

EXAMINING THE EFFECTS OF PERSPECTIVE TAKING ON THE HOSTILE  
ATTRIBUTIONAL BIAS

By

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To my parents, Mai Kim Hương and Lê Minh Hiểu, for all their love, support, hard work,  
and selflessness in helping me along my academic journey

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Abstract of Thesis Presented to the Graduate School  
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EXAMINING THE EFFECTS OF PERSPECTIVE TAKING ON THE HOSTILE  
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The current study examined how perspective taking influences the hostile attributional bias. Participants watched two videos of social interactions, with each video involving a target behaving with ambiguous or hostile intent. Target hostility, dispositional attributions for target behavior, situational factors influencing target behavior, the extent to which the target had a hostile personality type, feelings toward the target, and overlap between the self and the target were assessed. It was hypothesized that perspective taking would decrease the hostile attributional bias, decrease dispositional attributions for target behavior, increase situational attributions for target behavior, decrease perceptions of the target having a hostile personality type, increase positive feelings toward the target, and increase perceived overlap with the target when viewing an interaction with a target behaving with ambiguous, as compared with hostile, intent. Results revealed that experimental manipulations of perspective taking did not influence the hostile attributional bias, dispositional attribution, situational attribution, perceptions of the target as having a hostile personality type, feelings toward the target, and perceived overlap between the self and the target when the target behaved specifically with ambiguous, as compared with hostile, intent. However,

perceptions of self-other overlap with the target were enhanced and perceptions of the target as having a hostile personality type were decreased, regardless of the target's intent, as a function of perspective taking. Implications of the study are discussed.

## CHAPTER 1 INTRODUCTION

Each day, people engage in interpersonal interactions that can be interpreted and responded to in numerous ways. How one interprets the intent and behavior of others in a given interaction is integral to how one decides to behave in turn. In many social situations, other people's intent is relatively clear and easy to understand. For instance, smiles, hugs, and high fives are typically seen as positive gestures that may denote friendliness and warmth, whereas furrowed eyebrows, pushing, and flipping the middle finger are typically seen as negative gestures that may denote dislike or anger. Though many social situations are easy to navigate because the other person's intentions are clear and unambiguous, other social situations are more difficult to navigate because the other person's intentions are more ambiguous. These ambiguous social situations lend themselves most directly to multiple interpretations of another person's intent and hence multiple ways in which one may react and behave, either appropriately or inappropriately, given one's accurate or inaccurate perception of the other person's intentions.

For example, imagine that you are driving to work when a stranger merges into your lane at an uncomfortably close distance to your car. How would you react if this stranger's intent was unclear? Accurately perceiving benign or hostile intent on behalf of the other person would lend itself to an appropriate response in the situation. For instance, you may simply shrug your shoulders and continue driving as usual if you perceived the stranger's intent as benign (e.g., she did not see you when she turned into your lane and is not likely purposely endangering you). If you perceived the driver's intent as hostile on the other hand (e.g., she cut you off purposely and maliciously), you

might decide to drive more cautiously, keeping distance from the driver to avoid a potential accident.

Whereas accurately perceiving others' intent lends itself to appropriate behavioral responses, it is not always the case that we are accurate in our perceptions of other people's intent. In the previous example, if you incorrectly perceived benign intent on the part of the stranger, you may continue to drive normally, putting yourself at risk by driving too closely to a dangerous driver. If you incorrectly perceived hostile intent on the part of the stranger, you may retaliate or provoke an altercation unnecessarily (e.g., by cutting off the driver and putting yourself and a stranger in danger).

The current study examines the last misperception discussed: interpreting another person's intent as hostile when that person's intent is, in fact, ambiguous. Specifically, the current study focuses on the hostile attributional bias, the tendency to interpret others' intentions as hostile when social cues are ambiguous (Milich & Dodge, 1984). A tendency to interpret hostility when it is not clearly warranted may prompt an individual to retaliate or provoke another person when it is inappropriate, increasing the likelihood of a negative interpersonal interaction. It is important, then, to examine biases toward perceiving hostility in others' actions in order to better understand when ambiguous social situations may lend themselves to negative outcomes, allowing for the possibility of averting negative interpersonal interactions.

To better understand how negative interactions can be avoided, the current study investigates the hostile attributional bias as a function of individuals' egocentric perspectives—that is, may it be that people are more susceptible to the hostile attributional bias when they are focused on their own thoughts rather than the thoughts

of the person they are interacting with? If this is the case, then actively taking the perspective of an interaction partner may decrease the likelihood of attributing unwarranted hostility to them. The current study aims to investigate whether consciously taking another person's perspective may decrease the likelihood of exhibiting the hostile attributional bias.

