EMPATHIC CONCERN AND THE INHIBITION OF AGGRESSION: GENERAL OR INDIVIDUAL-SPECIFIC INHIBITION?

By Miranda R Wenzlaff

Previous studies on empathic concern and aggression have yielded inconsistent support that empathic concern inhibits aggression and failed to discern whether this inhibition is victim-specific or general. The purpose of this research was to examine the influence of empathic concern on aggression toward provoking individuals, and to test whether the nature of this inhibition is a result of a general effect or an individual-specific effect. In other words, does empathic concern inhibit aggression toward a provoking individual only when empathic concern is felt for that individual, or does experiencing empathic concern inhibit aggression toward any individual, regardless of whether empathic concern is felt toward them specifically? The present study was intended to address previous limitations, establish whether a causal relation between empathic concern and aggression exists, and test competing predictions of the General Aggression Model and the empathy-altruism hypothesis. Participants were assigned to a perspective-taking role (imagine-other or objective) while reading a communication (empathic concern manipulation) sent from an ostensible participant. Participants then received negative feedback from either the sender of the communication or a different third participant and were asked to provide feedback in return. Less aggression from participants in the imagine-other/sender condition than those in the imagine-other/control condition would provide support for the empathy-altruism hypothesis. Less aggression from participants in both of the imagine-other perspective conditions compared to those in the objective condition would provide support for the GAM. A one-way-between-subjects analysis of variance failed to find significant support for the expected outcomes for either the General Aggression Model or the empathy-altruism hypothesis.
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Empathic Concern and the Inhibition of Aggression: General or Individual-Specific Inhibition?

The study of empathic concern and aggression has been investigated by numerous researchers, yet research has failed to yield consistent support for the proposition that empathic concern inhibits aggression. Aggressive tendencies are a seemingly innate and inevitable outcome of the social world that we live in, evidenced through wars, homicides, and violence. Individuals strive to maximize personal gain at the expense of others (Davis, 1996). In the United States, the number of criminals in prison due to violent acts alone may be one indicator of our inability to suppress these egoistic desires. The goal of aggression research is to identify the biological, environmental, psychological, and social factors that may be linked in order to find ways to reduce unnecessary aggression (Anderson & Bushman, 2002). Numerous researchers have focused on identifying risk factors that contribute to aggressive behavior such as dispositional correlates (Davis, 1983) and exposure to violent media (Boxer, Rowell Huesmann, Bushman, O’Brien, & Moceri, 2009). Despite the variety of explanations that have been proposed to account for human aggression, the phenomenon of aggressive behavior is still not well understood (Henderson, 1986).

Recent research has shifted the focus to a potential inhibitor of aggressive behavior, known as empathy. However, much of the research has yielded inconsistent findings for the position that empathy inhibits aggression, and it is still unclear whether this inhibition is due to a general effect of empathy or whether this inhibition effect is
individual-specific. The purpose of this research was to examine the influence of empathic concern on aggression toward provoking individuals, and to test whether the nature of this inhibition is a result of a general effect or an individual-specific effect. In other words, does empathic concern inhibit aggression toward a provoking individual only when empathic concern is felt for that individual, or does experiencing empathic concern inhibit aggression toward any individual, regardless of whether empathic concern is felt toward them specifically?
Empathy

Empathy has become the focus of extensive psychological research, especially concerning studies of altruistic motivation. Empathy is also believed to regulate humans’ otherwise egoistic and selfish aggressive behaviors (Davis, 1996). There are many different ways in which empathy has been defined and used by researchers today. Originally, the word empathy came from the term *Einfühlung*, which referred to the tendency of observers to project themselves “into” that which they observe, typically some object of beauty (Davis, 1996). Miller and Eisenberg (1988) defined empathy as an emotional response evoked by the affective state or situation of another person. Others have defined empathy as a combination of emotional matching and sympathetic responding (Mehrabian & Epstein, 1972). For many researchers, empathy refers to other-oriented emotions in the perceiver that provides a source of motivation to relieve the empathy-inducing need (Dovidio, Allen, & Schroeder, 1990; Batson, 1991; Eisenberg & Miller, 1987).

Today, the term empathy is often used interchangeably with sympathy to describe emotional states of others or to assume the emotional role of the other (Miller & Eisenberg, 1988), and over the years has been used to refer to a number of psychological states (Batson, 2011). The present study was aimed at examining a specific construct of empathy known as empathic concern.
**Empathic Concern**

Batson (2011) uses the term *empathic emotion* to refer to other-oriented emotions elicited by and congruent with the perceived welfare of someone else. According to Batson (2011), what distinguishes empathic concern from empathic emotion is the perception of need in the target individual. Thus, *empathic concern* refers to other-oriented emotions elicited by and congruent with the perceived welfare of *someone in need*. The term congruent refers to the valence of the emotion, whether the perceived welfare of the other is positive or negative, rather than the emotional content. Additionally, empathic concern is not a single, discrete emotion; rather it encompasses an array of feelings including sympathy, soft-heartedness, compassion, tenderness, sorrow, sadness, distress, concern, and grief (Batson, 2011). Empathic concern is other-oriented in the sense that it involves feeling for the other individual (Batson, 2011). This other-oriented focus which leads to an affective response rather than a self-focused orientation is a central component to empathic concern (Batson & Shaw, 1991).

What makes empathic concern distinct from other empathic processes is the altruistic motivation it produces. According to Batson (2011), not all empathic emotions produce altruistic motivation; it is only empathic concern felt when another is perceived in need. In order to understand why this occurs, it is necessary to first identify the factors that produce empathic concern.
Antecedents of Empathic Concern

According to Batson (2011), two conditions are deemed necessary in order to elicit empathic concern: (a) perceiving the other in need and (b) valuing the other’s welfare. In order to perceive another’s need, the discrepancy between what is and what is not must be noticed, and attention must be focused on the person in need, not the self or any other aspect of the situation (Batson, 2011).

The idea that empathic concern requires perception of need has been examined by several psychologists. Berger (1962) conducted an experiment in which subjects observed a target person perform a task and ostensibly receive electric shocks at the onset of a visual signal, or receive no shocks in the control condition. Additionally, a movement condition was manipulated so that the target either jerked his arm at the visual signal (movement condition) or did not (no-movement condition). All participants were informed that they would not receive shocks during the experiment, in order to ascertain that the physiological reactions to watching the target were based on empathic concern for the target and not fear or anxiety of being shocked. Berger believed that both a painful stimulus (shock) and a distress response (movement) were necessary to infer that the target was in pain (i.e., perception of need) in order to elicit empathic concern for the target. Thus, only those individuals in the shock/movement condition should display increased physiological arousal. The other three conditions were missing information necessary to infer pain (i.e., need). Consistent with the assumption that people can experience empathic concern when attending to another perceived in need, the
participants in the shock/movement condition were more physiologically aroused while observing the target than the participants in the other three conditions (Berger, 1962). Berger concluded that empathic arousal occurs in response to perceived need.

The second condition deemed necessary to elicit empathic concern is valuing the other’s welfare (Batson, 2011). Positively valuing a person’s welfare will likely facilitate other-oriented perspective taking, as individuals are more likely to consider how the other person is affected by events in his or her life. Without placing value on the welfare of another person perceived to be in need, there is no basis for emotional elicitation, specifically empathic concern. Individuals place positive value on events that bring them pleasure, and place negative value on events that bring them pain. Placing value on another person’s welfare produces responses to events that affect his or her welfare, in a similar response pattern as would be expected if those events affected our own welfare (Batson, Eklund, Chermok, Hoyt, & Ortiz, 2007). As a result, valuing the other leads us to adopt his or her perspective. Thus, we imagine how this person thinks and feels about events because his or her pleasure or pain becomes part of our own value structure (Batson et al., 2007). For example, Batson, Turk, Shaw, and Klein (1995) found that perspective taking instructions not only increased empathic concern for a stranger in need but also increased valuing of the stranger’s welfare. Additionally, Batson et al. (1995) found that when the participants who had been led to experience empathic concern learned that the stranger’s need had been met, empathic concern decreased, but valuing of the stranger’s welfare remained high.
When it comes to perspective taking, an imagine-other perspective seems to elicit empathic responses, whereas an imagine-self perspective appears to elicit more personal distress. Evidence has been found that individuals who adopt an imagine-other perspective experience greater empathic concern (Stotland, 1969) and show increases in assignment of a desirable task to another individual (Batson et al., 2003). If perspective taking produces an increase in altruistic motivation as a result of experiencing empathic concern, one could infer it would likewise inhibit aggression, as this behavior is associated with a competing egoistic motivation. Therefore, additional examination of empathic concern as a source of aggression inhibition is warranted.

**Empathy-Altruism Hypothesis**

A central theory in the current literature regarding altruism is the empathy-altruism hypothesis. Prior research has indicated that feeling empathic concern for someone in need can give rise to sympathetic or helpful (altruistic) behavior toward another person (Stotland, 1969). Simply stated, empathic concern produces altruistic motivation (Batson, 2011). First, the term altruism or altruistic motivation requires additional clarification. Generally defined, altruism is a desire to benefit someone else for his or her sake rather than one’s own (Batson, 2011). Batson’s (2011) formal definition of *altruism* is a motivational state with the ultimate goal of increasing another’s welfare. In contrast, *egoism* is a motivational state with the ultimate goal of increasing one’s own welfare. These motivations are goal-directed and refer to situational forces, not
dispositions. According to Batson (2011), increasing another’s welfare (altruism) is the ultimate goal if an individual (a) imagines some desirable change in the other’s world and (b) experiences a force to bring about that change as (c) an end in itself. Increasing one’s own welfare (egoism) is the ultimate goal if an individual (a) imagines some desirable change in his or her own world and (b) experiences a force to bring about that change as (c) an end in itself.

The empathy-altruism hypothesis states that feeling other-oriented emotions elicited by and congruent with the perceived welfare of another person in need (i.e., empathic concern) produces a motivational state with the ultimate goal of increasing that person’s welfare by having the empathy-inducing need removed (i.e., altruistic motivation)(Batson, 2011). Additionally, the more empathic concern felt for the person in need, the more motivation there is to have the need removed. This hypothesis claims that empathic concern is a source of altruistic motivation, with a necessary condition for this altruistic motivation being the perception of another in need (Batson, 2011). The empathy-altruism hypothesis posits that these conditions of empathic concern specifically are what produce altruistic motivation.

A number of experiments have produced results consisted with the empathy-altruism hypothesis. For example, Batson, Duncan, Ackerman, Buckley, and Birch (1981) conducted two experiments to test the empathy-altruism hypothesis by manipulating empathic concern, personal distress, similarity, and the ease of escape from witnessing the need. In the first experiment, participants were not likely to help when
escape was easy, but were likely to help when escape was difficult in the dissimilar victim condition. In the similar victim condition, the difficulty of escape had no influence on the likelihood of the subject to help. In the second experiment, a placebo procedure was used to manipulate whether participants believed they were primarily experiencing empathic concern or personal distress. These results were consistent with the empathy-altruism hypothesis. In the personal distress conditions, helping was lower when escape was easy but not when escape was difficult, a pattern consistent with an egoistic motivation for helping. In the empathic concern conditions, helping remained high regardless of whether escape was easy or difficult, suggesting the presence of an altruistic motivation. Thus, the results of this study were consistent with the empathy-altruism hypothesis.

