relationships as in farther relationships, then the traditional view of indirect aggression as a single phenomenon would be warranted (i.e., the null hypothesis). However, the current study was interested in testing the alternative hypothesis that certain indirectly aggressive behaviors are more common within the context of certain types of relationships (i.e., objectively/subjectively closer/farther). A complete list of these hypotheses was presented in Table 1.

To investigate these hypotheses, a Chi-squared analysis was conducted to examine the frequency of each specific indirectly aggressive behavior in closer as compared to farther relationships. Further, these analyses were conducted for both objective and subjective relationship closeness.

From the measures of objective and subjective relationship closeness (i.e., the PAM Duration and Frequency of Interaction subscales and the hierarchical mapping technique, respectively), each social network member was identified as "closer to," "of moderate closeness to," or "farther from" the participant who identified them. For objective closeness, these classifications were determined by conducting a tertiary split of PAM scores for each participant, independently of all other participants. That is, for each participant, all of their identified social network members were ranked in order of their assigned PAM scores. Those scoring in the highest third were classified as "objectively closer," as higher scores on the PAM indicate greater objective closeness. By contrast, those scoring in the bottom third were classified as "objectively farther." In order to maximize the difference between "closer" and "farther" individuals, social network members scoring in the middle third (i.e., those classified as being of moderate closeness to the participant) for each participant were excluded from further analysis.

For subjective closeness, an identical procedure was used to identify "subjectively closer" and "subjectively farther" social network members; however, those classified as "subjectively closer" were those network members who scored in the bottom third and those classified as "subjectively farther" were those network members who scored in the top third of each participant's ranked social network members, as lower scores on the hierarchical map represent greater subjective closeness. Once again, social network members scoring in the middle third for each participant were excluded from further analysis.

The number of times each behavior was identified as having been used against a social network member who was either "closer" or "farther" from the participant is presented in Tables 9 (for Objective Closeness) and 11 (for Subjective Closeness). By contrast, the number of times each behavior was identified as having been used against the participant by a social network member who was "closer" or "farther" from the participant is presented in Tables 10 (for Objective Closeness) and 12 (for Subjective Closeness). With regard to the objective closeness of relationships, breaking confidences, trying to break up the friendships of others, threatening to withhold one's own friendship from another, and lying were significantly more commonly perpetrated by participants against objectively *closer* social network members than against objectively farther individuals. On the other hand, gossiping, rumor spreading, privately making fun of a target, *silent* nonverbal behaviors, *audible* nonverbal behaviors, and backbiting were significantly more commonly perpetrated by participants against objectively *farther* social network members than against objectively closer individuals. There were no significant differences in the frequency of reported use of ostracism, publicly making fun

of a target, rallying others against a target, using one's personal relationships as a weapon, passing notes, telephone harassment, "cyber-bullying," or involving males based on objective relationship closeness (See Table 9).

Table 9

Chi-squared analysis of the frequency of each reported perpetrated indirectly aggressive behavior in objectively closer versus farther relationships.

	Gossiped	Ostracized	Spread a Rumor	Made Fun in Public	Made Fun in Private	Rallied Against
Closer	102	41	36	29	44	20
Farther	145	56	68	39	90	25
χ^2	7.29**	2.32	9.85**	1.47	15.79***	0.56

	Broke a Confidence	Used Friendship as a Weapon	Interfered with Friendship	Withheld Friendship	Passed a Note	Harassed by Phone
Closer	60	14	35	12	24	5
Farther	24	13	21	2	24	7
χ^2	15.43***	0.04	3.50[a]	7.14**	0.00	0.33

	"Cyber-bullied"	Nonverbal Behavior	Whispered or Laughed	Backbit	Used a Boy as a Weapon	Lied
Closer	25	46	21	74	14	31
Farther	24	77	47	128	9	16
χ^2	0.02	7.81**	9.94**	14.45***	1.09	4.79*

[a] $p < .07$, * $p < .05$, ** $p < .01$, *** $p < .001$

Additionally, breaking confidences and threatening to withhold one's own friendship from another were significantly more commonly used against participants by objectively *closer* social network members than by objectively farther individuals. On the other hand, rumor spreading, passing notes, *silent* nonverbal behaviors, *audible* nonverbal behaviors, and backbiting were significantly more commonly perpetrated by objectively

farther social network members than by objectively closer individuals. There were no significant differences in the frequency of social network members using their personal relationship to the participant as a weapon, trying to break up the friendships of the participant, threatening to withhold one's own friendship from the participant, passing notes about the participant, harassing them by telephone, or involving males based on objective relationship closeness (See Table 10).

Table 10

Chi-squared analysis of the frequency of each reported victimizing indirectly aggressive behavior in objectively closer versus farther relationships.

	Gossiped	Ostracized	Spread a Rumor	Made Fun in Public	Made Fun in Private	Rallied Against
Closer	86	65	44	46	41	35
Farther	87	80	63	46	47	44
χ^2	0.01	1.55	3.37[a]	0.00	0.41	1.03

	Broke a Confidence	Used Friendship as a Weapon	Interfered with Friendship	Withheld Friendship	Passed a Note	Harassed by Phone
Closer	93	30	45	16	34	15
Farther	25	21	35	6	79	9
χ^2	39.19***	1.59	1.25	4.55*	6.48*	1.50

	"Cyber-bullied"	Nonverbal Behavior	Whispered or Laughed	Backbit	Used a Boy as a Weapon	Lied
Closer	24	51	29	42	20	22
Farther	19	87	50	70	12	24
χ^2	0.58	9.39**	5.58*	7.00**	2.00	0.09

[a] $p < .07$, * $p < .05$, ** $p < .01$, *** $p < .001$

With regard to the subjective closeness of relationships, breaking confidences and lying were significantly more commonly perpetrated by participants against subjectively

closer social network members than against objectively farther individuals. On the other

hand, gossiping, ostracism, rumor spreading, publicly making fun of a target, privately

making fun of a target, rallying others against a target, "cyber-bullying," *silent* nonverbal

behaviors, *audible* nonverbal behaviors, and backbiting were significantly more

commonly perpetrated by participants against subjectively *farther* social network

members than against objectively closer individuals. There were no significant

differences in the frequency of reported use of gossiping, ostracism, publicly making fun

of a target, privately making fun of a target, rallying others against a target, using one's

personal relationships as a weapon, trying to break up the friendships of others, telephone

harassment, "cyber-bullying," involving males, or lying based on subjective relationship

closeness (See Table 11).

Table 11

Chi-squared analysis of the frequency of each reported perpetrated indirectly aggressive behavior in subjectively closer versus farther relationships.