### **The Hostile Attributional Bias**

The hostile attributional bias has typically been studied by examining how boys varying in chronic levels of aggression<sup>1</sup> interpret social situations (de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002; Dodge, 1980; Dodge & Frame, 1982; Dodge & Newman 1981; Milich & Dodge, 1984; Nasby, Hayden, & DePaulo, 1980; Steinberg & Dodge, 1983). Results consistently indicate that in comparison to nonaggressive boys, aggressive boys tend to perceive more hostility and aggression in their peers' intentions when social cues are ambiguous, whereas nonaggressive boys perceive benign intent under the same circumstances (Dodge, 1980; Dodge & Newman 1981; Milich & Dodge, 1984; Nasby Hayden, & DePaulo, 1980). It is only when social cues are ambiguous that aggressive and nonaggressive boys react differently; when a peer's intention is unambiguous, both aggressive and nonaggressive boys respond to provocation that is clearly benign or clearly hostile, with restraint and aggression, respectively (Dodge, 1980).

A meta-analytic examination by de Castro and colleagues (de Castro, et al., 2002) bolsters these findings, showing that over 41 studies conducted on the relationship

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<sup>1</sup> Aggression levels were typically assessed by teacher and peer ratings. Boys who fell above the median in teacher ratings of aggression and below the median in peer ratings of favorability were categorized as aggressive.

between aggressive behavior and the hostile attributional bias, there is a robust and significant association between children's aggressive behavior and making hostile attributions for others' behavior, with more aggressive children being more likely exhibit the hostile attributional bias. Furthermore, this relationship held across numerous samples (i.e., representative samples of the population, extreme groups samples, referred/non-referred samples)<sup>2</sup>, with the largest effect sizes observed between aggression and the hostile attributional bias in studies of highly aggressive children.

While there have been many studies that have investigated hostile attributional biases among children, and particularly among boys (de Castro et al., 2002; Dodge, 1980; Dodge & Frame, 1982; Dodge & Newman 1981; Milich & Dodge, 1984; Nasby et al., 1980; Steinberg & Dodge, 1983), there has been limited research conducted on the hostile attributional bias in adults, which both the current research, and studies by Epps and Kendall (1995) and Matthews and Norris (2002) attempt to rectify.

In Epps and Kendall's (1995) study, both male and female college students were first assessed on their levels of aggression using the State-Trait Anger Expression Inventory (Speilberger, 1988) and their levels of hostility using the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957). These participants then read a set of hypothetical scenarios of people behaving with benign, ambiguous, or hostile intent in various everyday situations. The findings of this study, in concordance with what was found in children, revealed that individuals with high self-reported levels of aggression were

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<sup>2</sup> Samples from the general population refers to studies that used samples of children who had never been referred to any intervention (i.e., psychiatric care, special education) and used correlational or median split procedures to examine the relationship between aggression and the hostile attributional bias. Extreme groups samples denotes studies that compared students at extreme aggression levels (i.e., one standard deviation above and below the average). Referred versus nonreferred samples denotes any studies that compared children who had been referred to any type of intervention to students who had never been referred to intervention.

more likely to attribute hostility to a person acting with ambiguous (rather than unambiguously benign or hostile) intent. Furthermore, whereas previous studies had included only male participants, Epps and Kendall's study included both males and females and found no gender differences in the hostile attributional bias.

Matthews and Norris (2002) also studied the hostile attributional bias in adults, focusing specifically on aggressive driving in a community sample. Participants in this study were assessed on their aggression levels (using the Buss and Perry [1992] Aggression Questionnaire), risky driving behavior (by the Risky Driving Inventory [Donovan & Jessor, 1991]), and hostile attributional biases as assessed by essays featuring targets who behaved in either an ambiguous, unambiguously hostile, or unambiguously benign manner. As with previous studies, Matthews and Norris (2002) found that the hostile attributional bias was related to participants' levels of aggressiveness, with high aggression individuals, as compared with nonaggressive individuals, being more likely to attribute hostility when assessing an individual behaving with ambiguous intent. Furthermore, they found that high aggression level was positively related to risky driving behavior. These findings broadened hostile attributional bias research into the specific real world domain of driving behavior.

### **Differences in Self versus Other Attributions for Behavior**

The study of the hostile attributional bias has largely been confined to the field of clinical psychology, which has focused on comparing aggressive and nonaggressive populations, consistently showing that individuals of high aggression levels are more likely to exhibit the hostile attributional bias under ambiguous circumstances as compared with their nonaggressive counterparts. In social psychology, attribution theories, which seek to understand people's causal explanations for their own and

others' behaviors and actions, have yet to be examined with regard to the hostile attributional bias.