In another experiment, Dovidio et al. (1990) tested the empathy-altruism hypothesis against the negative state-relief model, which proposes that empathic concern tends to co-occur with other negative states (e.g., sadness) that promote helping as a means to obtain mood-enhancing rewards. Participants were assigned to either imagine or observe another person’s problem and were then given the opportunity to help that person with the same problem or with a different problem. Participants in the imagine-other condition experienced more empathic concern and helped more often than did participants in the observe condition for the same problem, but not for a different problem. Regression analyses found that empathic concern in response to a problem mediated helping of that problem in a way that was independent of sadness, even though sadness also influenced helping behavior. This study found a systematic relationship
between empathic concern and helping that is consistent with the empathy-altruism hypothesis.

Taken together, these and over 30 other experiments (see reviews in Batson, 2011; Batson & Shaw, 1991) have provided substantial support for the proposal that empathic concern evokes an altruistic motivation. Most of this research has focused on how this motivation manifests in helping behavior. However, the empathy-altruism hypothesis also suggests implications for the inhibition of aggression. To understand these implications, it is first important to understand what is meant by aggression.
Aggression

Aggression is a behavior that is meant to harm or hurt another person or object (Caprara, Barbaranelli, Pastorelli, & Perugini, 1994). More specifically, human aggression is any behavior directed toward another individual that is carried out with proximate (immediate) intent to cause harm (Anderson & Bushman, 2002). Additionally, the perpetrator must believe the behavior will harm the target, and the target is motivated to avoid the behavior (Bushman & Anderson 2001).

Aggression can be expressed either verbally or physically and often occurs when an individual is prompted by a negative emotion (Caprara et al., 1994). Some of the varying human acts of aggression that are implemented are behaviors such as physical assault, verbal assault, abuse, verbal derogation, and discrimination (Caprara et al., 1994). Aggression is typically conceived using two distinctions: hostile vs. instrumental. Hostile aggression is considered to be impulsive, thoughtless (unplanned), driven by anger, having the ultimate motive of harming the target, and to occur as a reaction to some perceived provocation (Anderson & Bushman, 2002). Instrumental aggression is considered to be a premeditated means of obtaining some ultimate goal other than harming the victim, and being proactive instead of reactive (Anderson & Bushman, 2002). For the purpose of this study, the focus was on displays of hostile aggression toward provoking individuals.
**Aggression Theories**

Five main theories drive much of the current research on aggression. The Cognitive Neoassociation Theory proposed that aversive events produce negative affect, which becomes associated with the event and with the elicited cognitive and emotional responses from that event (Berkowitz, 1990). These aggressive thoughts, emotions, and behaviors are linked together in memory to form an associative memory structure of aggression-related concepts that are activated by similar concepts. The Social Learning Theory posits that people acquire aggressive responses by direct experience or by observing others (Bandura, 1978). The Script Theory proposed that when children observe violence in the media, they learn aggressive scripts (sets of highly associated concepts in memory), which then define situations and guide behavior (Huesmann, 1988).

The Excitation Transfer Theory proposed by Zillman (1988) posits that if two arousing events are separated by a short period of time, physiological arousal from the first event may be misattributed to the second event. If the second event is related to anger, the additional arousal should make the individual even angrier. Additionally, if a person consciously attributed his or her arousal to anger, he or she will remain ready to aggress until their label of anger dissipates. Finally, Tedeschi and Felson (1994) proposed the Social Interaction Theory. According to this theory, the actor is a decision-maker whose choices are directed by the expected rewards, costs, and probabilities of obtaining different outcomes. This theory interprets aggressive behavior (e.g., coercive actions) as a
way to influence social behavior in order to produce some change in the target’s behavior. Despite the variety of theories that exist on aggression, the most commonly used model for studying aggression is the General Aggression Model (GAM), which is the aggression model that underlies the present research.

**The General Aggression Model**

The GAM integrates existing domain-specific theories of aggression into a broader social-cognitive framework for understanding aggression and violence (Anderson & Bushman, 2002). This integration of domain-specific theories is advantageous for multiple reasons: it is more parsimonious than the set of existing mini-theories, it better explains aggressive acts that are based on multiple motives (e.g., both instrumental and affect-based aggression), it will aid in the development of more comprehensive interventions designed to treat individuals who are chronically aggressive, and it provides broader insights about child rearing and development issues (Anderson & Bushman, 2002). It is the only social-cognitive model that incorporates biological processes, personality development, social processes, cognitive processes, short-term and long-term processes, and decision processes into understanding aggression (DeWall, Anderson, & Bushman, 2011).

The GAM incorporates the use of knowledge structures for perception, interpretation, decision making, and action. Knowledge structures include affect in several ways: they contain links to experiential affect “nodes” or concepts, include
knowledge about when a particular emotion should be experienced and how emotions influence people’s judgments and behavior, and include affect as an action rule (e.g., a person’s insult script may prescribe aggressive retaliation but only if anger is at a high level or fear is at a low level) (Anderson & Bushman, 2002). According to Anderson and Bushman (2002), the focus of the GAM is on the “person in the situation” (p. 34). This is known as an episode and consists of one cycle of an ongoing social interaction. Figure 1 illustrates the GAM cycle of episodic processes.

Figure 1. The General Aggression Model Episodic Processes

![Figure 1. The General Aggression Model Episodic Processes](image)

*Figure 1. Simplified version of the main foci of the general aggression model. The three main foci concern (a) person and situation inputs; (b) cognitive, affective, and arousal routes through which these input variables have their impact; and (c) outcomes of the underlying appraisal and decision processes. Adapted from “Human Aggression,” by C. A. Anderson and B. J. Bushman, 2002, Annual Review of Psychology, 53, p. 34. Copyright 2002 by Annual Reviews.*
The GAM consists of three stages. The first stage consists of person (e.g., personality traits, attitudes, and genetic predispositions) and situation (e.g., situational features or presence of aggressive cues) inputs as causal factors. The second stage consists of the internal cognitive, affective, and arousal states which process inputs interactively to influence the final outcome behavior. The third stage consists of appraisal and decision making processes, which can be automatic (immediate appraisal) or controlled (reappraisal). Finally, the outcome behavior from the present episode then cycles into social encounters, which influence future episodic cycles through the personological and situational input variables (Anderson & Bushman, 2002). In other words, inputs enter into the appraisal and decision making process through their collective effects on cognition, affect, and arousal (Anderson & Bushman, 2002). Repeated exposure to aggression and violence can result in long-term changes in personality due to the development, automatization, and reinforcement of aggression-related knowledge structures (Anderson & Bushman, 2002).

The GAM provides an overarching and comprehensive framework appropriate for understanding how empathic concern may inhibit aggression in the present study. The GAM includes most, if not all, of the factors that can influence aggression and explain why a person or group acted aggressively (DeWall et al., 2011). Furthermore, the GAM can be used to determine how that aggression can be reduced. Specifically, the GAM identifies the underlying processes that can be examined to understand how different inputs lead to aggressive or nonaggressive behavior (Anderson & Bushman, 2002).
In regards to the present study, empathic concern is a variable that influences an individual’s affective state, present in the second stage of the model. The cycle of ongoing social interaction of the GAM provides opportunities for new variables to influence internal states (e.g., empathic concern manipulation), which subsequently influences appraisal and decision-making processes. An individual’s current internal state can set the stage for aggressive behavior. For example, trait hostility and exposure to violent media interact to increase hostile feelings and influence the accessibility of aggressive thoughts (Anderson, 1997), aggressive affect (Bushman, 1995), and aggressive behavior (Bushman, 1995) through access to knowledge structures and previously learned scripts. The introduction of a provocation manipulation cues aggression-related knowledge structures and concepts.

If the GAM is correct, then in the present research the experimental induction of empathic concern prior to provocation should create competing or incompatible internal affective states. Inducing emotional states that are incompatible with overt aggression may reduce the intensity or likelihood of committing later aggressive acts (Baron, 1983; Mueller & Donnerstein, 1976). The accessibility of aggressive scripts and knowledge structures will no longer be salient. The incompatibility of these opposing internal states should undermine the routes to aggression, resulting in an inhibition of aggression.
Empathy-Altruism Hypothesis vs. General Aggression Model

The above review of research offers a theoretical framework that is congruent with the hypothesis that empathic concern may inhibit aggression. However, it does not make clear whether this inhibition is general or whether it is individual specific. The GAM would suggest that empathic concern inhibits aggression in a general sense. In other words, the GAM predicts a general inhibiting effect of empathic concern on aggression regardless of the potential target of aggression.

In contrast, the empathy-altruism hypothesis makes a more specific prediction. Empathic concern evokes an altruistic motivation to increase the welfare of the person for whom empathic concern is experienced, meaning empathic concern should only inhibit aggression toward that person specifically. The empathy-altruism hypothesis predicts a target-specific inhibiting effect of empathic concern on aggression. Therefore, inhibition of aggression should only occur for the individual for whom empathic concern is felt.

At this time, I am aware of only four experiments that speak to the question of whether empathic concern causally inhibits aggression. In the first, Harmon-Jones, Vaughn-Scott, Mohr, Sigelman, and Harmon-Jones (2004) examined whether feeling empathic concern could eliminate the effects of anger on relative left frontal activity. Left frontal cortical activity is associated with approach motivation, emotion, and behavior, whereas right frontal cortical activity is associated with withdrawal motivation, emotion, and behavior. Participants were induced to experience empathic concern using a
perspective taking manipulation (low-objective/high-imagine-other) for a person who then insulted them or not. They found an increase in left, relative to right, frontal activity after participants received an insult, but only if they had previously felt low empathic concern for the person giving the insult. For participants induced to experience high empathic concern, no relative increase in relative left frontal activity was evidenced, suggesting an inhibition of approach motivation produced by anger. Unfortunately, aggressive behavior was not measured, and so it is unclear whether the inhibition of relative front cortical activity actually reflects an inhibition of aggressive tendencies.

In another set of studies, Richardson, Hammock, Smith, Gardner, and Signo (1994) attempted to demonstrate the role of empathy as a cognitive inhibitor of aggressive responding. Study 1 examined the correlation between a trait measure of empathic concern and trait measures of aggression and found that empathic concern was positively correlated with constructive and nonaggressive responses to conflict. Study 2 manipulated threat (low/high) and perspective taking (perspective-taking/no perspective-taking) and found that participants in the perspective taking condition set lower shocks than those in the no-perspective taking condition, when aggression was measured using a modified version of the Taylor Aggression Paradigm in which participants administered and received mild electric shocks to an ostensible opponent during a competitive task. Highly provoked participants also responded more aggressively than those in the low provocation condition. Study 3 measured both cognitive and affective components of empathy with relative aggression. Males responded more aggressively than did females and high perspective takers sent less offensive messages than did low perspective takers.
High perspective taking females responded less aggressively than did high perspective taking males and low perspective taking females. In the low provocation condition for males, high perspective takers responded less aggressively than did low perspective taking males. For females, the same pattern was found in the high provocation condition.