	Gossiped	Ostracized	Spread a Rumor	Made Fun in Public	Made Fun in Private	Rallied Against
Closer	71	26	26	26	32	16
Farther	204	75	95	56	127	47
χ^2	64.32***	23.77***	39.35***	10.98**	56.76***	15.25***

	Broke a Confidence	Used Friendship as a Weapon	Interfered with Friendship	Withheld Friendship	Passed a Note	Harassed by Phone
Closer	59	12	38	8	26	8
Farther	35	20	30	13	35	8
χ^2	6.13*	2.00	0.94	1.19	1.33	0.00

	"Cyber-bullied"	Nonverbal Behavior	Whispered or Laughed	Backbit	Used a Boy as a Weapon	Lied
Closer	21	29	12	44	12	35
Farther	38	115	57	178	21	18
χ^2	4.90*	51.36***	29.35***	80.88***	2.46	5.45*

* $p < .05$, ** $p < .01$, *** $p < .001$

Finally, breaking confidences was the only behavior used significantly more often against participants by subjectively *closer* social network members than by subjectively farther individuals. Whereas gossiping, ostracism, rumor spreading, publicly making fun of a target, privately making fun of a target, rallying others against a target, using one's personal relationships as a weapon, trying to break up the friendships of others, cyber-bullying," *silent* nonverbal behaviors, *audible* nonverbal behaviors, and backbiting were significantly more commonly perpetrated by subjectively *farther* social network members

than by subjectively closer individuals. There were no significant differences in the

frequency of social network members threatening to withhold their friendship from the

participant, passing notes about the participant, harassing them by telephone, involving

males, or lying to them based on subjective relationship closeness (See Table 12). A

summary of the predicted levels of relationship closeness each behavior was

hypothesized to be found within, as well as the observed levels of relationship closeness,

is presented in Table 13.

Table 12

Chi-squared analysis of the frequency of each reported victimizing indirectly aggressive

behavior in subjectively closer versus farther relationships.

	Gossiped	Ostracized	Spread a Rumor	Made Fun in Public	Made Fun in Private	Rallied Against
Closer	57	35	24	31	23	21
Farther	136	116	97	68	69	78
χ^2	32.34***	43.45***	44.04***	13.83***	23.00***	32.82***

	Broke a Confidence	Used Friendship as a Weapon	Interfered with Friendship	Withheld Friendship	Passed a Note	Harassed by Phone
Closer	89	17	26	9	28	10
Farther	45	36	68	17	32	13
χ^2	14.45***	6.81**	18.77***	2.46	0.27	0.39

	"Cyber-bullied"	Nonverbal Behavior	Whispered or Laughed	Backbit	Used a Boy as a Weapon	Lied
Closer	18	31	17	29	16	25
Farther	33	127	77	96	25	34
χ^2	4.41*	58.33***	38.30***	35.91***	1.98	1.370

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 13

A comparison of the predictions and findings for the closeness of the relationship each

perpetrated specific indirectly aggressive behavior was more likely to be found within.

Behavior	Objective Closeness Prediction	Objective Closeness Finding	Subjective Closeness Prediction	Subjective Closeness Finding
Gossiping	Farther	**Farther**	Farther	**Farther**
Ostracism	Closer	-	Closer	Farther
Rumor Spreading	Farther	**Farther**	Closer	Farther
Publicly "making fun" of a target	Farther	-	Farther	**Farther**
Privately making fun of a target	Closer	Farther	Closer	Farther
Rallying others against a target	Farther	-	Farther	**Farther**
Breaking confidences	Closer	**Closer**	Farther	Closer
Using one's personal relationships as a weapon	Closer	-	Closer	-
Trying to break up the friendships of others	Farther	-	Farther	-
Threatening to withhold one's own friendship from another	Closer	**Closer**	Closer	-
Passing notes	Farther	-	Closer	-
Telephone harassment	Farther	-	Farther	-
"Cyber-bullying"	Farther	-	Farther	**Farther**
Silent nonverbal behaviors	Closer	Farther	Closer	Farther
Audible nonverbal behaviors	Farther	**Farther**	Farther	**Farther**
Backbiting	Farther	**Farther**	Closer	Farther
Involving males	Closer	-	Farther	-
Lying	Closer	**Closer**	Farther	Closer

Note: Findings in bold represent hypotheses supported.

CHAPTER IV

DISCUSSION

The current study was designed as a preliminary investigation of the relationship between relationship closeness, both actual (objective closeness) and perceived (subjective closeness), and specific types of indirectly aggressive behavior. To date, most research examining "indirect aggression" has conceptualized it as a single concept, tending to overlook both the specific behaviors involved in indirect aggression (Tanaka, 2001) and the potential differential impact and prevalence across relationship types (i.e., relationship closeness levels) each behavior may exhibit. The current study examined specific behaviors use in relationships of varying degrees of closeness, to determine whether future research should take a behavior-specific approach to the study of indirect aggression.

Relationship Closeness and Specific Indirectly Aggressive Behaviors

Along with the specific indirectly aggressive behaviors identified in the review of the available literature, the current study began with a pilot study which identified several additional behaviors. These additional behaviors (e.g., involving males, rallying others against a target) represented those that laypeople believed to compose the concept of indirect aggression. The list generated from the available literature and supplemented by the lay behaviors was intended to include as many specific indirectly aggressive behaviors as possible. These behaviors were then examined individually by having participants identify the specific behaviors they had both used and experienced in their final year of high school, as well as the closeness of the relationship between themselves and the other individuals involved. The purpose of examining these behaviors

individually with regard to the closeness of the relationship between the victim and the

perpetrator was an investigation whether the effects of relationship closeness were the

same across all behaviors. That is, whether the traditional view of indirect aggression as a

single concept, with all its behavioral manifestations functioning as one, was warranted.

If the use or experience of these behaviors varied across relationship closeness levels, this

traditional view – and thus the research and conclusions that have stemmed from it – may

be in need of revision.

My findings indicate that, in fact, the multitude of behaviors believed to compose

indirect aggression are not used uniformly across relationship types (i.e., relationship

closeness levels), as certain behaviors were significantly more common within the

context of certain levels of relationship closeness. Specifically, breaking confidences,

threatening to withhold one's own friendship from another, and lying were significantly

more commonly used by participants against social network members who were

objectively closer to them. On the other hand, gossiping, rumor spreading, privately

making fun of a target, *silent* nonverbal behaviors, *audible* nonverbal behaviors, and

backbiting were more commonly used by participants against social network members

who were *objectively farther* from them. Similarly, breaking confidences and lying were

more commonly used by participants against social network members who were

subjectively closer to them; whereas gossiping, ostracism, rumor spreading, publicly

making fun of a target, privately making fun of a target, rallying others against a target,

cyber-bullying, *silent* nonverbal behaviors, *audible* nonverbal behaviors, and backbiting

were significantly more commonly used against social network members who were

subjectively farther from them.

In terms of the behaviors participants reported being victimized by, these also varied by the closeness of the relationship. That is, participants reported being victimized by broken confidences and threats of withholding friendship perpetrated by *objectively closer* social network members. On the other hand, rumor spreading, passed notes, *silent* nonverbal behaviors, *audible* nonverbal behaviors, and backbiting were more commonly used against participants by social network members who were *objectively farther* from them. Similarly, broken confidences were more commonly used against participants by social network members who were *subjectively closer* to them. Finally, gossiping, ostracism, rumor spreading, publicly making fun of a target, privately making fun of a target, rallying others against the participant, cyber-bullying, using their friendship with the participant as a weapon, trying to interfere with one of the participant's friendships, *silent* nonverbal behaviors, *audible* nonverbal behaviors, and backbiting were significantly more commonly used by social network members who were *subjectively farther* from them.