Research on attribution suggests that whereas people tend to see their own behaviors as being influenced by the environment and external forces (e.g., a situational attribution), they tend to see others' behaviors as being caused by others' personality and internal forces (e.g., a dispositional attribution). This perceptual difference is known as the actor-observer asymmetry (Jones & Nisbett, 1971) and is a consequence of seeing the world from different perspectives, either as actors or observers. This asymmetry leads to a differential salience of personal and situational factors, with situational factors being more salient to actors and dispositional factors being more salient to observers (Jones & Nisbett, 1971). In relation to this asymmetry, Ross, Greene, & House (1977) have shown that people are biased toward inferring dispositional causes for others' behavior, failing to account for situational factors that may have influenced the other's behavior.

Although people tend to make dispositional attributions for others' behavior, and situational attributions for their own behavior, these perceptions are changeable (Regan & Totten, 1975; Storms, 1973). Storms (1973) has shown that by changing a person's perspective from an actor to an observer, her attribution patterns can be changed as well. For instance, Storms (1973) showed that by viewing video footage of one's own behavior from the perspective of an observer, actors explained their behavior more in terms of dispositional rather than situational factors as compared with actors who were shown no video footage or video footage of their behavior from their original (actor)

perspective, which resulted in the actors maintaining typical situational attributions for their own behavior.

Self-other differences in attributions have been found, then, to be changeable by manipulating one's visual perspective from an actor to observer. Self-other differences in attributions can also be changed, though, by cognitive *perspective taking*, a conscious and deliberate attempt to understand another person's mental representations—namely another person's thoughts, feelings, attitudes, beliefs, preferences, or evaluations (Batson, Early, & Salvarani, 1997; Epley & Waytz, in press).

### **Perspective Taking**

Perspective taking has been shown to occur through the cognitive process of egocentric anchoring and adjustment (Epley, Keysar, Van Boven, & Gilovich, 2004). When perspective taking, people tend to anchor on their own perspective and then adjust from this baseline to account for expected differences between another person's perspective and their own. However, adjustments tend to be insufficient, and as a consequence, inferred thoughts about another person's perspective tend to be too much like one's own. Perspective taking, in both children and adults, has been shown to occur through a process of egocentric anchoring and adjustment, with both children and adults anchoring on their own perspectives to a similar degree, but with adults being better perspective takers than children because they adjust more sufficiently away from their own perspective than children do (Epley, Morewedge, & Keysar, 2004).

Neurological research has shown that perspective taking's effect on mental representations of the self relative to others results in perspective takers perceiving targets to be more similar to themselves (Ames, Jenkins, Banaji, & Mitchell, 2008). In an fMRI investigation of perspective taking, Ames and colleagues (2008) examined the

role of the ventromedial prefrontal cortex (vmPFC), a part of the brain known to be involved in self-referential mentation, in perspective taking. In their study, it was found that blood oxygen level dependent patterns of the vmPFC revealed less differentiation between the self and a target of perspective taking, suggesting that the self and other become less distinct during perspective taking processes (Ames et al., 2008). Hence, neurological evidence has shown that that perspective taking results in a merging of self and other mental representations (Ames et al., 2008; Davis et al., 1996).

Perspective taking has been shown to result in a number of cognitive and social outcomes beyond a reversal of the actor-observer asymmetry (Regan & Totten, 1975; Storms, 1973). Social cognitive research supports neurological evidence that perspective taking results in a merging of the self and other. Specifically, taking the perspective of a target has been shown to increase perceived similarity in personality attributes between the self and target (Davis et al., 1996). Furthermore, taking the perspective of a target has been shown to prompt individuals to exhibit similar behavior to a target (Galinsky, Wang, & Ku, 2008b). For instance, Galinsky and colleagues (Galinsky et al., 2008b) showed that after taking the perspective of an elderly man, perspective takers subsequently walked more slowly down a hallway corridor as compared with those who did not take the perspective of an elderly man. Studies have also documented that perspective taking increases emotional congruence between the self and other (Batson, et al., 1989; Betancourt, 1990), with perspective takers feeling increased sympathy, unease, and distress for a target they see suffering (Batson et al., 1989).

Perspective taking, then, often results in a “merging” or overlap of the self with a target which can result in positive social benefits. One social benefit associated with perspective taking is decreased stereotype expression and ingroup favoritism when one takes the perspective of a target who is an outgroup member, due to seeing this outgroup member as being more similar to oneself (Galinsky & Moskowitz, 2000). Perspective taking has also been shown to prompt individuals to act more altruistically toward a target whose perspective they take, often in response to the negative states they feel when taking the perspective of a target who is suffering (Batson et al., 1989; Betancourt, 1990). Furthermore, perspective taking has been shown to facilitate negotiation by leading people to see greater compatibility between their own and the other side’s interests (Galinsky, Maddux, Gilin, & White, 2008a). Perspective taking has also been theorized to facilitate bonding between individuals, leading to smoother interpersonal interactions, and reduced intergroup tension (Galinsky, 2002; Galinsky et al., 2005). Lastly, perspective taking has been shown to decrease interpersonal aggression, with perspective takers being less likely to aggress in response to threats or provocation as compared with individuals who do not take a target’s perspective (Richardson, Hammock, Smith, & Gardner, 1994). Thus, perspective taking has been shown to result in numerous social benefits.