Unfortunately, all three studies prove problematic for interpretation. In Study 1, measures of empathic concern and aggression were self-report trait measures, which are likely laden with social desirability and do not provide insight into the causal direction of association. In Studies 2 and 3, empathic concern was not measured, so it remains unclear whether the inhibition effect was caused by feelings of empathic concern. In Study 3 there was no apparent need of the other, which makes it unlikely that empathic concern was experienced prior to the measurement of aggression.

In a study by Eliasz (1980), empathic concern was manipulated by asking female participants to imagine the situation of an interaction partner with regard to his psychological state (thoughts and feelings) and make an assessment of his current situation and its perspectives. Aggression was then measured using the Buss Teacher-Learner Task in which participants administered electric shocks to an ostensible partner in order to improve learning and performance on an arithmetic task. This study failed to find a negative relation between empathic concern and aggression. However, the participants received a harsh evaluation to provoke anger and aggression prior to the empathic concern manipulation, which may have prevented empathic concern from even developing (Batson, 2011).
Finally, Gaines, Kirwin, and Gentry (1977) tested the hypothesis that descriptive anger expression elicits less subsequent aggression and greater empathic concern than does aggressive insult by requiring male undergraduates to set varying levels of shock for an opponent during a series of competitive trials before and after hearing one of four types of taped comment. This study assessed self-reported empathic concern for the target of aggression and found it to be present after provocation. Results indicated that descriptive anger expression led to a significant decrease in aggression, whereas no feedback (opponent said nothing) led to an increase in aggression. In contrast, descriptive anger expression, insult, and no anger feedback produced more residual hostility than did no feedback. Participants in the descriptive anger group appeared to be more motivated by empathic concern in setting shocks, as compared to the other three groups. Empathic concern was found to be generally associated with lower shock settings initially and with reductions in shock settings following the opponent's comments (Gaines et al., 1977). The empathy-inhibition association was highly significant, but a causal relationship could not be determined because assessment of empathic concern was measured using retrospective self-reports after the opportunity to harm the victim. Thus, participants may have believed they felt greater empathic concern because they harmed the victim less.

Despite these studies providing the clearest examination of whether a causal link between empathic concern and aggression exists, there are several limitations to interpreting their results according to Batson (2011). The study by Eliasz (1980) introduced the provocation manipulation prior to the empathy manipulation, which may have prevented empathic concern from ever developing. The study by Richardson et al.
(1994) failed to obtain a measure of empathic concern for the target, so there is no way to confirm that the empathic concern manipulation was successful or that empathic concern was present at the time the participant was given the opportunity to retaliate. Thus, it cannot be assumed that empathy inhibits aggression if it was not present at the time participants aggressed. In the study by Harmon-Jones et al. (2004), no behavioral measure of aggression was taken, so it is uncertain if the inhibition of relative front cortical activity actually indicates an inhibition of aggressive tendencies. Finally, the Gaines et al. (1977) study failed to establish a causal inhibition of aggression due to empathic concern because empathy was measured using retrospective self-reports after participants were given the opportunity to harm the victim.

Taken together, the limitations of these studies pose a major problem with interpreting the results. Additionally, prior studies have measured aggression toward someone other than the target of empathic concern or for the target of empathic concern, but not both within the same study. This leaves the question of whether empathic concern inhibits aggression in general or if this inhibition is individual-specific unanswered. Thus, the present study was designed to accomplish two goals: (a) specifically address the limitations found in each of these prior studies in order to provide a clear test of whether empathic concern causally inhibits aggression, and (b) measure aggression toward both the target of empathic concern and toward someone other than the target of empathic concern following an empathic concern manipulation.
Specifically, the present research addressed the limitations of prior studies in a number of ways. First, the empathic concern manipulation occurred prior to the provocation manipulation. Second, a manipulation check followed to ensure that the empathic concern manipulation was successful and present at the time the participants were given the opportunity to retaliate. Third, a behavioral measure of aggression toward the provoking target was obtained. Finally, the empathic concern manipulation check was taken prior to the opportunity to aggress, providing more support for a causal relation. None of these prior studies contain conditions that tested the general vs. individual-specific inhibition hypotheses either. Thus, the present research included the necessary conditions to test the competing predictions of the GAM and the empathy-altruism hypothesis, by measuring aggression toward both the target of empathic concern and a target for whom empathic concern was not felt.
The Present Research

The purpose of the present research was to examine how empathic concern influenced aggression toward a provoking target, testing competing predictions between the GAM and the empathy-altruism hypothesis. To test these predictions, a one-way-between-subjects cell design was employed using procedures from prior research to manipulate empathic concern and provocation. Participants were asked to write two essays, the first of which was to be exchanged with two ostensible same sex participants in the study for evaluation as part of a peer review process at UWO. The second essay was to be presumably critiqued by an independent reviewer after the study session concluded to determine if feedback enhances students’ writing skills. In reality, each participant was asked to complete only one essay, which they exchanged and evaluated with only one of the ostensible participants. Prior to exchanging the first essay, participants were informed that they might be asked to send or receive a personal communication to assess whether knowledge about a peer evaluator would affect the peer review process.

The communication constituted the empathic concern manipulation. The participant was told that they were randomly assigned to the sender, receiver, or control condition for the communication (neither send nor receive communication). In reality, participants were always assigned to the receiver condition. Additionally, perspective taking was manipulated by asking participants to adopt reading perspectives (imagine-
other vs. objective) as a way to help them think informatively about the communication prior to reading it. Provocation was manipulated using negative feedback on the participant’s essay from either the sender or control participant. Following the provocation manipulation, the participant was given an opportunity to aggress and asked to evaluate the essay of the provoking target using the same feedback form. The responses on the essay feedback form constituted the measure of aggression using bipolar scale items. Negative scores indicated more negative feedback and higher levels of aggression, whereas positive scores indicated more positive feedback and lower levels of aggression.

An additional condition that involved no communication (no empathic concern manipulation) or feedback (no provocation) was included to establish directionality for the aggression variable in the other three conditions. Participants in the control condition only completed an essay and evaluated an ostensible participant’s essay, as a baseline measure of aggression in the absence of the empathic concern and provocation manipulation. This resulted in four conditions: (a) no communication/no feedback (control), (b) objective perspective/negative feedback from sender, (c) imagine-other perspective/negative feedback from sender, or (d) imagine-other perspective/negative feedback from control.
Method

Participants

Participants were recruited from the University of Wisconsin through SONA systems, an experiment management program for the Department of Psychology, in exchange for course credit or extra credit. Seventy-two female undergraduate students participated in the study (three participants’ data were excluded due to high suspicion). Participant gender and experimenter gender were matched to minimize self-presentation effects (Jones & Pittman, 1982). Participants were randomly assigned to one of four conditions using random block assignment: no communication/no feedback (control), objective perspective/negative feedback from sender, imagine-other perspective/negative feedback from sender, or imagine-other perspective/negative feedback from control. The no communication/no feedback condition was included as a baseline measure. All participants were at least 18 years of age prior to participation.

Procedure

The researcher arrived to the study sessions at least 15 minutes prior to the scheduled timeslot in order to ensure that all necessary materials were present and that the research area was properly prepared for the study. The researcher greeted participants at a pre-designated location that was separate from the testing room and verified that they
were at the correct study. To ensure that all participants had a uniform experience, a specific study script (Appendix A) was followed for each session. Upon arrival to the testing room, participants were asked to turn off their cell phones and any electronic devices. Participants were seated at a desk where two copies of the Consent Form (Appendix B) and a face-down copy of the Peer Review Study: Introduction (Appendix D) were placed. Participants were left alone to complete the Consent Forms and read the Introduction sheet.

After completing the Consent Form, participants were asked if they had any questions about the study and if so, these were addressed before going over the main points of the Introduction. The Introduction explained that the main purpose of the study was to develop a standard peer review process to help improve the writing and critical thinking skills of students at the university for the Peer Review Educational Process program (P.R.E.P.). Participants would be asked to write two short essays, the first which would be reviewed by their peers involved in the study, and the second which would be critiqued by an independent writing evaluator after the study concluded. The participant was then given a folder in which to place all completed questionnaires and materials from the study, and asked to leave any identifying information off of the forms and questionnaires once completed so that their responses could not be associated with their identity. In addition, participants were reminded that the scheduling of all three participants had been staggered to ensure that they would not meet each other. These points were stressed in order to encourage participants to express their views freely and honestly.
The *Introduction* explained that the study was also looking at whether personal communication, or knowing something about peer evaluators, would influence the review process. For this reason, each participant in the session had been randomly assigned to one of three communication roles: sender, receiver, or control. It was explained that assigning each participant to one of these roles during a single study session enabled the researcher to control for outside factors which could influence reactions. Thus, prior to exchanging the first essay, participants were told they may be asked to send or receive a personal communication (Appendix J), presumably determined randomly.

The communication ostensibly detailed an important event that had occurred in the sender's life recently. If participants were assigned to receive a communication, they were provided with the communication prior to reviewing the other participant’s essay. In reality, participants in all experimental conditions were assigned to *receive* a communication prior to exchanging essays and were given a *Communication Role* form as a reminder (Appendix E). Participants assigned to the control group were told they would *neither send nor receive* any communication and were also given a *Communication Role* form as a reminder (Appendix F). Those assigned to receive a communication were told that the *sender* was currently working on their communication, which they were asked to write before receiving information about the purpose of the study. In the meantime, participants were asked to begin the first essay task while the sender finished. All participants were given *Essay Task 1* directions (Appendix G), which asked them to present their views in a short essay on a randomly determined topic. All participants were given identical essay topics concerning their views on increasing
student tuition at the university. Participants were given 10 minutes to complete their essay; however, if they finished earlier they were asked to open the testing room door to signify they were done. Participants were asked to remain in the testing room until the researcher returned from working with the other participants, in order to reinforce the existence of additional participants.

The researcher returned after 10 minutes had elapsed or after participants had alerted they were done to collect the completed essay task. The researcher then placed two folders on the table where participants were seated, one containing Communication Instructions and one containing the Communication (Appendix J) from the sender.

**Perspective-taking manipulation.** The Communication Instructions assigned participants to either an objective reading perspective (Appendix H) or an imagine-other reading perspective (Appendix I) prior to reading the communication, ostensibly as a way to help them think informatively about the communication. Participants in the objective perspective condition were asked to try to remain as objective as possible about the event described and how it has affected his or her life while reading the communication. Participants in the imagine-other perspective condition were asked to try to imagine what the sender is thinking and feeling about the event described and how it has affected his or her life while reading the communication.