Examining these behaviors, it is clear that some are consistently found within the context of certain relationships. For example, breaking confidences was an indirectly aggressive strategy that was used significantly more often by and against *closer* individuals, both objectively and subjectively. Similarly, rumor spreading, both *silent* and *audible* nonverbal behaviors, and backbiting were all consistently used by and against *farther* individuals, both objectively and subjectively. There was a fair amount of variation, however, for the other behaviors.

While many of these differences were not in the predicted direction, this likely represents issues with hypothesis formation rather than any glaring inconsistencies in the

data. As the current study drew primarily from Björkqvist's effect/danger ratio (1994), it is possible that this theory was not able to account for all facets of indirectly aggressive behavior. More likely, however, is that its attempted application to indirectly aggressive behaviors was too vague to be of value. Nonetheless, the differential relationship between specific indirectly aggressive behaviors and varying degrees of relationship closeness suggest that these groups of behaviors may serve different functions within the overarching concept of "indirect aggression" (e.g., hurting a target versus getting a target to perform a desired task). The possibility of such variation is an important contribution to the indirect aggression literature, as it suggests the need to take a more behavior-specific approach to the study of indirect aggression if one hopes to discover its full depth.

As previously discussed, research on indirect aggression has taken a general approach to its study; that is, indirect aggression and all of its behavioral manifestations have been examined as a single entity. Therefore, any conclusions that have been drawn from these studies, as well as the intervention strategies that have stemmed from these findings may have overlooked important behavioral complexities. The differential pattern of the use and experience of specific indirectly aggressive behaviors observed in the current study suggest that individuals at varying degrees of relationship closeness are at risk of being victimized by different kinds of behaviors. As such, a single intervention approach to indirect aggression may not be effective at all levels of relationship closeness. Without a recognition that these behaviors function differently within the concept of indirect aggression, it is not clear whether researchers are in fact moving toward a better understand of "indirect aggression" as a whole, or whether research paths

are actually becoming more divergent. In addition, those who implement indirect

aggression intervention strategies that stem from this research (e.g., school teachers,

counselors) may not be targeting all aspects of this issue.

Individual Difference Variables

In addition to the investigation of specific indirectly aggressive behaviors and

varying degrees of relationship closeness, the current study sought to examine several

individual difference variables as they related to the use and experience of indirect

aggression *in general*. A general approach to indirect aggression was taken with the

individual difference variables because, as the interactions between the variables became

more complex, the frequency of each reported behavior was not large enough to yield

meaningful results. The variables selected for inclusion in the current study were

attachment style, social intelligence, and empathy. Attachment style was included

primarily due to its pervasiveness in relationship research; however, the conclusions from

this previous attachment style research also seemed quite relevant to the use and

experience of indirect aggression (e.g., Brennan et al., 1998; Mikulincer et al., 2005;

Rholes et al., 1998). Social intelligence and empathy were also expected to be important

individual difference variables to consider. These variables have been linked in previous

research, both to one another and to indirect aggression (i.e., Björkqvist et al., 2000;

Kaukiainen et al., 1999), and their hypothesized interrelationships made their inclusion in

the current study warranted (i.e., positive relationships found between social intelligence

and both empathy and indirect aggression, in seeming contention with a negative

relationship between empathy and indirect aggression; Björkqvist et al., 2000; Kaukiainen et al., 1999).

Regression analyses indicated that none of these individual difference variables was a significant predictor of the total number of behaviors participants reported perpetrating or being victimized by over and above that which was accounted for by social desirability (with the exception of a marginally significant contribution of empathy on the number of behaviors participants reported being victimized by). The inclusion and effect of social desirability will be addressed in the limitations section to follow.

Analysis of variance, on the other hand, suggested a complex interrelationship between attachment style and relationship closeness, as well as among social intelligence, empathy, and relationship closeness. Though the multitude of hypotheses presented regarding these variables were not uniformly supported, the current study did find support for the prediction that anxiously attached individuals would report being victimized by significantly more indirectly aggressive behaviors than any other group. In addition, there was an interesting interaction between social intelligence and empathy, such that individuals classified as highly empathic who also received *low* social intelligence scores were the most polarized in their perception of the individuals they felt aggressed against them. That is, they felt quite victimized by disliked others (both well-known and acquaintances), and barely victimized at all by liked others (both well-know and acquaintances). On the other hand, individuals classified as highly empathic who also received *high* and *moderate* scores on social intelligence perceived their aggressors as being both liked and disliked (well-known and acquaintance).

Further, there was a significant interaction between social intelligence and emotional empathy. While it was predicted that individuals who were highly socially intelligent *and* high in cognitive empathy would perpetrate the greatest number of indirectly aggressive behaviors, the current study found a variation of this relationship to be more accurate. That is, individuals who were highly socially intelligent and *low in emotional empathy* actually reported perpetrating the greatest number of behaviors. This is an important addition to previous research which has sought to explore the seemingly paradoxical relationship between social intelligence, empathy, and indirect aggression (e.g., Björkqvist et al., 2000; Kaukiainen et al., 1999).

Finally, the results from the analyses of variance clearly indicated that participants perceived disliked well-known others to be their most common targets and aggressors of indirect aggression, followed by disliked acquaintances, liked well-known others, and finally, liked acquaintances. These groups may be important to consider when designing indirect aggression intervention strategies, as each may present their own challenges. In addition, the clear differences between these groups further support the notion that relationship type (i.e., closeness level) is an important variable to consider when examining indirect aggression.

Overall, the findings of the current study suggest a need for a behavioral approach to the study of indirect aggression. Such a perspective would likely lead to behavior- and relationship-specific intervention strategies, in which specific behaviors and relationships could be targeted more effectively than could be achieved by a more general approach. Additionally, the results of the individual difference variables suggest that there are indeed personal characteristics that influence the use and experience of indirect

aggression. For example, individuals characterized as highly socially intelligent but low on cognitive empathy reported perpetrating significantly more indirectly aggressive behaviors than any other group, which would make them an interesting set for future research. In general, however, a better understanding of the characteristics of the common perpetrators and victims, as well as their behavior of choice would be important for those who implement intervention strategies (e.g., school teachers, counselors).

One final note of interest concerns the significant relationship between the total number of behaviors participants reported perpetrating and the total number of behaviors they reported being victimized by. This relationship was stronger than any of the other variable intercorrelations, and may be indicative of toxic friendship environments, in which indirectly aggressive behaviors are used by all parties at high levels (or alternatively, used by all parties in low levels). In such environments, aggression may be met with more aggression (i.e., an aggression spiral; Andersson & Pearson, 1999; Friedman, Tidd, Currall, & Tsai, 2000). Alternatively, it could reflect a tendency for those who commonly perpetrate indirect aggression to also *perceive* themselves as targets when the behavior of another is ambiguous. This final hypothesis parallels findings in the direct aggression research (e.g., Baumeister, 1999). These competing explanations would be another avenue of interest for future research. It appears, however, that those who reported higher levels of victimization by indirectly aggressive behaviors also reported higher levels of perpetrating these behaviors. Conversely, those reporting lower levels of victimization also reported lower levels of perpetration.