### **The Current Study**

The effects of perspective taking have been studied in respect to changing self-other asymmetries in attribution patterns (Regan & Totten, 1975; Storms, 1973), perceived and actual similarity between the self and others (Batson, et al., 1989; Betancourt, 1990; Davis et al., 1996; Galinsky et al., 2008b), and facilitating positive relationships with others (Galinsky, 2002; Galinsky, et al., 2005; Galinsky & Moskowitz,

2000; Galinsky, et al., 2008a; Richardson et al., 1994), but studies have yet to examine whether perspective taking may avert interpersonal hostility and how perspective taking affects perceptions in social situations where the target's intentions and actions are ambiguous. The current study aims to do just this, by examining whether perspective taking may decrease the likelihood of exhibiting the hostile attributional bias in ambiguous social interactions.

By perspective taking, it is believed that actors will experience increased self-other overlap with a target, namely by feeling more similar and close to a target, and prompting them to shift from a default egocentric perspective that promotes dispositional attributions for a target's behavior to a more self-like attributional pattern that emphasizes situational explanations for the target's behavior. Furthermore, it is expected that this self-other overlap with the target and reversal of attribution patterns will influence perceptions of target hostility, namely by decreasing perceptions of a target's hostile intentions, thereby decreasing the likelihood of exhibiting the hostile attributional bias. Lastly, this is expected to result in more positive feelings toward the target.

The current study will examine how perspective taking influences perceptions of a target behaving with ambiguous, as compared with hostile, intent. Thus, I will test the hypothesis that compared with people who are asked to take a neutral, objective perspective (objective-perspective condition) or no perspective at all (no-perspective condition), people who take the perspective of a target (other-perspective condition) acting with ambiguous intent will be (1) less likely to make hostile attributions for the target's behavior, (2) less likely to attribute a target's behavior to dispositional factors,

(3) more likely to attribute a target's behavior to situational factors, (4) less likely to indicate the target has a hostile personality type, (5) more likely to report having positive feelings toward the target (i.e., feel less anger toward the target, enjoy the target as a friend, and like the target), (6) and more likely to report feeling overlap with the target (i.e., greater similarity and closeness to the target).

These predictions are expected to occur when viewing a target behaving particularly with ambiguous intent (the conditions under which the hostile attributional bias typically occurs) rather than when viewing a target behaving with hostile intent. When viewing a target behaving with hostile intent, perspective taking is expected to have no effect due to the lack of ambiguity in target intent, which should prompt individuals to perceive the target relatively similarly, regardless of what perspective they take (i.e., most people should perceive a person behaving with unambiguously hostile intent to be hostile, regardless of what perspective they take) (Dodge, 1980; Epps & Kendall, 1995). Furthermore, the other-perspective condition was expected to yield the strongest effect on the dependent measures, followed by the objective-perspective condition, then the no-perspective condition. Though taking a neutral, objective perspective may remove individuals from taking an egocentric perspective, it does not prompt a conscious effort to think of oneself as a target and hence, should not confer to the social benefits of perspective taking. Furthermore, since maintaining one's own perspective (which I expect to occur in the no-perspective condition) confers none of the effects that perspective taking does, I expect this condition to show none of the positive social benefits of perspective taking.

## CHAPTER 2 METHOD

### **Participants**

Two hundred and ninety two undergraduate students<sup>1</sup> enrolled in general psychology courses at the University of Florida participated in this study. Participants consisted of 97 men and 194 women (with one participant not reporting a gender). Participants' age ranged from 18 to 40 years of age ( $M = 18.54$ ,  $SD = 1.57$ ). The sample included participants of many ethnicities: 10% African American participants, 7.1% Asian (American) participants, 63.8% Caucasian participants, 10.4% Latino participants, 6.2% mixed race participants, and 2.5% other (did not report).

### **Procedure**

Participants completed the study on laboratory computers at the University of Florida. The study was administered in half hour sessions with approximately five participants, situated in separate booths, in each session. Upon completion of the study, participants were fully debriefed and given course credit for their participation.

### **Materials**

#### **Video Stimuli**

Participants viewed two previously validated videos created to assess Cognitive Appraisal and Understanding of Social Events (CAUSE videos) (Chen & Matthews, 2003). The first video (CAUSE 1) depicts a social interaction with a target behaving with ambiguous intent, conditions under which the hostile attributional bias may be assessed. In this video, participants viewed a story about Billy, a student in Mr. Stubbs's

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<sup>1</sup> A power analysis was conducted using the program G\*Power .For a point-biserial model with a small anticipated effect size ( $\rho = .1$  to  $.2$ ), alpha error of  $.05$ , and power of  $.80$ , there was a desired sample size of approximately  $n = 300$ .