**Empathic concern manipulation.** After adopting a reading perspective, participants read the Communication (Appendix J) from the sender. The story in the communication was identical in all conditions. The communication described a recent
break-up with the sender’s significant other after a long-term relationship, an event thought to be highly relatable for most college age students. In it, the sender described how the transition from high school to college led to a change in her partner’s feelings for her, and as a result he had decided he no longer wanted to be tied down with a relationship. The sender described how down she felt and how she had been unable to focus on anything but the recent break-up.

Measurement of Empathic Concern and Perspective Taking

Additionally, the Communication Reactions Questionnaire 1 (Appendix K) and Communication Reactions Questionnaire 2 (Appendix L) were placed in order, face down on the table, with the order in which they were to be completed written on the back (1 and 2). Participants were asked to thoroughly read over the communication instructions before reading the communication, and then complete Communication Reactions Questionnaire 1 and Communication Reactions Questionnaire 2. The Communication Reactions Questionnaire 1 included the manipulation check for empathic concern. Responses to these 16 items were on 7-point scales (1=not at all; 7=extremely) indicating the extent to which each feeling was experienced (i.e., happy, sad, compassionate, etc.). The Communication Reactions Questionnaire 2 included questions concerning how interesting or clear participants found the communication to be, as well as manipulation checks for perspective-taking. Responses to these items were on 7-point scales (1=not at all; 7=very much) indicating their agreement, with one bipolar scale
question concerning the valence of the event described (-3 = extremely negative; 0 = neutral; +3 = extremely positive). Participants in the objective/sender condition and the imagine-other/sender condition were told they would exchange and evaluate essays with the sender first, who was working on their own essay in the meantime. Participants in the imagine-other/control condition were told they would exchange and evaluate essays with the control participant first, since the sender had not yet completed their essay. Participants were instructed to open the door when they had finished reading the communication and completed the questionnaires, while their completed essay was taken for evaluation.

Once the participant finished, the researcher collected the communication folders and ensured all completed questionnaires had been placed inside the confidentiality folder. Participants in the objective/sender condition and the imagine-other/sender condition were given a folder containing their Essay Feedback Form (Appendix M) from the sender, along with the sender’s completed first essay (Appendix N) and a blank essay feedback form (Appendix O) in a second folder. Participants in the imagine-other/control condition were given a folder containing their Essay Feedback Form (Appendix M) from the control participant, along with the control participant’s completed first essay (Appendix N) and a blank essay feedback form (Appendix O) in a second folder.

**Provocation manipulation.** Provocation of aggression was manipulated using negative feedback scores on the Essay Feedback Form. Responses to these items were on 7-point bipolar rating scales (-3 = poor or extremely ineffective; 0 = neutral; +3 = strong or
extremely effective). All scores ranged between -1 and -3, demonstrating a clear negative pattern from the neutral baseline. The final question allowed for additional comments which stated:

Your essay was pretty weak. You could have done a much better job developing your ideas. You didn’t make many original or significant points in your essay.

Participants were told to read through their Essay Feedback Form. Once finished, they were asked to read the provoking participant’s essay and provide feedback using the blank essay feedback form (Appendix O), opening the door when finished.

Measurement of Aggression

Aggression towards the target was measured by responses on the Essay Feedback Form (Appendix O) following the provocation manipulation. This form allowed participants the opportunity to retaliate (aggress) towards the provoking target. The questionnaire included five rating scales (organization, breadth of vocabulary, spelling and grammar, development of noteworthy ideas, and overall effectiveness of the essay). Responses to these items were on a bipolar rating scales (-3=poor or extremely ineffective; 0=neutral; +3=strong or extremely effective). The final question asked participants for any additional comments concerning the essay. These scores were then reverse-coded so that lower scores represented lower aggression and higher scores represented higher aggression.
When the researcher returned, the completed essay feedback form was collected and participants were given the *Quality of Feedback Questionnaire* (Appendix P) to complete. The *Quality of Feedback Questionnaire* served as a manipulation check to ensure that the provocation manipulation was successful. The questionnaire included 13 questions concerning how the participant interpreted their feedback from the provoking target. Responses to these items were on 7-point rating scales (*1* = *not at all; 7* = *very or extremely*) and bipolar rating scales (*-3* = *extremely negative or bad; 0* = *neutral; +3* = *extremely positive or good*). Participants were asked to think back to the feedback they received on their essay and complete the form, alerting the researcher when finished by opening the door.

Participants in the control condition did not receive or send a personal communication. Each was given the same essay task to complete, but was asked to provide feedback on another participant’s essay prior to receiving feedback on their own. In reality, no feedback was provided to the control participants.

Upon completion of the study, participants were probed for suspicion concerning the true nature of the study, debriefed (Appendix Q), and thanked for their participation.

**Predictions.** According to the GAM, it was predicted that participants in both of the imagine-other perspective conditions would assign lower aggression scores on the essay feedback questionnaire than those in the objective condition, regardless of whether the negative feedback was received from the sender or the control participant. This result
would provide support for the GAM, indicating a general inhibition of aggression due to the empathic concern induction.

According to the empathy-altruism hypothesis, it was predicted that participants in the imagine-other perspective condition who received negative feedback from the *sender* would assign lower aggression scores on the essay feedback form than participants in the imagine-other perspective who receive negative feedback from the control participant and objective condition combined. This result would provide support for the empathy-altruism hypothesis, indicating an individual-specific inhibition of aggression. Table 1 shows the patterns of aggression levels that were expected for each condition for both the empathy-altruism hypothesis and the GAM.

Table 1

*Predictions for levels of aggression for the empathy-altruism hypothesis and the GAM.*

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Competing Predictions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Empathy Altruism</td>
<td>General Aggression Model</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hypothesis</td>
<td>[1, -2, 1]</td>
<td>[2, -1, -1]</td>
</tr>
<tr>
<td>Objective/Sender</td>
<td>High</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Imagine-Other/Sender</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Imagine-Other/Control</td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

In other words, empathic concern was expected to inhibit aggression *only* toward the sender for whom the empathic concern was felt, as predicted by the empathy-altruism hypothesis. In contrast, the elicitation of empathic concern was expected to inhibit
aggression towards both the sender and the control participant, regardless of whether empathic concern was felt specifically for that individual, as predicted by the GAM.
Analyses

Preliminary analyses included manipulation checks for provocation, perspective-taking, and empathic concern. The primary analysis examined aggression between the three experimental conditions. Finally, an additional analysis was performed for aggression which included the control condition as a baseline measure in order to assess directionality of the results.

Perceived Negativity of Feedback

To assess whether the provocation manipulation was successful, a one-way-between-subjects analysis of variance (ANOVA) was conducted using the three perspective conditions (objective/sender, imagine-other/sender, imagine-other/control), after which the mean feedback rating was tested against a value of zero in each condition. One-sample t-tests were performed to assess the directionality of the means from a baseline of zero (neutral). If provocation was successfully manipulated, all mean feedback ratings across conditions should differ significantly from zero with no significant mean difference between conditions.
**Perspective-Taking**

To assess whether the manipulation of perspective-taking was successful, a one-way-between-subjects analysis of variance (ANOVA) was conducted using the three perspective conditions (objective/sender, imagine-other/sender, imagine-other/control), after which planned comparisons were conducted to look for differences between groups using orthogonal contrasts. The first contrast compared the objective condition to both imagine-other conditions (-2, 1, 1). The second contrast compared the imagine-other/control condition to the imagine-other/sender condition (0, 1, -1). If perspective-taking was successfully manipulated, a significant mean difference between the objective condition and both imagine-other conditions combined was expected, and no mean difference was expected between the two imagine-other conditions.

**Empathic Concern**

To assess whether the manipulation of empathic concern was successful, a one-way-between-subjects analysis of variance (ANOVA) was conducted using the three perspective conditions (objective/sender, imagine-other/sender, imagine-other/control). An empathic concern index score was created by averaging the six empathic concern item ratings (*compassionate, sympathetic, softhearted, tender, warm, and moved*) on the *Communication Reactions Questionnaire 1*. Cronbach’s alpha was calculated to determine the inter-item reliability of empathic concern items.
Planned comparisons were conducted for differences between groups using orthogonal contrasts. The first contrast compared the objective condition to both imagine-other conditions (-2, 1, 1). The second contrast compared the imagine-other/control condition to the imagine-other/sender condition (0, 1, -1). If empathic concern was successfully manipulated, a significant mean difference between the objective condition and the imagine-other conditions combined was expected, and no mean difference was expected between the two imagine-other conditions.

**Primary Dependent Variable-Aggression**

The primary analysis examined the dependent variable of interest, aggression, using a one-way-between-subjects analysis of variance for the three experimental conditions (objective/sender, imagine-other/sender, imagine-other/control), followed by two planned orthogonal contrasts. Items on the essay feedback form were reverse-coded and an aggression index score was computed and used for analysis. Participants in the control condition were not included.

The first contrast tested the GAM hypothesis by comparing aggression levels between participants in the objective condition to those in both imagine-other conditions combined (2, -1, -1). A significant mean difference between the objective condition and the imagine-other conditions was expected if the GAM prediction was correct.
The second contrast tested the empathy-altruism hypothesis by comparing aggression levels between participants in the imagine-other/sender condition to those in the objective and imagine-other/control conditions (1, -2, 1). A significant difference between the imagine-other/sender condition and the objective and imagine-other/control conditions was expected if the empathy-altruism hypothesis was correct.