Limitations

As has been addressed already, one important limitation of the current study was the use of self-report measures to assess the number of indirectly aggressive behaviors participants reported perpetrating and being victimized by. Previous research has indicated that, because of the negative social perception of indirect aggression, issues related to positive self-presentation (i.e., social desirability) may confound the results of self-reports (e.g., Peets & Kikas, 2006). While clearly an important issue, and one which did seem to influence the findings of the current study, the use of self-reports for this project was necessary. First and foremost, while this study was admittedly interested in creating an observable (i.e., behavior-driven) definition of indirect aggression, it must be acknowledged that the experience of indirect aggression is inherently subjective. The ill-effects that can befall an individual who *feels* that they are being targeted by an indirectly aggressive behavior are well documented (e.g., Williams, 2005). As such, self-reports of these experiences cannot be eliminated from study, at least not entirely. Perhaps more relevant to the current study, however, is that peer- and teacher-reported behavior were simply not accessible (given the first year university student convenience population used). While I attempted to control for issues of social desirability by including it as a measure, as well as assuring strict confidentiality and anonymity of participant responses, future studies are still well-advised to seek out other-reports of indirect aggression when available.

As noted, the current study included a measure of social desirability to partially safeguard against the pitfalls of self-report measures of indirect aggression. Self-reports of this type of behavior have been found to correlate poorly with peer- and teacher-

reports of indirect aggression (Peets & Kikas, 2006). Interestingly, though not surprisingly, social desirability accounted for a significant portion of the variance of the total number of behaviors participants reported perpetrating and being victimized by. These findings suggest, due to the socially undesirable nature of admitting to perpetrating or being victimized by indirect aggression, that participants were likely underreporting the incidence of indirect aggression. Also, social desirability was a significant predictor of indirect aggression, and remained significant when the other individual difference variables (i.e., in the attachment style and social intelligence/empathy ANOVAs) were also included in the analysis. These findings further suggest the limited usefulness of self-reports of indirect aggression.

Another limitation of the current study may be that the behavioral list on which participants indicted which behaviors they had used and experienced was not exhaustive. The behavioral list generated for use in the current study emerged from the analysis of previous indirect aggression research, and was supplemented with behaviors uncovered in my pilot study. While this analysis attempted to be as thorough as possible, it was not possible to include *every* indirectly aggressive behavior. In fact, such a list would likely be too impractical and unmanageable for effective use. However, participants were given the option of adding behaviors to the indirectly aggressive behavioral list at their discretion. Only a few participants did add additional behaviors ($N = 13$), and most of these could either be better classified as direct aggression (e.g., one participant reported that a social network member had gotten a "gang together to… fight" her), or fit into the behaviors listed (e.g., one participant added that a social network member had "fooled around" with her boyfriend; which arguably could have been included under the

"involving males" item on the behavioral list). As such, confidence in the completeness of the behavioral list was maintained.

A third limitation of the current study is with regard to the population sampled. In addition to using only a first year university student convenience sample, the current study limited participants to females that had graduated from high school in June, 2006. These latter two selection requirements were intended to simplify analysis and minimize the time lag between the event and its retrospective report. Future research is needed to investigate possible gender or ethnicity variation. For example, tactics used by males may be quite different from those used by females. Also, the largely Caucasian population used in the current study would not have allowed for any cultural variation to be observed; that is, perhaps different cultures prefer different indirectly aggressive strategies. Such a variation may be expected between individualist and collectivist cultures; for example, in collectivist cultures, acceptance by and inclusion in society is often of greater importance than in individualist cultures (e.g., Tanaka, 2001). Therefore, it is perhaps in these countries that the effect of ostracism would be even stronger than was observed in the current (individualist) study. Additionally, an examination of the developmental progression of these variables and behaviors may also be of interest. For example, some behaviors may be more commonly perpetrated by younger children, such as those which require less intellectual sophistication (e.g., note passing in class or publicly making fun of another individual) or not requiring access to more advanced technology (e.g., telephone harassment or cyber-bullying).

Another limitation was due to the fact that several participants did not complete the relationship closeness measures in the questionnaire package appropriately; as such,

there were issues with missing data. Several participants did not use the same 10 social network members for all measures of relationship closeness, or they included more than 10 social network members. For these individuals, it was not possible to collect data on every variable that was of interest (i.e., some social network members were identified only by their level of objective closeness or only by their level of subjective closeness). The current study made use of all available data (i.e., social network members included whenever a scale had been completed for them); however, future research using a similar design may benefit from a more structured questionnaire package. For example, following a tax form procedure, a code could precede each space provided for participants to list their social network members according to their level of being "liked/disliked" and "well-known/acquaintance", and could be used throughout the measures of relationship closeness to ensure that participants understood that they were to use the *same* social network member throughout.

Finally, the current study focused on specific indirectly aggressive behaviors in its central analysis; however, it also assessed the total number of behaviors participants had perpetrated and been victimized by, as opposed to the frequency of each behavior. That is, the number of times a participant had perpetrated a specific indirectly aggressive behavior (e.g., the number of times they gossiped) against one of their social network members was not assessed. The omission of such a measure was necessary, as the retrospective nature of the current study would not have allowed for such detailed recollection (or at least could not have trusted the accuracy of such reports). However, future research may benefit from the use of a prospective daily report measure to examine this issue.

Conclusion

These limitations notwithstanding, the findings of this study are an important addition to the current understanding of "indirect aggression." The creation of a comprehensive list of the behaviors involved in indirect aggression is important to its study, and while it can never be completely exhaustive (as the behaviors of choice will always be in flux), the current study has attempted to integrate the findings to date. Additionally, an understanding of the breadth of these specific behaviors is also important, as these behaviors are often more accessible for study than perpetrator motivations.

Finally, the differential relationship between specific indirectly aggressive behaviors and varying degrees of relationship closeness is important, as it suggests an alternate approach to the study of indirect aggression as a whole. Future research would likely benefit by acknowledging that when it comes to indirect aggression, not all behavioral expressions are created equally.

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Appendix A

General Instructions:

There are many acts of aggression that don't fit into the stereotypical definition of what it means to "aggress." For example, a note passed in class, girls whispering to one another, a well-timed laugh – while these may not stand out as traditional acts of aggression, they can still be quite hurtful. These actions are a part of an aggressive strategy that is generally more common among females, and is a phenomenon that has been largely ignored in modern society. This type of aggression is called "indirect aggression," and it is characterized by social manipulation (enticing someone to do something they otherwise might not), rumour spreading, gossiping, excluding someone from a group, or any other subtle behavior that is perceived as intentionally hurtful.

Most females have been on both sides of indirect aggression; they have both been hurt and have hurt another using subtle means at some point in their past. The current study is interested in your personal experiences with indirect aggression, from both perspectives.

In addition, however, females tend to develop positive and supportive relationships with one another. These positive experiences are important to our conception of friendship and of ourselves.

On the following pages, you will be asked to recount experiences you have had with both negative (i.e., indirectly aggressive) and positive interactions with other females. Please be as detailed as possible in your recollections and opinions, and remember that no information you provide will be ever linked to you personally and all questionnaires will be kept in the strictest of confidence.