(the target) math class. After announcing that he had found cheating on the last exam, Mr. Stubbs asks Billy to stay after class; it is unclear whether or not Mr. Stubbs intends to talk to Billy about cheating on the test. The second video (CAUSE 2) depicts a social interaction with a target behaving with unambiguously hostile intent, conditions under which most participants should perceive the target to be acting hostilely. In this video, participants viewed a story about a group of high school students going to a restaurant after an evening playing basketball. When the students arrive at the restaurant, the owner (target) changes the restaurant sign from “Open” to “Closed” and refuses to seat them despite the fact that the students point out that it is not yet the restaurant’s closing time.

### **Experimental Manipulation**

Before viewing each of the videos, participants received one of three types of perspective instructions on a random basis: Those in the “other-perspective” condition were told to take the perspective of the target and imagine what he was thinking and feeling, those in the “objective-perspective” condition were told to watch the video with a neutral, objective perspective, and those in the “no-perspective control” condition were simply told to watch the video. The experimental manipulation was adapted from a previous study on the effect of perspective taking on cognitive representations of the self and other (Davis et al., 1996). Participants listened to an audio-recording of the instructions on head phones while simultaneously reading the instructions on the computer screen. Participants received the same perspective taking instructions for both videos.

For example, before viewing the first video (CAUSE 1), participants in the other-perspective condition received the following instructions:

In this video you will be watching a story about Billy, a high school student in Mr. Stubbs's math class. In your mind's eye, try to take *Mr. Stubbs's* perspective in the story. Clearly and vividly imagine how *Mr. Stubbs* is feeling and what he is thinking about what is happening. Concentrate on *Mr. Stubbs* in the experience. Think about *Mr. Stubbs's* reactions. Try not to concern yourself with attending to all the information presented. Just imagine how *Mr. Stubbs* feels in this situation. Now please watch the following story.

Those in the observer-perspective condition received the following instructions:

In this video you will be watching a story about Billy, a high school student in Mr. Stubbs's math class. As you watch the video, closely look at and listen to what Mr. Stubbs does and says. Make careful observations of all his behavior. Concentrate your observations on Mr. Stubbs's mannerisms, posture, movements, facial expressions, speech characteristics, tone of voice, and other behavior. Notice exactly what Mr. Stubbs does, whatever it is. Try to take a neutral perspective, being as objective as possible. Now please watch the following story.

Lastly, those in the no-perspective condition received instructions that stated, "In this video you will be watching a story about Billy, a high school student in Mr. Stubbs's math class. Please watch the following story." Identical instruction sets were used for CAUSE 2, only changing the description of the video for all conditions and the actor and target names for the other- and objective-perspective conditions (Appendix A).

### **Dependent Measures**

Participants answered 12 questions after watching each CAUSE video. Participants responded to all but two items (clarified below) on a seven-point Likert scale ranging from 1 (not at all) to 7 (very much). Questions after each video were identical, besides changing the target from "Mr. Stubbs" to "the restaurant owner" to correspond to the appropriate videos (Appendix B).

### **Hostile attribution**

Two items (adapted from Epps & Kendall, 1995) assessed hostile attributions. The first item asked to what extent the target person (e.g., Mr. Stubbs) acted in a hostile manner. The second item focused on perceived intentions, and asked to what extent the target was being intentionally hostile.

### **Dispositional and situational attribution**

Two items (adapted from Storms, 1973) assessed dispositional and situational attributions for the target's behavior. The first item asked to what extent the target's actions reflected something about the target's personality. The second item asked to what extent the target's actions reflected something about the situation the target was placed in.

### **Hostile personality**

Two items (constructed for this study) examined perceptions of the target as having a specifically hostile (or non-hostile) personality type. The first item asked to what extent the target is the type of person who generally picks on people. The second item asked to what extent the target is a generally hostile person.

### **Interpersonal feelings toward target**

Three items (adapted from Davis et al., 1996) were included to assess interpersonal feelings toward the target. The first item asked how angry the participant would be toward the target had the participant been in that given interaction. The second item asked how much the participant would like the target had the participant been in that given interaction. And the third item asked to what degree the participant would enjoy having the target as a friend.

### **Overlap with target**

Two items assessed the extent to which participants felt an overlapping identity with the target. One item (adapted from Davis et al. 1996) assessed to what degree participants felt similar to the target. The second item was a validated single-item measure assessing perceptions of closeness to the target as represented by a series of seven overlapping circles (Aron, Aron, & Smollan, 1992).

### **Manipulation check**

To ensure that participants followed the perspective taking instructions they had been given, one manipulation check question was included. The item asked participants what set of instructions they received before watching each video.