Finally, an additional one-way ANOVA was conducted for aggression which included the no communication/no feedback condition (control condition), along with the three experimental conditions. This analysis was included in order to assess the directionality of the results respective to a baseline measure and was followed by a series of three planned contrasts. The first contrast compared the objective/sender condition to the control condition (1, -1, 0, 0). The second contrast compared the imagine-other/sender condition to the control condition (1, 0, -1, 0). The third contrast compared the imagine-other/control condition to the control condition (1, 0, 0, -1). No specific predictions were made in regards to the control condition.
Results

Perceived Negativity of Feedback

Participants in the three perspective conditions were asked to indicate how positive or negative they perceived the feedback on their essay to be on a bipolar scale (3 = extremely negative; 0 = neutral; 3 = extremely positive). To assess whether participants perceived their feedback as negative, a one-way-between-subjects analysis of variance (ANOVA) was conducted using perspective condition as the factor (objective/sender, imagine-other/sender, imagine-other/control), after which the mean feedback rating was tested against a value of zero in each condition. No significant mean difference between conditions was expected. The ANOVA revealed no statistically significant mean differences between groups, $F(2, 51) = .10, p > .05, \eta^2 = .004$. The mean scores for participants in the objective condition ($M = -2.22$), the imagine-other/sender condition ($M = -2.17$), and the imagine-other/control condition ($M = -2.28$) all indicated that the feedback was perceived as negative. Furthermore, one-sample $t$-tests were performed to assess the directionality of the means from a baseline of zero (neutral). In all instances the means were significantly different from zero, all $t$’s $> 11.66$, $p$’s $< .001$, with $d$’s ranging between -2.74 and -3.40. In summary, participants across all conditions perceived their feedback as equally negative. Table 2 provides means and standard deviations across all conditions for all study measures.
Table 2

*Means and Standard Deviations for Experimental and Control Groups Across All Measures*

<table>
<thead>
<tr>
<th>Measures</th>
<th>Obj(Sender)</th>
<th>I-O(Sender)</th>
<th>I-O/Control</th>
<th>Control (Contrasts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Negativity</td>
<td>-2.22 (.81)</td>
<td>-2.17 (.71)</td>
<td>-2.28 (.67)</td>
<td>--- (-2, 1, 1)</td>
</tr>
<tr>
<td>Perceived Need</td>
<td>-1.44 (.98)</td>
<td>-2.06 (.64)</td>
<td>-2.28 (.57)</td>
<td>11.01* (.78)</td>
</tr>
<tr>
<td>Objective Perspective</td>
<td>5.17 (.92)</td>
<td>3.22 (1.26)</td>
<td>3.56 (1.82)</td>
<td>19.72* (.52)</td>
</tr>
<tr>
<td>I-O Perspective</td>
<td>4.00 (1.53)</td>
<td>6.17 (.79)</td>
<td>6.50 (.71)</td>
<td>27.33* (.41)</td>
</tr>
<tr>
<td>Empathic Concern</td>
<td>3.57 (1.12)</td>
<td>4.28 (.91)</td>
<td>4.68 (1.19)</td>
<td>8.36* (1.22)</td>
</tr>
<tr>
<td>Aggression Index</td>
<td>-0.34 (1.04)</td>
<td>0.19 (1.34)</td>
<td>-0.10 (1.17)</td>
<td>1.28 (1.44)</td>
</tr>
</tbody>
</table>

Note. * = p ≤ .05. Standard deviations appear in parenthesis below means.

**Perceived Need of the Sender**

Perceived need of the sender was included for analyses based on prior research which has shown it to be a necessary antecedent to empathic concern, providing the motivation to increase another individual’s welfare. To assess perceived need of the sender, participants in the three perspective conditions were asked to indicate how positive or negative they perceived the event described by the sender to be on a bipolar scale (-3=extremely negative; 0=neutral; 3=extremely positive). To assess whether perceived need of the sender differed by condition, a one-way-between-subjects ANOVA
was conducted using perspective condition as the factor (objective/sender, imagine-other/sender, imagine-other/control), after which planned comparisons followed to test differences between groups using orthogonal contrasts.

The ANOVA revealed statistically significant mean differences between groups, \( F(2, 51) = 5.90, p = .005, \eta^2 = .19 \). The first contrast compared the objective condition to both imagine-other conditions (\(-2, 1, 1\)). The weighted mean score for participants in the imagine-other conditions (\( M = -2.17 \)) was significantly lower than those in the objective condition (\( M = -1.44 \)), \( F(1, 52) = 11.01, p = .002, d = .97 \), indicating that participants in the imagine-other conditions perceived the need of the sender as greater than did those in the objective condition. The second contrast compared the imagine-other/control condition to the imagine-other/sender condition (\( 0, 1, -1 \)). The results indicated that participants in the imagine-other/control condition (\( M = -2.28 \)) did not differ significantly from those in the imagine-other/sender condition (\( M = -2.06 \)), \( F(1, 52) = .78, p > .05, d = -.36 \). In summary, participants in the imagine-other conditions perceived the event described by the sender similarly and perceived significantly greater need in the sender than did those in the objective condition.

**Perspective-Taking**

Participants in the three perspective conditions were asked to indicate the extent to which they adopted each perspective (i.e., remained objective or imagined the other) on 7-point scales (1=not at all; 7=very much). To assess whether the perspective-taking
manipulation was successful, planned comparisons were conducted for differences between groups using orthogonal contrasts. If perspective-taking was successfully manipulated, a significant mean difference between the objective condition and both imagine-other conditions combined was expected, and no mean difference was expected between the two imagine-other conditions.

For the self-reported objective perspective, the data revealed statistically significant mean differences between groups, $F(2, 51) = 10.12, p < .001, \eta^2 = .28$. The first contrast compared the objective condition to both imagine other conditions (-2, 1,1). The results indicated that participants in the objective/sender condition ($M = 5.17$) reported significantly higher mean scores on the objective perspective item than did participants in the imagine-other conditions ($M = 3.39$), $F(1, 52) = 19.72, p < .001, d = -1.28$. The second contrast compared the imagine-other/control condition to the imagine-other/sender condition (0, 1, -1). The results indicated that participants in the imagine-other/control condition ($M = 3.56$) did not differ significantly from those in the imagine-other/sender condition ($M = 3.22$), $F(1, 52) = .52, p > .05, d = .22$.

For self-reported imagine-other perspective, the data revealed statistically significant mean differences between groups, $F(2, 51) = 28.67, p < .001, \eta^2 = .53$. The first contrast compared the objective condition to both imagine other conditions (-2, 1,1). The results indicated that participants in the imagine-other conditions ($M = 6.34$) reported significantly higher scores on the imagine-other perspective item than did participants in the objective/sender condition ($M = 4.00$), $F(1, 52) = 27.33, p < .001, d = 2.17$. The
second contrast compared the imagine-other/control condition to the imagine-other/sender condition (0, 1, -1). The results indicated that participants in the imagine-other/control condition ($M = 6.50$) did not differ significantly from those in the imagine-other/sender condition ($M = 6.17$), $F(1, 52) = .41, p > .05, d = .44$.

In summary, these results provide support that perspective-taking was successfully manipulated. Participants in the objective perspective-taking condition indicated that they remained significantly more objective than did participants in the imagine-other conditions, whereas participants in the imagine-other conditions indicated that they adopted the imagine-other perspective significantly more than did those in the objective condition.

**Empathic Concern**

An empathic concern index score was created by averaging the six empathic concern item ratings (*compassionate, sympathetic, softehearted, tender, warm, and moved*). Participants in the three perspective conditions were asked to indicate the extent to which they experienced each feeling on a 7-point scale (*1=not at all; 7=extremely*). A reliability analysis was conducted to determine the internal consistency of the six-item empathic concern scale. Coefficient alpha for the scale was $\alpha = .83$, indicating internal consistency among the scale items. To assess whether the perspective-taking manipulation produced different levels of empathic concern, planned comparisons were conducted for differences between groups using orthogonal contrasts. If empathic
concern was successfully manipulated, a significant mean difference between the
objective condition and the imagine-other conditions combined was expected, and no
mean difference was expected between the two imagine-other conditions.

The data revealed statistically significant differences between groups, \( F(2, 51) = 4.79, p = .012, \eta^2 = .16 \). The first contrast compared the objective condition to both
imagine other conditions (-2, 1,1). The results indicated that participants in the
objective/sender condition \( (M = 3.57) \) reported experiencing significantly lower levels of
empathic concern than did participants in the imagine-other conditions \( (M = 4.48), F(1, 52) = 8.36, p = .006, d = .84 \). The second contrast compared the imagine-other/control
condition to the imagine-other/sender condition \( (0, 1, -1) \). The results indicated that
participants in the imagine-other/control condition \( (M = 4.68) \) did not differ significantly
from those in the imagine-other/sender condition \( (M = 4.28), F(1, 52) = 1.22, p > .05, d = .38 \). In summary, participants in the imagine-other conditions experienced significantly
greater mean levels of empathic concern than those in the objective condition. Overall,
these results provide support that empathic concern was successfully manipulated.

Additionally, a one-way-between-subjects analysis of covariance (ANCOVA)
was conducted to assess the effect of the perspective-taking manipulation on empathic
concern while controlling for perceived need, after which planned orthogonal contrasts
were conducted. The ANCOVA results indicated a significant effect for perceived need,
\( F(1, 50) = 4.89, p = .032, \text{partial } \eta^2 = .09 \). The first contrast compared the objective
condition to both imagine other conditions (-2, 1,1). The results indicated that
participants in the objective condition \((M = 3.78)\) reported lower levels of empathic concern than those in the imagine-other/sender condition and imagine-other/control condition combined \((M = 4.38)\), \(F(1, 50) = 3.20, p > .05\), when the means were adjusted to account for the covariate, however this was not significant. The second contrast compared the imagine-other/sender condition to the imagine-other/control condition \((0, -1, 1)\). The results indicated that participants in the imagine-other/sender condition \((M = 4.22)\) reported slightly lower levels of empathic concern than those in the imagine-other/control condition \((M = 4.53)\), \(F(1, 50) = .75, p > .05\), when the means were adjusted to account for the covariate, however this was not significant.

The results of the follow-up ANCOVA indicated that there was a significant effect of perspective-taking on empathic concern after controlling for perceived need. While the first contrast was close to approaching significance \((p = .08)\), both contrasts failed to show significant differences between groups. These results suggest that perspective-taking is what drives empathic concern and perceived need. In other words, perspective-taking influences empathic concern primarily because of its effect on perceived need. However, this effect evaporates when controlling for perceived need.

**Primary Dependent Variable-Aggression**

Participants were asked to provide feedback by selecting responses on five rating scales as the measure of aggression (organization, breadth of vocabulary, spelling and grammar, development of noteworthy ideas, and overall effectiveness of the essay).
Responses to these items were on 7-point bipolar scales (-3=poor or extremely ineffective; 0=neutral; +3=strong or extremely effective). Responses were then reverse coded so that higher scores indicated higher aggression. An aggression index score was computed by averaging the five aggression item ratings and used for analysis. The primary analysis examined aggression using a one-way-between-subjects ANOVA using the three experimental conditions (objective/sender, imagine-other/sender, or imagine-other/control) followed by planned orthogonal contrasts. If the GAM prediction was correct, a significant mean difference between the objective condition and the imagine-other conditions was expected. If the empathy-altruism hypothesis was correct, a significant difference between the imagine-other/sender condition and the objective and imagine-other/control conditions was expected.

The aggression index data revealed no statistically significant differences between groups, $F(2, 51) = .91$, $p > .05$, $\eta^2 = .03$. The first contrast tested the GAM hypothesis by comparing aggression levels between participants in the objective condition to those in both imagine-other conditions (2, -1, -1). The results indicated that participants in the objective/sender condition ($M = -34$) assigned lower scores on the essay feedback form than participants in the imagine-other conditions ($M = .05$), $F(1, 52) = 1.28$, $p > .05$, $d = -.33$, however this was not significant.

The second contrast tested the empathy-altruism hypothesis by comparing aggression levels between participants in the imagine-other/sender condition to those in the objective and imagine-other/control conditions (1, -2, 1). The results indicated that
participants in the imagine-other/sender condition ($M = .19$) did not differ significantly from those in the objective and imagine-other/control conditions combined ($M = -.22$), $F(1, 52) = 1.44, p > .05, d = .34$.