Demographic Information

Age: _____

What ethnicity do you most identify with yourself:

_____ European/Caucasian

_____ Native American Aboriginal

_____ Middle Eastern

_____ Asian

_____ Polynesian

_____ East Indian

_____ African

_____ Central American

_____ South American

_____ Australian

1. What indirectly aggressive bullying behaviours have you experienced or performed?
   Please list as many as you can recall, from any point in your past. Please provide details about the behaviour and the situation. That is, how many individuals were involved, what were their relationships (friends, enemies, acquaintances), and why did it happen.

2. There are many reasons to perform aggressive bullying behaviours. Some have to do with yourself (i.e., your thoughts and feelings), whereas other have to do with others (i.e., what your friends thought or felt). What are the reasons that you or others may have performed these behaviours?
   Please list as many reasons as you can think of.

3. In contrast to aggressive behaviour, females also act towards others in ways that are caring. Please describe an instance in which a female friend provided genuine comfort or support at a time that you needed her.

Thank you for your participation. Please quietly collect your belongings, place this questionnaire in the envelope provided, and bring it with the informed consent form to the researcher at the front of the room. The researcher will provide you with written feedback about this study.

Appendix B
INFORMED CONSENT

Research Project Title: Bullying Behaviours and Motivations Pilot Study
Researcher(s):   Tara Reich
Sponsor (if applicable):   Dr. Marian Morry   474-7840

      This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information:

      I agree to participant in the study entitled "Joliett" which is being conducted by Tara Reich, a graduate student at the University of Manitoba, and has been approved by the Psychology/Sociology Research Ethics Board. I have been informed that the purpose of this study is to collect preliminary data regarding indirectly aggressive (i.e., socially manipulative through the use of gossiping, group exclusion, and character defamation) and positive relationship experiences. I understand that I will be asked to complete a brief questionnaire about my own relationship experiences and to provide demographic information. I am aware that this is the only session I need attend, that my participation will take approximately 30 minutes, and that I will receive one experimental credit toward my Introductory Psychology research participation requirement.

      I understand that there is no known risk involved in my participation, and that any information I chose to provide will be kept strictly confidential. I have been informed that my name and student number will **NOT** be associated in any way with my responses. I have also been made aware that I may withdraw from this experiment at any time without penalty or loss of credit.

      I am aware that I will be able to find the results of this study in late February, 2006 outside room P259 in the Duff Roblin Building. Should I have any questions regarding this study I am aware that they can be directed to Tara Reich through P404 Duff Roblin Building, 996-8150, or at   .a. Any complaints may be reported to the Human Ethics Secretariat at 474-7122, or e-mailed to   .ı. I understand that this contact information will be provided for me in writing at the end of today's session. As per the American Psychological Association regulations, the questionnaires will be kept for 5 years post-publication and will then be shredded.

      My signature on this form indicates that I have understood to my satisfaction the information regarding participation in this research project and agree to participate as a subject. In no way does this waive my legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. I am free to withdraw from the study at any time, and/or refrain from answering any questions I would prefer to omit, without prejudice or consequence. My continued participation should be as informed as my initial consent, so I should feel free to ask for clarification or new information throughout my participation

_____   _____

Participant's Signature   Date

_____   _____

Researcher and/or Delegate's Signature   Date

Appendix C
Debriefing Form for the Bullying Behaviours and Motivations Pilot Study

Thank you for your participation in the study "Joliett;" the time you have taken and the information you have provided is greatly appreciated. You have just completed a questionnaire collecting preliminary information regarding females' experiences with both indirect aggression and positive relationship experiences with other females. While both men and women display direct and indirect aggression, social aggression has been demonstrated to be far more prevalent among females (Xie, 2000). This pattern has been found across a variety of cultures (Österman, et al., 1998; Hines & Fry, 1994), and across a variety of age groups (Österman, et al., 1998; Hines & Fry, 1994).

To date, most research on indirect aggression (i.e., social manipulation through the use of gossiping, group exclusion, character defamation; Xie, 2000) has focused on identifying it as a distinct form of aggression. The task now turns, however, to identifying the causes underlying indirect aggression if we are to begin to understand why these behaviours are performed: Who and under what conditions are people more likely to perform them? Who is more likely to suffer as a target? Your responses to the open ended questions will provide us with some of this information. By comparing responses across participants, we can determine which behaviours are most common, which motives are most common, and so on. Our next step in this research will be to create scenarios describing various indirect aggressive behaviours and asking individuals about the motives for these behaviours, or providing the motives and asking individuals about the behaviours they would or have performed.

Your responses on the questionnaire will be kept confidential. All data is numerically coded and for research use only. Neither your name nor your student number will ever be associated with your responses, and all questionnaires will be kept under lock and key.

Thank you again for your participation. If you have any questions regarding this study, please contact researchers Tara Reich (   ) or Dr. Marian Morry (or in P508 Dutt Koblin, 474-7840). Please direct concerns to the Human Ethics Secretariat at 474-7122.

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If you experience any emotional distress after writing about your experiences with indirect aggression, please do not hesitate to contact one of the following sources:

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

They are there to help.

Appendix D
Demographic Information

Age: _____

In what year did you graduate high school: _____

What ethnicity do you most identify with yourself:

_____ European/Caucasian   _____ East Indian

_____ Native American Aboriginal   _____ African

_____ Middle Eastern   _____ Central American

_____ Asian   _____ South American

_____ Polynesian   _____ Australian

Appendix E
Social Network Map
(Antonucci, 1986; Rowe and Carnelley, 2005; Sande, Goethals, & Radloff, 1988)

INSTRUCTIONS: To answer the following questions, you will need to create a Social Network Map (*See loose page*). This is a visual representation of the social network you had in your final year of high school. To begin, please list the *initials* **of two (2) or three (3)** *female* **classmates from your final year of high school** that fall into each of the following categories, to a maximum of **ten (10)**:
NOTE: If two or more individuals have the same initials, place a number after their name (e.g., JD1, JD2).

At least two **liked well-known others**, specific people you had known for a fairly long time, whom you felt that you knew a lot about, and whom you liked based on what you knew about them:
            1._____   2._____   3._____
At least two **disliked well-known others**, specific people you had known for a fairly long time, whom you felt that you knew a lot about, and whom you disliked based on what you knew about them:
            1._____   2._____   3._____
At least two **liked acquaintances**, specific people whom you had known for a few months, but were not close friends; acquaintances that you liked based on what you knew about them at the time:
   1._____   2._____   3._____
At least two **disliked acquaintances**, specific people whom you had known for a few months, but were not close friends; acquaintances that you disliked based on what you knew about them at the time:
            1._____   2._____   3._____