The current study employed a 3 (perspective condition: no-perspective, objective-perspective, other-perspective) x 2 (target type: ambiguous intent, unambiguously hostile intent) mixed design, with perspective condition as a between-subjects variable and target type as a within-subjects variable. Since the study contains both within- and between-subjects factors, mixed model factorial analysis of variance (ANOVA) analyses<sup>2</sup> were conducted to test the key study hypotheses.

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<sup>2</sup> Two 1-*df* focused planned contrasts tests were also conducted to examine the key study hypotheses. Results revealed the same patterns as the 2-*df* omnibus tests, therefore the omnibus tests and pairwise comparisons are reported.

## CHAPTER 3 RESULTS

After excluding participants who failed to answer the manipulation check question correctly, the final number of participants included in analyses was 240 ( $ns = 75, 71, 94$  in the no-perspective, objective-perspective, and other-perspective conditions, respectively). The mean ratings for each target and perspective taking condition are reported in Table 3-1.

### **Hostile Attributional Bias**

The two items assessing hostile attributions were highly related within each target type ( $r = .81$  in the ambiguous target condition,  $r = .75$  in the hostile target condition), therefore the two items were averaged to create separate indices of hostile attributions, with one index for each target. There was an overall main effect of target type,  $F(1, 237) = 645.94$ ,  $p < .001$ , partial  $\eta^2 = .73$ , indicating that participants perceived the hostile target as acting with greater hostile intent ( $M = 5.81$ ,  $SD = 1.25$ ) than the ambiguous target ( $M = 2.74$ ,  $SD = 1.56$ ). However, there was no overall effect of perspective condition on hostile attributions,  $F(2, 237) = .27$ ,  $p = .77$ , partial  $\eta^2 = .002$ , nor was there an interaction between perspective condition and target type,  $F(2, 237) = .76$ ,  $p = .47$ , partial  $\eta^2 = .006$ , indicating that perceptions of the target's hostility were not affected by perspective taking, and this was true whether the target acted with ambiguous or hostile intent. Thus, hypothesis 1 was not supported.

### **Dispositional Attribution**

For the item asking whether the target's actions were caused by dispositional factors, there was an overall main effect of target type,  $F(1, 237) = 119.78$ ,  $p < .001$ , partial  $\eta^2 = .34$ , indicating that participants made more dispositional attributions for the

hostile target ( $M = 5.56$ ,  $SD = 1.26$ ) than the ambiguous target ( $M = 4.31$ ,  $SD = 1.61$ ). However, there was no overall main effect of perspective condition on participants' dispositional attributions for target behavior,  $F(2, 237) = .50$ ,  $p = .61$ , partial  $\eta^2 = .004$ , nor was there an interaction between perspective condition and target type,  $F(2, 237) = .16$ ,  $p = .86$ , partial  $\eta^2 = .001$ , indicating that dispositional attributions for the target's behavior were not affected by perspective taking, and this was true whether the target acted with ambiguous or hostile intent. Thus, hypothesis 2 was not supported.

### **Situational Attribution**

For the item asking whether the target's behavior was caused by situational factors, there was a main effect of target type,  $F(1, 237) = 5.91$ ,  $p = .02$ , partial  $\eta^2 = .02$ , indicating that participants made more situational attributions for the behavior of the hostile target ( $M = 5.10$ ,  $SD = 1.60$ ) than for the ambiguous target ( $M = 4.78$ ,  $SD = 1.45$ ). However, there was no effect of perspective condition on situational attributions,  $F(2, 237) = .15$ ,  $p = .86$ , partial  $\eta^2 = .001$ , nor was there an interaction between perspective condition and target type,  $F(2, 237) = .47$ ,  $p = .63$ , partial  $\eta^2 = .004$ , indicating that situational attributions for the target's behavior were not affected by perspective taking, and this was true whether the target acted with ambiguous or hostile intent. Thus, hypothesis 3 was not supported.

### **Hostile Personality**

The two items assessing target hostile personality type were highly related within each target type ( $r = .76$  in the ambiguous target condition,  $r = .71$  in the hostile target condition), therefore the two items were averaged to create separate indices of hostile personality type, yielding one index for each target. There was an overall main effect of target type,  $F(1, 237) = 248.64$ ,  $p < .001$ , partial  $\eta^2 = .51$ , indicating that participants

perceived the hostile target to have a more hostile personality type ( $M = 3.85$ ,  $SD = 1.43$ ) than the ambiguous target ( $M = 2.15$ ,  $SD = 1.12$ ). Furthermore, there was a main effect of perspective condition,  $F(2, 237) = 3.29$ ,  $p = .04$ , partial  $\eta^2 = .03$ , with those in the other-perspective condition rating the target as having a less hostile personality ( $M = 2.79$ ,  $SD = 1.30$ ) than those in the objective-perspective condition ( $M = 3.17$ ,  $SD = 1.22$ ),  $t(163) = 2.48$ ,  $p = .04$ .<sup>1</sup> However, there was no difference between the other- and no-perspective conditions,  $t(167) = 1.70$ ,  $p = .27$ , and objective- and no-perspective conditions,  $t(144) = .80$ ,  $p = 1.00$ . Lastly, there was no interaction between perspective condition and target type,  $F(2, 237) = .30$ ,  $p = .74$ , partial  $\eta^2 = .003$ , indicating that the effect of perspective taking was not specific to targets with ambiguous, as compared with hostile, intent. Thus, hypothesis 4 was not supported.