An additional one-way-between-subjects ANOVA was conducted for aggression which included the no communication/no feedback condition (control condition) as a baseline measure, along with the three experimental conditions. This analysis was included to assess the directionality of the results respective to a baseline measure and was followed by three planned orthogonal contrasts.

The data revealed no statistically significant differences between groups, $F(3, 68) = 1.12, p > .05, \eta^2 = .05$. The first contrast compared the objective/sender condition to the control condition (1, -1, 0, 0). The results indicated that participants in the objective condition ($M = -.34$) assigned slightly higher scores on the aggression measure than those in the control condition ($M = -.48$), $t(68) = .34, p > .05, d = .13$, however this was not significant. The second contrast compared the imagine-other/sender condition to the control condition (1, 0, -1, 0). The results indicated that participants in the imagine-other/sender condition ($M = .19$) assigned higher scores on the aggression measure than those in the control condition ($M = -.48$), $t(68) = 1.70, p > .05, d = .54$, however this was not significant. The third contrast compared the imagine-other/control condition to the control condition (1, 0, 0, -1). The results indicated that participants in the imagine-other/control condition ($M = -.10$) assigned higher scores on the aggression measure than
did those in the control condition ($M = -.48$), $t(68) = .96$, $p > .05$, $d = .33$, however this was not significant.

Overall, all three experimental conditions showed higher levels of aggression than the control condition. Despite the lack of statistical significance, the data suggests that the absence of feedback and communication results in less aggression on the measure than when these factors are present. The experimental conditions suggest a negative directional trend from the baseline.
General Discussion

Working from both the General Aggression Model and Batson’s empathy-altruism hypothesis, the present study sought to induce the experience of empathic concern and determine its influence on aggression toward a provoking target, while simultaneously addressing the limitations of previous studies. Furthermore, this study tested the general vs. individual-specific inhibition of aggression by measuring aggression towards both the target of empathic concern and a target for whom empathic concern was not felt, testing competing predictions between the General Aggression Model and the empathy-altruism hypothesis. Preliminary analyses revealed successful manipulations of independent variables with patterns generally in the expected directions. However, contrary to the predictions, the results on the aggression measure showed no support for either the empathy-altruism hypothesis or the GAM.

Despite the previous success of studies which have found support for aggression inhibition due to empathic concern, the present study failed to do so. Results found for perceived negativity of feedback, perspective-taking, and empathic concern demonstrate that the manipulations were all successful, however when given the opportunity to aggress, there were no differences detected. Consistent with the prediction for the perceived negativity of feedback measure, results indicated that the feedback was perceived as equally negative and there were no significant differences between conditions. For perceived need, the results indicated that those in the imagine-other
conditions perceived a greater level of need for the sender than those in the objective condition. Each of these groups showed a negative mean rating respective to the neutral midpoint, suggesting that all conditions still perceived need of the sender. Participants were shown to perceive greater need of the sender as a function of perspective-taking, with those in the imagine-other groups perceiving more need than those in the objective. For self-reported perspective, participants reported correctly adopting their assigned perspective-taking role. The results revealed significant differences between objective and imagine-other perspective-taking roles, and no significant differences between the imagine-other conditions, which was consistent with predictions. Finally, the results revealed for the empathic concern measure were consistent with the hypotheses, with participants in the imagine-other conditions reporting greater levels of empathic concern than those in the objective condition.

Despite the success of the preliminary analyses which revealed results consistent with study predictions, the primary dependent measure failed to find any significant differences on the aggression measure. In contrast to the predictions, the results did not find significant support for the expected outcomes for either the General Aggression Model or the empathy-altruism hypothesis. The GAM hypothesis, which predicted that participants in both of the imagine-other perspective conditions would assign more positive scores on the essay feedback questionnaire regardless of whether the negative feedback was received from the sender or the control participant, was not supported. Instead, the results revealed a reversed pattern, with those in the objective condition demonstrating less aggression than those in the imagine-other conditions. The empathy-
altruism hypothesis, which predicted that participants in the imagine-other perspective condition who received negative feedback from the sender would assign more positive scores on the essay feedback form than participants in the imagine-other perspective who received negative feedback from the control participant and the objective condition combined, was also not supported. These results also yielded a pattern that contradicted the prediction, with those in the imagine-other/sender condition demonstrating higher aggression than those in the objective and imagine-other/control groups combined. The final analysis for aggression compared each of experimental conditions to the control condition in order to assess directionality for the results respective to a baseline measure. None of these contrasts yielded significant differences from the baseline measure.

Overall, the study failed to detect an association between empathic concern and the inhibition of aggression. The absence of detectable differences on the aggression measure warrants further examination. There may be several explanations for the failure of support found for the hypotheses in the present findings. One possibility is that the provocation manipulation was not harsh enough, and thus unable to evoke an aggressive response. Additionally, during debriefing interviews, many participants stated that they were not offended by the negative feedback because (a) it wasn’t a topic they felt strongly about and (b) they didn’t have much time or put much effort into the essay. Another possibility for the lack of effect on aggression is that the empathic concern manipulation was not strong enough to persist through the provocation manipulation.
Limitations and Implications

When looking at the results on the aggression measure for all four conditions, the most likely explanation for the failure of detectable differences is that the aggression scale used was not a sensitive measure of aggression. When given the opportunity to aggress, no significant differences were detected across groups and in particular, none differed significantly from the control group. The lack of statistical significance found for each condition when compared to the baseline measure supports the probability that the dependent measure was not sensitive enough to detect differences between groups. The limited number of feedback questions and/or the criteria (e.g., spelling and grammar) on which each participant was asked to provide an assessment on may have served as constraints.

While the results were found to be inconsistent with both hypotheses, there is not enough evidence that the measure employed in this study was a sensitive measure of aggression. Thus, these hypotheses cannot be completely ruled out. However, if the dependent measure of aggression is valid, these results suggest that there is no inhibition effect of empathic concern on aggression.
Conclusion

In summary, the present study failed to find support for either the General Aggression Model theory or the empathy-altruism hypothesis. The results of this study suggest that the claim that empathic concern inhibits aggression is too generalized, and may be subject to factors not accounted for by this study. Despite the successful manipulation of empathic concern, provocation, and perspective-taking, the results on the aggression measure failed to detect any significant differences between groups. Participants in the imagine-other sender condition demonstrated only slightly higher levels of aggression than those in both the imagine-other/control and objective condition. Interestingly, all experimental conditions exhibited higher levels of aggression on the measure when compared to the baseline found for the control group. These data suggest that the various manipulations employed in this study yielded slightly more aggression on the measure than when those factors were absent. This finding is consistent with the model of cognitive inhibition of aggressive responding in that the excitation that accompanies the provocation that elicits aggression may interfere with cognitive processes associated with aggression inhibition (Richardson et al., 1994).

Future studies may benefit from piloting a new communication story in advance to provide a stronger empathic concern manipulation. Alternatively, considering the possibility that the provocation manipulation was too weak, it is worth considering increasing the degree of negativity on this measure. Future studies may want to pilot
alternative aggression scales that have already been tested to ensure reliability and validity in assessing aggression. Taking into consideration the opinions voiced by the participants, providing a variety of essay topics that are more personal or meaningful as well as providing additional time to complete the essays, may be of benefit. It might also be useful to include an additional measure of empathic concern following the provocation, to assess if empathic concern is still present at the time of provocation.
APPENDIX A

Empathy and Aggression Study Script
Empathy and Aggression Study: Script

- Greet Participant (P)
  - Meet P at a room other than the lab room
  - Introduce self
  - Check to make sure P is at the right study
- Introduce the Study
  - Bring P to testing room
  - Ask them to please turn off cell phones and any electronic devices
  - Seat P at table with 2 copies of Consent Form, a pencil, and a face-down copy of the Introduction: Peer Review Study form. Ask P if they know what a consent form is—if not explain.
  - Ask that P read over and sign the Consent Form if P decides to participate. Explain that one copy of the Consent Form is for P and the other is for you.
  - After reading and signing the Consent Form, ask P to turn over and read the Introduction: Peer Review Study form which explains more about the study
  - Briefly describe what the study is about: “The purpose of this study is to investigate the effects of peer feedback on essay performance. The goal is to develop a peer review educational process, called P.R.E.P., which is being developed jointly by the Departments of Psychology and English as a service for the university.”
  - Tell P to open the door a crack when ready to continue—explain that you will try to get back to P as soon as possible, but that you are working with the other two participants as well so it might take a little while to return
  - Leave P to read over Introduction
- Go over Introduction
  - Return and ask if any questions about the study—if yes, answer them
  - Go over main points of Introduction:
    1. Study is looking at the effects of peer feedback on essay performance. Goal is to develop a peer review process for UWO. Explain that there are two additional P’s in the study, but since it is important that they do not meet, all P’s were brought to the study area separately.
    2. P and other two participants will be asked to exchange and evaluate each other’s essays on pre-selected topics. After providing and receiving feedback with the other participants, each will then
write a second essay to be evaluated by independent writing evaluators to see if feedback improves essay writing.

3. Prior to exchanging first essays, P may be asked to send or receive a personal communication to another participant (determined randomly). This is done to examine whether knowing something about the peer evaluator affects the peer review process. Each participant may be assigned to one of three conditions: sender, receiver, or control.

4. To ensure anonymity and that all participants can express views freely, P and other two participants will not meet and so should not put any identifying information in communication or essays.

5. Will fill out and exchange evaluation forms about essays as well as reactions questionnaires to communication if assigned to receive communication

- Ask if any other questions—if yes, answer them
- Provide confidentiality folder—Explain to P that all questionnaires for study (except feedback for other) should go into it without identifying information. The folder will go to the person entering data so that you and none of the research personnel will be able to associate P’s responses with his or her identity.
- Place sheet on P’s desk indicating their randomly assigned communication condition. Explain that the P assigned as the sender is still working on their communication, which they were asked to do before receiving information about the purpose of the study. While the sender is finishing up P can begin writing the first essay. Give P Essay Task 1.
- Control P’s will be told they will not receive or send a communication. P is asked to begin writing their first essay. Give P Essay Task 1.
- Explain that you’ll return in 10 minutes to collect their essay, but they may open the door a crack if they finish their essay sooner. Explain that it might take a bit get back as you are working with the other participants also. Although scheduling of all Ps is staggered, sometimes things slow down a bit. Leave P to complete Essay Task 1

- Return with Communication from sender
  - Return and ask if essay went okay and collect
  - Give P folder containing Communication Instructions (either imagine-other or objective) and Communication.
- Explain that P should read over the communication instructions carefully before reading the communication and then fill out Communication Reactions Questionnaire 1 and Communication Reactions Questionnaire 2—place these in stated order, upside down on table, with order number written on back.
- P’s in the experimental conditions will be told that their completed essay will be taken for evaluation by the other participants in the meantime who will also begin his or her own essays.
- Explain to open the door a crack when finished reading the communication and filling out the questionnaires.
- P’s assigned to the no communication condition will be asked if essay went okay.