INSTRUCTIONS: Please **use the circular stickers provided** to construct your Social Network Map: **Copy as clearly as possible** the initials of each of your above-listed Social Network Members onto a separate circular sticker. Using the bull's eye map on the following page, please place each of your initial-identified stickers into your bull's eye map in a position and at a distance from your core self that is **meaningful to you**, according to the directions below:
- The central circle of the bull's eye ("YOU") represents your core self;
- In the first concentric circle around the core self, please include people to whom you felt so close that it would have been hard to imagine life without them;
- In the second (middle) circle, please include people to whom you may not have felt quite that close but who were still important to you;
- In the outer circle, please include people whom you haven't already mentioned but who were close enough and important enough in your life that they should be placed in your social network;
- Finally, in the space outside of the concentric circles, please include people to whom you did not feel close with.
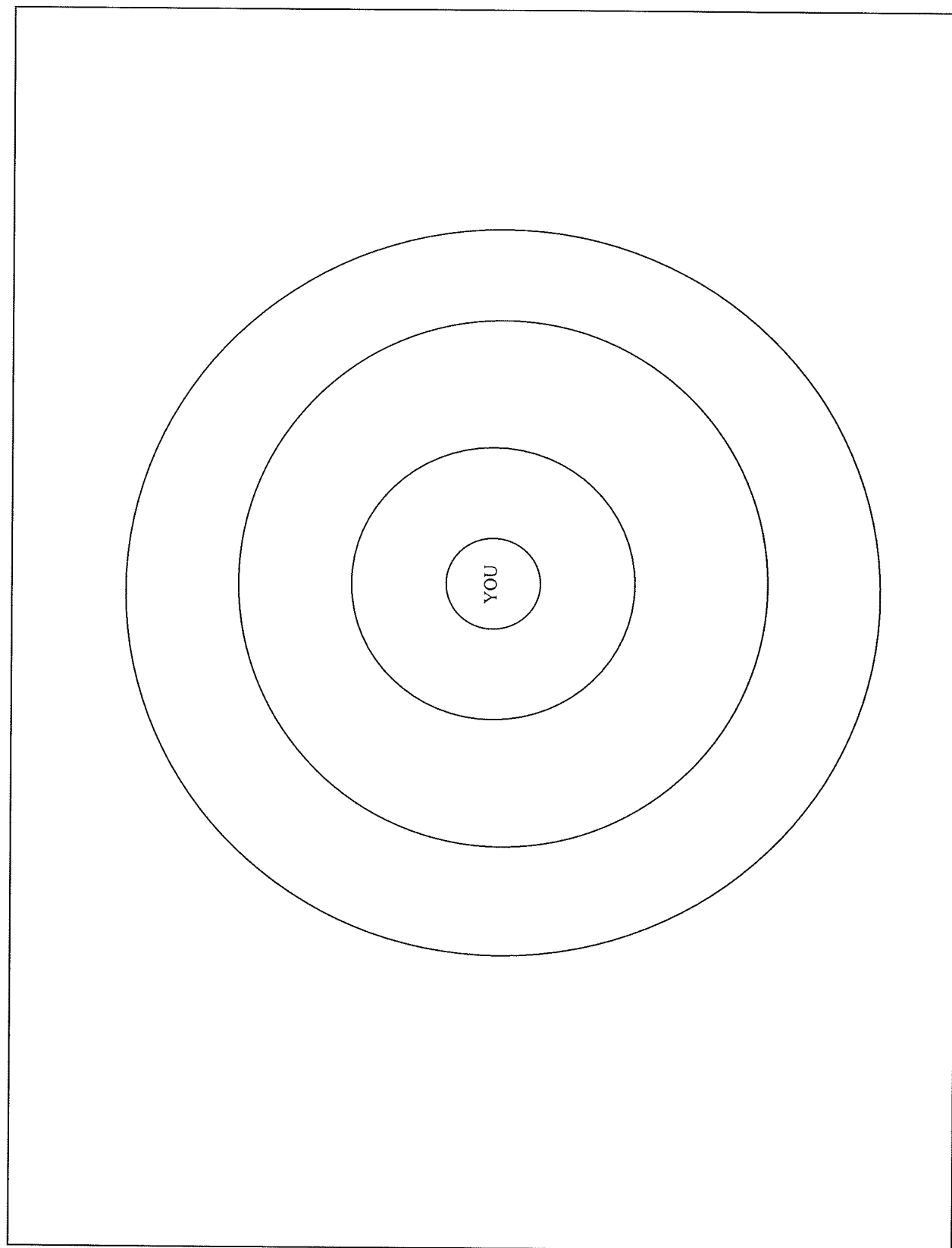
Appendix F
The Personal Acquaintance Measure: Duration and Frequency of Interaction subscales
(Starzky, Holden, Fabrigar, & MacDonald, 2006)

For each of the 10 scales below, please think of one of the social network members you listed on page ____ and write the initials you gave them at the beginning of each scale. Each scale consists of 6 questions which will pertain to one individual *only* (we'll refer to her as "_____"). Read each statement carefully, and circle the answer that best corresponds to your agreement or disagreement with each statement. Please answer based on your impressions in your *last year of high school.*

SD	= definitely false or strongly disagree
D	= mostly false or disagree
N	= about equally true or false, cannot decide, or neutral
A	= mostly true or agree
SA	= definitely true or strongly agree

Social Network Member's initials: ____

Please respond to and only circle one answer for each statement.

1. I had known ____ for many years.   SD   D   N   A   SA

2. Seeing ____ was part of my weekly routine.   SD   D   N   A   SA

3. I had known ____ for a long time.   SD   D   N   A   SA

4. I saw ____ a lot.   SD   D   N   A   SA

5. ____ and I go way back.   SD   D   N   A   SA

6. Seeing ____ was part of my daily routine.   SD   D   N   A   SA

Appendix G

Using the provided definitions of behaviors below, please list the <u>INITIALS</u> of any and all members from your social network map who have performed the listed behavior <u>AGAINST YOU</u>.

For example, if you had a classmate named "Jane Doe, you would include a sticker labeled J.D. in your social network map. If, in your final year of high school, Jane had spread a rumor about you, you would write "J.D." beside "Rumor spreading" on this page.

Note: you may include any member of your mapped high school social network under as many behavioral headings as apply.

Said something that was not entirely flattering about me when I was not there to defend myself

_____

Didn't include me in an activity or conversation when others around me (i.e. friends of mine) were

_____

Told someone something about me that they knew was not true

_____

Made fun of the way I looked or acted, or embarrassed me in front of others

_____

Made fun of the way I looked of acted, or imitated me when I was not around

_____

Encouraged someone not to talk to or maybe even not like me

_____

Told someone something that I had told them in secret

_____

Started hanging out with or becoming friends with another person to make me jealous or punish me; or became friends with me for any reason other than they actually liked me

---

Tried to interfere with one of my friendships

Said (or implied) that they would not continue to be my friend unless I did something they wanted me to

---

Wrote or passed a note about me in class/school

Called my home or cell phone to make fun or annoy me; or used the three-way calling feature to allow someone else to listen in on a call I thought was private

---

Sent an e-mail or instant/text message to or about me that I found upsetting

---

Rolled her eyes, gave me a dirty look, or used another nonverbal behavior to make me feel small

---

Whispered or laughed to someone in front of me when I knew they were talking about me

---

Said something nasty about me when I was not there to defend myself

---

Dated someone I liked or had dated when she knew (or should have known) that I didn't want her to

_____

Told me something that wasn't true to make be feel/look silly for believing her

_____

Other: **(please define)** _____

_____

Other: **(please define)** _____

_____

Other: **(please define)** _____

_____

Appendix H
Using the provided definitions of behaviors below, please list the <u>INITIALS</u> of any and all members from your social network map against whom <u>YOU HAVE PERFORMED</u> the listed behavior:
For example, if you had a classmate named "Sally Sun," you would include a sticker labeled S.S. in your social network map. If, in your final year of high school, you had excluded Sally from your group of friends, you would write "S.S." beside "Ostracism" on this page.
Note: you may include any member of your mapped high school social network under as many behavioral headings as apply.