### **Interpersonal Feelings toward Target**

The three items assessing interpersonal feelings toward the target were highly related within each target type ( $\alpha = .68$ , average  $r = .42$  in the ambiguous target condition;  $\alpha = .72$ , average  $r = .48$  in the hostile target condition), therefore the three items were averaged to create separate indices of hostile personality type, yielding one index for each target. There was an overall main effect of target type,  $F(1, 237) = 722.20$ ,  $p < .001$ , partial  $\eta^2 = .75$ , indicating that participants reported more positive feelings toward the ambiguous target ( $M = 4.33$ ,  $SD = 1.09$ ) than toward the hostile target ( $M = 2.67$ ,  $SD = .82$ ). However, there was no overall effect of perspective condition,  $F(2, 237) = 1.02$ ,  $p = .36$ , partial  $\eta^2 = .01$ , nor was there an interaction between perspective condition and target type,  $F(2, 237) = 1.03$ ,  $p = .36$ , partial  $\eta^2 =$

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<sup>1</sup> All reported pairwise comparisons were Bonferroni corrected.

.01, indicating that feelings toward the target were not affected by perspective taking, and this was true whether the target acted with ambiguous or hostile intent. Thus, hypothesis 5 was not supported.

### **Overlap with target**

The two items assessing overlap with the target were highly related within each target type ( $r = .58$  in the ambiguous target condition,  $r = .68$  in the hostile target condition), therefore the two items were averaged to create separate indices of overlap with the target, yielding one index for each target. There was an overall main effect of target type,  $F(1, 237) = 197.06$ ,  $p < .001$ , partial  $\eta^2 = .45$ , indicating that participants felt more overlap with the ambiguous target ( $M = 3.32$ ,  $SD = 1.30$ ) as compared with the hostile target ( $M = 1.94$ ,  $SD = 1.04$ ). There was also an overall main effect of perspective condition,  $F(2, 237) = 11.17$ ,  $p < .001$ , partial  $\eta^2 = .09$ , indicating that those in the other-perspective condition felt more overlap with the target ( $M = 2.98$ ,  $SD = 1.22$ ) than those in the objective-condition ( $M = 2.52$ ,  $SD = 1.07$ ),  $t(163) = 3.40$ ,  $p = .002$ , and those in the no-perspective condition ( $M = 2.39$ ,  $SD = 1.10$ ),  $t(167) = 4.43$ ,  $p < .001$ . There was no difference in perceptions of overlap with the target between those in the objective- and no-perspective conditions,  $t(144) = .92$ ,  $p = 1.00$ . Lastly, there was no interaction between perspective condition and target type,  $F(2, 237) = .70$ ,  $p = .50$ , partial  $\eta^2 = .006$ , indicating that perspective taking affected feelings of similarity to both ambiguous and hostile targets. Thus, hypothesis 6 was not supported.

Table 3-1. Means for Each Target Type and Perspective Condition

Dependent Measures	Target Type					
	Ambiguous			Hostile		
	Perspective-Condition					
Other-Perspective	Objective-Perspective	No-Perspective	Other-Perspective	Objective-Perspective	No-Perspective	
M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	
Hostile attributional bias	2.79 (1.67)	2.56 (1.41)	2.85 (1.64)	5.76 (1.29)	5.85 (1.16)	5.82 (1.27)
Dispositional attribution	4.26 (1.66)	4.45 (1.44)	4.25 (1.70)	5.47 (1.34)	5.63 (1.06)	5.59 (1.34)
Situational attribution	4.72 (1.53)	4.82 (1.25)	4.81 (1.52)	5.16 (1.08)	4.96 (1.58)	5.17 (1.59)
Hostile personality type	1.99 (1.08)	2.27 (1.16)	2.21 (1.08)	3.59 (1.27)	4.07 (1.27)	3.89 (1.54)
Feelings toward target	4.39 (1.08)	4.39 (.99)	4.21 (1.18)	2.80 (.89)	2.60 (.77)	2.61 (.78)
Overlap with target	3.75 (1.31)	3.20 (1.25)	3.01 (1.21)	2.22 (1.13)	1.84 (.90)	1.77 (.99)

Note: "M" indicates mean values and "SD" indicates standard deviation values.