- Return with Essay Feedback
  - Return and ask if communication went okay
  - Collect
  - Give folder with P’s Essay Feedback form (negative) and a second folder containing the other’s essay and a blank Essay Feedback form
  - P’s assigned to receive negative feedback from the sender will be given feedback from the sender and the sender’s essay to evaluate, and P’s assigned to receive negative feedback from the control will be given feedback from the control and the control’s essay to evaluate. Control participants are given an essay to evaluate, but are not provided with feedback on their essay.
  - Ask P to read over their feedback. After, P is to read the essay they were given, complete feedback form, and then place it back in folder. When P is finished you will collect and return to participant.
  - Explain to open door a crack when finished

- Return with Quality of Feedback Form
  - Ask if providing feedback went okay
  - Give P Quality of Feedback Form—Ask P to think back to the feedback they received on their essay and to fill out form
  - Explain to open door a crack when finished

- Return and Debrief
  - Collect Quality of Feedback Form
  - Read debriefing script, give debriefing form to P, and answer any additional questions they have
  - Thank P for their participation
APPENDIX B

Informed Consent Form
Informed Consent
University of Wisconsin Oshkosh
Peer Review Study

The Department of Psychology supports the practice of protecting human participants in research. The following information is provided so that you can decide whether you wish to participate in the present study. Your participation is solicited but is strictly voluntary. We assure you that your name and responses will remain confidential.

In this study you will be asked to write and receive brief essays. You will also send and receive feedback about the essays. Your reactions will be assessed by questionnaires at various points throughout the study.

If you agree to participate, you will be free to withdraw at any time and will still receive credit for the amount of time spent in the study. If you decide not to participate in this study, please let the researcher know and he or she will excuse you from the study. You do not need to tell the researcher your reasons for choosing not to participate. If you do decide to withdraw from the study, any information collected from you up to that point will then be destroyed.

All results will be recorded confidentially. You will not meet any other participants in this study, and your identity will not be revealed to any other participants. We will not release information about you in any way or form that could identify you. If you have any questions, please contact:

David A. Lishner, Ph.D.
Department of Psychology
University of Wisconsin Oshkosh
Oshkosh, WI 54901
lishnerd@uwosh.edu
920-915-2301

If you have any complaints about your treatment as a participant in this study, call or write: Although the chairperson may ask for your name, all complaints are kept in confidence.

Chair, Institutional Review Board for Protection of Human Participants
c/o Grants Office
UW Oshkosh
920-424-1415

Consent Statement: By signing the statement below, I am confirming that I am at least 18 years old and have received an explanation of the study. I agree to participate. I understand that my participation in this study is strictly voluntary, and that I may withdraw at any time.

_______________________________ ______________________
Name Date
APPENDIX C

Informed Consent Form (For Those Under 18)
Informed Consent (For Those under 18)
University of Wisconsin Oshkosh
Peer Review Study

The Department of Psychology supports the practice of protecting human participants in research. The following information is provided so that you can decide whether you wish to participate in the present study. Your participation is solicited but is strictly voluntary. We assure you that your name and responses will remain confidential.

In this study you will be asked to write and receive brief essays. You will also send and receive feedback about the essays. Your reactions will be assessed by questionnaires at various points throughout the study.

If you agree to participate, you will be free to withdraw at any time and will still receive credit for the amount of time spent in the study. If you decide not to participate in this study, please let the researcher know and he or she will excuse you from the study. You do not need to tell the researcher your reasons for choosing not to participate. If you do decide to withdraw from the study, any information collected from you up to that point will then be destroyed.

All results will be recorded confidentially. You will not meet any other participants in this study, and your identity will not be revealed to any other participants. We will not release information about you in any way or form that could identify you.

If you have any questions, please ask us or contact:

David A. Lishner, Ph.D.
Department of Psychology
University of Wisconsin Oshkosh
Oshkosh, WI 54901
lishnerd@uwosh.edu
920-915-2301

If you have any complaints about your treatment as a participant in this study, please call or write:

Chair, Institutional Review Board for Protection of Human Participants
c/o Grants Office
UW Oshkosh
920-424-1415

Although the chairperson may ask for your name, all complaints are kept in confidence.
Participant Consent Statement: By signing the statement below, I am confirming that I have received an explanation of the study. I agree to participate. I understand that my participation in this study is strictly voluntary, and that I may withdraw at any time.

______________________________
Name

______________________________
Date

Parental Consent Statement: By signing the statement below, I am confirming that I have received an explanation of the study. I agree that my son or daughter be allowed to participate. I understand that his or her participation in this study is strictly voluntary, and that he or she may withdraw at any time.

______________________________
Name

______________________________
Date
APPENDIX D

Peer Review Study: Introduction
Peer Review Study: Introduction

The purpose of this study is to develop a standard peer review process to help improve the writing and critical thinking skills of students at the University of Wisconsin Oshkosh. The program, Peer Review Educational Process (P.R.E.P.), is being developed by the Departments of Psychology and Education as a service to the University of Wisconsin Oshkosh. Your participation will help us determine ways to structure peer feedback so that it will maximize educational benefits.

First Essay

In this study, you and two other same sex participants will be asked to write a short essay on an assigned topic. There are several possible topics on which you may be asked to write, but each of you will write about a different topic. Which topic you receive will be determined randomly. Once you are assigned a specific topic statement, you will be given up to 10 minutes to write an essay in which you may choose to either endorse or refute the statement. Regardless of what position you take, try to provide examples and/or relevant reasons to support and develop your view.

Essay Feedback

Once you have completed your essay, it will be given to both other participants, who will then provide you with feedback. They will be asked to rate your essay on its breadth of vocabulary, spelling and grammar, development of noteworthy ideas, and overall effectiveness. Similarly, you will be given the other participants' essays and asked to rate them using the same type of feedback form. The other participants will be working in adjacent rooms, but the starting times in this study have been staggered so that you and the other participants will never meet. This is done so you may freely express your opinions in the essay feedback tasks without worry of your identity being revealed. As such, make sure not to write your name on your essay or any of the questionnaires you will be asked to fill out.

Second Essay

After receiving feedback on your first essay and providing feedback on the other participants' essays, you will be asked to write a second essay. This second essay will be critiqued by an independent reviewer after the study session ends to ultimately determine if the peer review process is effective at enhancing students’ writing.

Continued on next page
**Peer Review Study: Introduction**

**Communication**

In addition to testing the P.R.E.P. program, one factor that we are examining is whether personal communication enhances the peer review process. For this reason, each participant in a session is randomly assigned to one of the following roles:

1. **Sender**: The participant assigned to this role will be asked to write a brief communication about something important that has happened in his or her life recently. The participant assigned to this role will be asked to write the communication before receiving any additional information about the study.
2. **Receiver**: The participant assigned to this role will be asked to read the communication written by the Sender before beginning the essay feedback portion of the study.
3. **Control Role**: The participant assigned to this role will neither send nor receive communication.

By assigning a participant to each of these roles during a single study session we are able to control for outside factors (e.g., time of semester, day of week, time of day, weather, etc.) that might affect reactions to the communication during the study. Thus, we will be able to determine whether personal communication enhances the peer review process.

At this time please open the door a crack to let the research assistant know that you are ready to continue.
APPENDIX E

Receiver Communication Role
**Communication Role**

One factor that we are examining is whether personal communication enhances the peer review process. For this reason, each participant in a session is randomly assigned to one of the following roles: sender, receiver, or control.

You have been randomly assigned to the role of **Receiver**.

As the **Receiver**, you will be asked to read a communication written by the Sender before beginning the essay feedback portion of the study.
APPENDIX F

Control Communication Role
Communication Role

One factor that we are examining is whether personal communication enhances the peer review process. For this reason, each participant in a session is randomly assigned to one of the following roles: sender, receiver, or control.

You have been randomly assigned to the role of Control participant.

As the Control participant, you will not be asked to read a communication or send a communication before beginning the essay feedback portion of the study.
APPENDIX G

Essay Task 1 (Participant)
Due to recent statewide budget cuts in the educational system, many colleges and universities are faced with the issue of insufficient funds for student housing, athletic programs, and student health services. In an effort to avoid eliminating these services and programs, the state government has proposed a number of solutions. One proposed solution to this problem has been to enact a statewide increase in tuition fees for students. The tuition increase would alleviate the burden of higher taxes for state taxpayers, making it a more practical solution than increasing state taxes for individuals who do not attend secondary education.
APPENDIX H

Objective Reading Perspective Instructions
Communication Information

Inside this folder is a communication written by the sender. He or she was asked to write about an important event that has happened in his or her life recently. The sender was asked to write this communication before receiving any in-depth information about the study in order to make sure that he or she did not write about anything that would affect the peer review process.

Reading Perspective

Below is a set of reading perspective instructions. Previous participants in this study have informed us that adopting the reading perspective helped them think informatively about the communication. For this, please read the following perspective instructions carefully.

While you are reading the sender’s communication, try to remain as objective as possible about the event described and how it has affected his or her life. (Try not to imagine what the sender is thinking or feeling as a result of the event, or imagine yourself in the sender’s situation. Instead, just try to remain objective and detached as you read the communication).

Please read over the reading perspective instructions a second time. When you feel like you have a good sense of the reading perspective, please open the folder and read the communication from the sender. Once you have finished reading the communication, please complete the questionnaires provided by the research assistant in the appropriate order.
APPENDIX I

Imagine-Other Reading Perspective Instructions
Communication Information

Inside this folder is a communication written by the sender. He or she was asked to write about an important event that has happened in his or her life recently. The sender was asked to write this communication before receiving any in-depth information about the study in order to make sure that he or she did not write about anything that would affect the peer review process.

Reading Perspective

Below is a set of reading perspective instructions. Previous participants in this study have informed us that adopting the reading perspective helped them think informatively about the communication. For this, please read the following perspective instructions carefully.

While you are reading the sender’s communication, try to imagine what the sender is thinking and feeling about the event described and how it has affected his or her life. (Try not to imagine yourself in the sender’s situation. Instead, just try to imagine how the sender is thinking and feeling as you read the communication.)

Please read over the reading perspective instructions a second time. When you feel like you have a good sense of the reading perspective, please open the folder and read the communication from the sender. Once you have finished reading the communication, please complete the questionnaires provided by the research assistant in the appropriate order.
APPENDIX J

Communication from Sender
**Communication From Sender**

**Directions:** In the space below, please write a brief communication about an important event that has happened in your life recently.

[To be hand written—Female Version]

I’m supposed to write about something interesting that’s happened to me lately. Well, I don’t know if this will be interesting to anybody else, but one thing I can think of is that two days ago I broke up with my boyfriend. We’ve been going out since our Junior year in high school and have been really close, and it’s been great being at Oshkosh together. I thought he felt the same, but things have changed. Now he wants to date other people. He says he still cares a lot about me, but he doesn’t want to be tied down to just one person. I’ve been real down. It’s all I think about. I believe it when my friends here at Oshkosh say I will feel better in time, but that really hasn’t happened yet.