Said something that was not entirely flattering about her when she was not there to defend herself

_____

Didn't include her in an activity or conversation when others around her (i.e. some of her friends) were

_____

Told someone something about her that I wasn't sure was true

_____

Poked fun at the way she looked or acted, or embarrassed her in front of others

_____

Poked fun at the way she looked of acted, or imitated her when she was not around

_____

Encouraged one of my friends not to talk to her because of something she did to me

_____

Told someone something that she had told me in secret

_____

Started hanging out with or becoming friends with someone to let her know what it would feel like to not have me as a friend, or became friends with her for any reason other than that I actually liked her

---

May have accidentally interfered with one of her friendships

Said (or implied) that I could not continue to be her friend unless she did something that I needed her to do

---

Wrote or passed a note about her in class/school

Called her home or cell phone to make fun or irritate her; or used the three-way calling feature to allow someone else to listen in on a call I was having with her

---

Sent an e-mail or instant/text message to or about her that she may not have liked

---

Rolled my eyes or gave her a look that said that I didn't like her very much

---

Whispered or laughed with someone about her when she was in front of us

---

Said something nasty about her when she was not around

Dated someone she liked or had dated when I thought that she might not have wanted me to

_____

Told her something that wasn't true just to see if she would believe me

_____

Other: (**please define**) _____

_____

Other: (**please define**) _____

_____

Other: (**please define**) _____

_____

Appendix I
Experience in Close Relationships
(Brennan, Clark, & Shaver, 1998)

Experience in Close Relationships
Instructions: The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale:

Disagree strongly			Neutral/mixed		Agree strongly	
1	2	3	4	5	6	7

____ 1. I prefer not to show a partner how I feel deep down.

____ 2. I worry about being abandoned.

____ 3. I am very comfortable being close to romantic partners.

____ 4. I worry about my relationships.

____ 5. Just when my partner starts to get close to me I find myself pulling away.

____ 6. I worry that romantic partners won't care about me as much as I care about them.

____ 7. I get uncomfortable when a romantic partner wants to be very close.

____ 8. I worry a fair amount about losing my partner.

____ 9. I don't feel comfortable opening up to romantic partners.

____ 10. I often wish that my partner's feelings for me were as strong as my feelings for him/her.

____ 11. I often want to get close to my partner, but I keep pulling back.

____ 12. I often want to merge completely with romantic partners, and this sometimes scares them away.

____ 13. I am nervous when partners get too close to me.

____ 14. I worry about being alone.

____ 15. I feel comfortable sharing my private thoughts and feelings with my partner.

____ 16. My desire to be very close sometimes scares people away.

____ 17. I try to avoid getting too close to my partner.

____ 18. I need a lot of reassurance that I am loved by my partner.

____ 19. I find it relatively easy to get close to my partner.

____ 20. Sometimes I feel that I force my partners to show more feeling, more commitment.

____ 21. I find it difficult to allow myself to depend on romantic partners.

____ 22. I do not often worry about being abandoned.

____ 23. I prefer not to be close to romantic partners.

____ 24. If I can't get my partner to show interest in me, I get upset or angry.

____ 25. I tell my partner just about everything.

____ 26. I find that my partner(s) don't want to get as close as I would like.

____ 27. I usually discuss my problems and concerns with my partner.

____ 28. When I am not involved in a relationship, I feel somewhat anxious and insecure.

____ 29. I feel comfortable depending on romantic partners.

____ 30. I get frustrated when my partner is not around as much as I would like.

____ 31. I don't mind asking romantic partners for comfort, advice, or help.

____ 32. I get frustrated if romantic partners are not available when I need them.

____ 33. it helps to turn to my romantic partner in times of need.

____ 34. When romantic partners disapprove of me, I feel really bad about myself.

____ 35. I turn to my partner for many things, including comfort and reassurance.

____ 36. I resent it when my partner spends time away from me.

Appendix J
Tromsø Social Intelligence Scale
(Silvera, Martinussen, & Dahl, 2001)

1. I can predict other people's behavior.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. I often feel that it is difficult to understand others' choices.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. I know how my actions will make others feel.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

4. I often feel uncertain around new people who I don't know.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. People often surprise me with things they do.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

6. I understand other people's feelings.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

7. I fit in easily in social situations.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

8. Other people become angry with me without me be able to explain why.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

9. I understand others' wishes.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

10. I am good at entering new situations and meeting people for the first time.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

11. It seems as though people are often angry or irritated with me when I say what I think.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

12. I have a hard time getting along with other people.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

13. I find people unpredictable.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

14. I can often understand what others are trying to accomplish without the need for them to say anything.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

15. It takes a long time for me to get to know others well.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

16. I have often hurt others without realizing it.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

17. I can predict how others will react to my behavior.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

18. I am good at getting on good terms with new people.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

19. I frequently have problems finding good conversation topics.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

20. I am often surprised by others' reactions to what I do.

Describes me
extremely poorly

Describes me
extremely well

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix K
The Short Empathy Quotient (Short EQ)
(Baron-Cohen, & Wheelwright, 2004; shortened by Muncer & Ling, 2006).

How to fill out the questionnaire:
Below are a list of statements. Please read each statement <u>very carefully</u> and rate how strongly you agree or disagree with it by circling your answer. There are no right or wrong answers, or trick questions.

IN ORDER FOR THE SCALE TO BE VALID, YOU MUST ANSWER EVERY QUESTION.

Examples

E1. I would be very upset if I couldn't listen to music every day.	strongly agree	slightly agree	(slightly disagree)	strongly disagree
E2. I prefer to speak to my friends on the phone rather than write letters to them.	strongly agree	slightly agree	slightly disagree	(strongly disagree)
E3. I have no desire to travel to different parts of the world.	strongly agree	(slightly agree)	slightly disagree	strongly disagree
E4. I prefer to read than to dance.	strongly agree	slightly agree	slightly disagree	(strongly disagree)
1. I find it difficult to explain to others things that I understand easily, when they do not understand it first time.	strongly agree	slightly agree	slightly disagree	strongly disagree
2. I really enjoy caring for other people.	strongly agree	slightly agree	slightly disagree	strongly disagree
3. I find it hard to know what to do in a social situation.	strongly agree	slightly agree	slightly disagree	strongly disagree
4. Friendships and relationships are just too difficult, so I tend not to bother with them.	strongly agree	slightly agree	slightly disagree	strongly disagree
5. I often find it difficult to judge if something is rude or polite.	strongly agree	slightly agree	slightly disagree	strongly disagree