[To be hand written—Male Version]

I’m supposed to write about something interesting that’s happened to me lately. Well, I don’t know if this will be interesting to anybody else, but one thing I can think of is that two days ago I broke up with my girlfriend. We’ve been going out since our Junior year in high school and have been really close, and it’s been great being at Oshkosh together. I thought she felt the same, but things have changed. Now she wants to date other people. She says she still cares a lot about me, but she doesn’t want to be tied down to just one person. I’ve been real down. It’s all I think about. I believe it when my friends here at Oshkosh say I will feel better in time, but that really hasn’t happened yet.
APPENDIX K

Communication Reactions Questionnaire 1
**Communication Reactions Questionnaire 1**

**Directions:** Please indicate the extent to which you experienced each of the following feelings while reading the communication from the sender. Although you may not have experienced all of these feelings while reading this communication, please circle a response for each feeling.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<td>7</td>
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<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
APPENDIX L

Communication Reactions Questionnaire 2
Communication Reactions Questionnaire 2

Directions: Please answer each of the questions below in response to the sender’s communication.

1. How interesting was the sender’s communication?
   
   Not at all  |  Very interesting
   1  2  3  4  5  6  7

2. How clear was the sender’s communication?
   
   Not at all  |  Very clear
   1  2  3  4  5  6  7

3. Based on what you read, how much do you like the sender?
   
   Not at all  |  Very much
   1  2  3  4  5  6  7

4. While reading the sender’s communication, to what extent did you remain objective and detached?
   
   Not at all  |  Very Much
   1  2  3  4  5  6  7

5. While reading the communication, to what extent did you imagine the thoughts and feelings of the sender?
   
   Not at all  |  Very Much
   1  2  3  4  5  6  7

6. While reading the sender’s communication, to what extent did you imagine yourself in his or her situation?
   
   Not at all  |  Very Much
   1  2  3  4  5  6  7

7. How positive or negative was the event described by the sender?
   
   Extremely negative  |  Neutral  |  Extremely positive
   -3  -2  -1  0  1  2  3
APPENDIX M

Essay Feedback Form from Reviewer
Essay Feedback Form

Directions: Please review the essay you just read on the following criteria by circling a response for each question. Use the blank space at the bottom of this sheet for any additional comments you wish to provide.

Did you receive a communication from this participant? Yes___ No ___ [No]

What was your communication role? Sender___ Receiver___ Control___ [Sender or Control]

1. Organization

| Poor | -3 | Neutral | -1 | Strong | 2 | -2 |

2. Breadth of Vocabulary

| Poor | -3 | Neutral | -1 | Strong | 2 | -3 |

3. Spelling and Grammar

| Poor | -3 | Neutral | -1 | Strong | 2 | -1 |

4. Development of Noteworthy Ideas

| Poor | -3 | Neutral | -1 | Strong | 2 | -3 |

5. Overall Effectiveness of the Essay

| Extremely Ineffective | -3 | -2 | -1 | Neutral | 0 | 1 | Strong | 2 | -2 |

6. Please, use the space below to write in any additional comments.

[To be hand written: Your essay was pretty weak. You could have done a much better job developing your ideas. You didn’t make many original or significant points in your essay.]
APPENDIX N

Essay Task 1 (Reviewer)


**Essay Task 1**

First, please indicate which communication role you have been assigned to:

Sender___ Receiver___ Control___ [Sender or Control]

**Directions:** Please present your views on the issue below, using relevant examples and/or reasons for whether you support or refute the statement. The research assistant will return to collect your essay in 10 minutes. If you finish before then, please open the door a crack to let the assistant know.

*The number of recent hurricanes, tsunamis, food, and other natural disasters suggest that global warming is a real and serious threat to our planet. Thus, the United States should set an example for the rest of the world by actively pursuing alternative forms of renewable energy.*

**Essay (please write below):**

[Hand written essay]

Global warming is a serious issue and I think that the recent hurricanes are proof that were messing up our environment. I don’t know how exactly we can fix this problem, but someone needs to do something about it soon or else we’re all in trouble. The U.S. is a pretty influential country so we should try to do our best to do something about the environment. That way we could be an example of sorts for all the other countries out their. I think we need to work on new fuel/energy solutions, but we can’t let that just totally mess up our economy. That could cause another recession and just slow things up even more for everyone.

Reducing our use of oil is pretty important I think. Then we will be less dependent on foreign countries for oil. We will save a lot of money and less will probably end up going to the terrorists. [Besides that we need to stop countries in South America from cutting down all the rainforests.—to be crossed out] Also, energy is so expensive now it would be good to switch over to something cheaper or even free like solar power or something.
APPENDIX O

Blank Essay Feedback Form
Essay Feedback Form

Directions: Please review the essay you just read on the following criteria by circling a response for each question. Use the blank space at the bottom of this sheet for any additional comments you wish to provide.

Did you receive a communication from this participant? Yes___ No ___

What was your communication role? Sender___ Receiver___ Control___

1. Organization

<table>
<thead>
<tr>
<th>Poor</th>
<th>Neutral</th>
<th>Strong</th>
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<tbody>
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<td>2</td>
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<td>3</td>
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</tbody>
</table>

2. Breadth of Vocabulary

<table>
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<tr>
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<th>Neutral</th>
<th>Strong</th>
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3. Spelling and Grammar

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<td>1</td>
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</tbody>
</table>

4. Development of Noteworthy Ideas

<table>
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<tr>
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<th>Neutral</th>
<th>Strong</th>
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</thead>
<tbody>
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<tr>
<td>1</td>
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<td>3</td>
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</table>

5. Overall Effectiveness of the Essay

<table>
<thead>
<tr>
<th>Extremely Ineffective</th>
<th>Neutral</th>
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</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
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<td>3</td>
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</table>

6. Please, use the space below to write in any additional comments.
APPENDIX P

Quality of Feedback Questionnaire
Quality of Feedback Questionnaire

**Directions:** Please rate the feedback you received on your essay from the reviewer by circling a response for each question.

1. Did you receive your essay feedback from the sender, receiver, or the control participant?
   
   - ___ Sender
   - ___ Control
   - ___ Receiver

2. Did you receive communication from this particular reviewer?
   
   - ___ Yes
   - ___ No

3. How objective do you think the other participant was in rating your essay?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Very objective</th>
</tr>
</thead>
</table>

4. How competent do you think the other participant was in evaluating your essay?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Very competent</th>
</tr>
</thead>
</table>

5. How fair do you think the other participant was in rating your essay?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Very fair</th>
</tr>
</thead>
</table>

6. How would you have rated the overall effectiveness of your essay?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Extremely effective</th>
</tr>
</thead>
</table>

7. How useful were the other participant’s comments?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Extremely useful</th>
</tr>
</thead>
</table>

*Continued on next page*
8. How angry did you feel after receiving feedback from the other participant?

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<thead>
<tr>
<th>Not at all</th>
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<th>Extremely angry</th>
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</tbody>
</table>

9. Did you feel insulted by the feedback?

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<tr>
<th>Not at all</th>
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<th>Extremely insulted</th>
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10. To what extent do you think the feedback on your essay was due to the current situation of your peer reviewer?

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<thead>
<tr>
<th>Not at all</th>
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<th>Extremely</th>
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11. To what extent do you think the feedback on your essay was due to the type of person your reviewer is?

<table>
<thead>
<tr>
<th>Not at all</th>
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<th></th>
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<td>7</td>
<td></td>
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</table>

12. How positive or negative was the feedback you received from the other participant?

<table>
<thead>
<tr>
<th>Extremely negative</th>
<th>Neutral</th>
<th>Extremely positive</th>
</tr>
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<tbody>
<tr>
<td>-3</td>
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<tr>
<td>3</td>
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13. How good or bad did you feel after receiving feedback from the other participant?

<table>
<thead>
<tr>
<th>Extremely bad</th>
<th>Neutral</th>
<th>Extremely good</th>
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APPENDIX Q

Debriefing Information
Student Newspaper Pilot Articles Study: Debriefing Information

Thank you for participating in this study. The purpose of this form is to provide you more in-depth information about the study. The actual purpose of this study is not to develop a peer review program and UWO. Rather, the actual purpose of this study is to examine how an observer’s emotional reactions to a person’s bad situation influences the observer’s later reactions and behavior toward that person after he or she does, or does not, give negative feedback to the observer.

To examine this issue, we randomly assign some participants to write an essay and then receive negative feedback from another participant about the essay. Participants who are assigned to receive negative feedback also are asked to read a communication from one of the other participants while trying to imagine the communicator’s thoughts or feelings or while trying to remain objective and detached. Some participants are told that the person who sent the communication (the sender) was also the person who gave them negative feedback on the essay, whereas some participants are told that the negative feedback was given by a different person. Finally, some participants do not receive any communication and are just asked to evaluate the essay of one of the other participants. This procedure results in four different conditions: (1) a no-communication condition, (2) an objective/negative-feedback-from-sender condition; (3) an imagine-other/negative-feedback-from-sender condition; and (4) an imagine-other/negative-feedback-from-nonsender condition. You were randomly assigned to one of these four conditions. By doing this, we are able to see how the different experimental conditions might influence your emotional and behavioral reactions when encountering a person in need who does or does not act in a provoking manner.

As you may have guessed by now, there were a number of misleading things that you were told about this study. First, the purpose of the study is not to develop a peer review program at UWO. Second, there were no other participants in this session of the study; you were the only participant in this session of the study. Third, your essay was not evaluated, and will not be evaluated by anyone in the future. The purpose for giving you this misleading information was not to trick you. Rather, it was given to you to allow us to determine whether or not the four experimental conditions we created produce changes in people’s reactions and behavior and to ensure that these reactions were realistic. If we told actual participants the full truth about the purpose of the study in the beginning and that the other participants were not real, then actual participants may experience the situation as fictional or as pretend. This could lead participants to react very differently from how they would react in real-life situations when encountering people in need. Also, in some circumstances, if participants know about the actual purpose of a study, then they may feel compelled to report their reactions in an untruthful manner. For these reasons, when psychologists examine certain psychological processes they may withhold some information about a study or provide participants with some information about the study that is misleading. We realize that you may feel a bit uncomfortable about having been told misleading information, but we want to assure you
that it only was done to ensure that your experience in this study was as realistic and genuine as possible. Furthermore, it is important to remember that there is no correct or incorrect behavior or response to any of the questionnaires or materials in this study. However, if you still have any concerns about this study, then please speak with the research assistant about your concerns or contact Dr. David Lishner (at lishnerd@uwosh.edu). Either of these individuals will be more than happy to talk with you about any concerns you may have.

Again, thank you very much for your participation. We value the time and energy you spent in this study and it is our hope that the data you have provided will help us to better understand human psychology.
References