6. I am good at predicting how someone will feel.

strongly agree | slightly agree | slightly disagree | strongly disagree

7. I am quick to spot when someone in a group is feeling awkward or uncomfortable.

strongly agree | slightly agree | slightly disagree | strongly disagree

8. If I say something that someone else is offended by, I think that is their problem, not mine.

strongly agree | slightly agree | slightly disagree | strongly disagree

9. Seeing people cry does not really upset me.

strongly agree | slightly agree | slightly disagree | strongly disagree

10. I do not tend to find social situations confusing.

strongly agree | slightly agree | slightly disagree | strongly disagree

11. I can sense if I am intruding, even if the other person does not tell me.

strongly agree | slightly agree | slightly disagree | strongly disagree

12. I usually stay emotionally detached when watching a film.

strongly agree | slightly agree | slightly disagree | strongly disagree

13. I can tune into how someone else feels rapidly and intuitively.

strongly agree | slightly agree | slightly disagree | strongly disagree

14. I can easily work out what another person might want to talk about.

strongly agree | slightly agree | slightly disagree | strongly disagree

15. I tend to get emotionally involved with a friend's problems.

strongly agree | slightly agree | slightly disagree | strongly disagre

Appendix L
Shortened version (2) of the Marlowe-Crowne Social Desirability Scale
(Crowne & Marlowe, 1960; shortened by Strahan & Gerbasi, 1972)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is *True* or *False* as it pertains to you personally.

1. I never hesitate to go out of my way to help someone in trouble.

                    True   False

2. I have never intensely disliked anyone.

                    True   False

3. When I don't know something I don't at all mind admitting it.

                    True   False

4. I am always courteous, even to people who are disagreeable.

                    True   False

5. I would never think of letting someone else be punished for my wrong doings.

                    True   False

6. I sometimes feel resentful when I don't get my way.

                    True   False

7. There have been times when I felt like rebelling against people in authority even though I knew they were right.

                    True   False

8. I can remember "playing sick" to get out of something.

                    True   False

9. There have been times when I was quite jealous of the good fortune of others.

                    True   False

10. I am sometimes irritated by people who ask favors of me.

                    True   False

Appendix M
INFORMED CONSENT

Research Project Title: *Bullying Behaviors and Relationship Closeness*
Researcher(s):   Tara Reich, Department of Psychology   996-8150
Sponsor (if applicable):   Dr. Marian Morry   474-7840

        This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this consent form carefully and to understand any accompanying information:

        I agree to participant in the study entitled "Gander" which is being conducted by Tara Reich, a graduate student at the University of Manitoba, and has been approved by the Psychology/Sociology Research Ethics Board. I have been informed that the purpose of this study is to collect data regarding indirectly aggressive behaviors (e.g., negative gossiping, group exclusion, and character defamation) and the closeness of the relationship between the victim and the perpetrator of these behaviors. I understand that I will be asked to complete several questionnaires about my own social network, my experiences with indirect aggression, as well as other aspects of myself including some demographic information. I am aware that this is the only session I need attend, that my participation will take approximately 50 minutes, and that I will receive two experimental credits toward my Introductory Psychology research participation requirement.

        I understand that there is no known risk involved in my participation, and that any information I chose to provide will be kept strictly confidential. I have been informed that my name and student number will **NOT** be associated in any way with my responses. I have also been made aware that I may withdraw from this experiment at any time without penalty or loss of credit.

        I am aware that I will be able to find the results of this study in March, 2007 outside room P259 in the Duff Roblin Building. Should I have any questions regarding this study I am aware that they can be directed to Tara Reich through P404 Duff Roblin Building, 996-8150, or at _____ ⸱⸱ Any complaints may be reported to the Human Ethics Secretariat at 474-7122, or e-mailed to

⸱ _____ ı. I understand that a copy of this consent form will be provided to me at the end of today's session. As per the American Psychological Association regulations, the questionnaires will be shredded in 2012 at the earliest. Only the researchers, Tara Reich and Dr. Morry, will have access to this data.

        My signature on this form indicates that I have understood to my satisfaction the information regarding participation in this research project and agree to participate as a subject. In no way does this waive my legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. I am free to withdraw from the study at any time, and/or refrain from answering any questions I would prefer to omit, without prejudice or consequence. My continued participation should be as informed as my initial consent, so I should feel free to ask for clarification or new information throughout my participation.

        I, _____, have read the above information and hereby consent to participate in this study.

_____   _____
Participant's Signature   Date

_____   _____
Researcher and/or Delegate's Signature   Date

Appendix N
Debriefing Form for the Bullying Behaviors and Relationship Closeness Study

Thank you for your participation in the study "Gander;" the time you have taken and the information you have provided is greatly appreciated. You have just completed a questionnaire collecting information regarding the closeness of inter-female relationships and use of specific indirectly aggressive behaviors. While both men and women use indirect aggression, this pattern of behavior has been found to be a more serious issue among females (e.g., Coyne & Archer, 2005). Indirect aggression refers to "noxious behavior in which the target person is attacked not physically or directly through verbal intimidation but in a circuitous way, through social manipulation" (Kaukiainen et al., 1999).

To date, most research on indirect aggression has focused on identifying it as a distinct form of aggression. The task now turns, however, to identifying the types of relationships most vulnerable to indirect aggression as a whole, as well as to the **specific** behaviors involved. The more information that can be gathered about the intricacies of this type of aggression, the better equipped researchers will be to develop effective intervention strategies. One purpose then of this study was to determine whether certain types of indirect aggression are more common in some types of relationships than in others (e.g., acquaintances vs. best friends).

The current study also collected information regarding attachment style (the dominant form of affect regulation when interacting with relationship partners; Brennan et al., 1998), social intelligence (the ability to read and appropriately respond to the social behavior of another in order to accomplish one's own goals; Silvera et al., 2001), and empathy (understanding of the thoughts and feelings of another to the point of being moved internally by their emotional state; Baron-Cohen & Wheelwright, 2004), as these are all factors that are likely involved in this type of behavior. By comparing the distances between the core selves and the members of their social network across participants, we can determine whether some behaviors are more common in closer or more distant relationships. The next step in our research will be to determine whether any patterns revealed can be generalized to male participants, as research has shown that indirect aggression is common among males as well (e.g., Peets & Kikas, 2006).

Your responses on the questionnaires you have just completed will be kept confidential. All data is numerically coded and for research use only. Neither your name nor your student number will ever be associated with your responses, and all questionnaires will be kept under lock and key.

Thank you again for your participation. If you have any questions regarding this study, please contact researchers Tara Reich (.   ı) or Dr. Marian Morry (ı or in P508 Duff Roblin, 474-7840). Please direct concerns to the Human Ethics Secretariat at 474-7122.

References:
Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J.A. Simpson & W. S. Rholes (eds.), *Attachment theory and close relationships*, 46-76, New York: Guilford Press.
Coyne, S. M. & Archer, J. (2005). The relationship between indirect and physical aggression on television and in real life. *Social Development, 14*(2), 324-338.

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Peets, K. & Kikas, E. (2006). Aggressive strategies and victimization during adolescence: Grade and gender differences, and cross-informant agreement. *Aggressive Behavior, 32*, 68-79.

Silvera, D. H., Martinussen, M., & Dahl, T. I. (2001). The Tromsø Social Intelligence Scale, a self-report measure of social intelligence. *Scandinavian Journal of Psychology, 42*, 313-319.

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

Student Counseling and Career Centre 474-8592

Psychological Service Centre 474-9222

They are there to help