## CHAPTER 4 DISCUSSION

The current study found that participants distinguished between targets behaving with ambiguous and hostile intents largely in expected patterns, namely reporting more positive and less negative perceptions of a target behaving with ambiguous intent. Furthermore, perspective taking had a general effect on perceptions of target hostile personality type and overlap with the target; specifically, it was found that perspective taking prompts individuals to perceive targets to have a less hostile personality type and to feel more overlap with a target. Lastly, perspective taking had no effect on the hostile attributional bias, dispositional attribution, situational attribution, perceptions of target hostile personality type, overall impression of a target, and overlap with a target when a target behaves specifically with ambiguous intent. Thus, perspective taking did not confer positive social benefits in interpersonal interactions that were susceptible to the hostile attributional bias, and there was no support for the study hypotheses.

Though the study hypotheses were not supported, the data revealed that participants indeed distinguished between individuals behaving with ambiguous and hostile intent in expected patterns by exhibiting less hostile attributional biases, less dispositional attributions for behavior, perceptions of less hostile personality types for the targets, more positive feelings, and greater overlap with targets acting with ambiguous, as compared with hostile, intent. However, participants reported more situational attributions for the hostile target's behavior than for the ambiguous target's behavior, which is surprising given that the hostile target behaved with clearly hostile intent (leaving little ambiguity for other explanations of his behavior). Although theoretically it would be expected that someone behaving with unambiguous hostile

intent would not be perceived to be acting as a function of his situation, the unique properties of the scenario participants viewed for the current study may have prompted greater situational attributions for a hostile target (i.e., the target refused to let the students in the restaurant, but it was close to the restaurant's closing time, a situational factor that may have prompted the target to behave the way he did). This is one possible explanation for why the hostile target in the current study was perceived to be acting as a function of both his disposition and situation to a greater extent than the ambiguous target, and it may be that variation in situational attributions would be seen for targets behaving with unambiguously hostile intent under different situational circumstances. Thus, although the pattern of situational attributions was reversed from what would be expected depending on target type, participants largely perceived ambiguous and hostile targets in expected patterns, with more positive perceptions and less negative perceptions of ambiguous targets as compared with hostile targets.

Regardless of whether participants observed targets behaving with ambiguous or hostile intents, perspective taking had an overall effect on perceptions of the target having a hostile personality type and perceptions of overlap with the target. Specifically, participants who took the perspective of the target, as compared with an objective perspective, perceived the target to have a less hostile personality type, regardless of the target's intent. Furthermore, participants who took the perspective of the target, regardless of the target's intent, reported feeling the most overlap with the target, followed by those who took an objective perspective, and then those who took no perspective. Thus, though perspective taking did not show positive social effects particularly when viewing a target behaving with ambiguous intent, perspective taking

seemed to decrease the likelihood of perceiving a target to have a hostile personality type and increase feelings of self-other overlap with the target.

Perspective taking may have influenced perceptions of the target as having a hostile personality type, but not other perceptions seemingly related to perceiving the target as hostile (i.e., increased hostile and dispositional attributions, more negative feelings toward the target) for a couple of reasons. Firstly, it could be that perceived *traits* (i.e., a hostile personality type) are distinct from seemingly related attributions or feelings. Although one would expect individuals to make more hostile attributions and have a more negative impression of the target if he had a hostile personality type, this might not be the case. In our daily lives, we interact with strangers and have close friends and family members with varying personality types. It could be that in people's minds, personality type does not preclude the possibility of understanding that even those with hostile personalities may not always be acting as a function of their disposition (even if their behavior is consistent with their disposition) and hence do not necessarily have more negative feelings toward them (i.e., dislike, anger, not enjoy them as friends) because of their personality type. Perceptions of a target as having a hostile personality type was, in fact, only moderately or weakly related to measures of hostile attribution, dispositional attribution, and feelings toward the in the current sample, which lends some support to this claim. Secondly, it could be that this finding was simply the result of a type I error, and it would be difficult to know this without replicating the effect or having included convergent measures of perceptions of a target as having a hostile personality type.

Perspective takers consistently reported perceiving more overlap with a target regardless of whether the target was behaving with ambiguous or unambiguously hostile intent. Specifically, those who took the perspective of the target felt the most overlap, followed by those who took an objective perspective, then those who took no perspective. These results suggest that although participants showed a greater merging of the self with the target when they were perspective taking, which is consistent with past research (Davis et al., 1996; Galinsky et al., 2008b), the current study revealed self-other overlap was not accompanied by changes in perception of a target's hostile intent, nor did it generalize to other perceptions of the target or vary as a function of target intent.

Perspective taking may not have had an effect on the hostile attributional bias for a number of reasons. For one, although perspective taking leads to perceptions of shared personality attributes with a target (Davis et al., 1996) and acting more similarly to the target (Galinsky et al., 2008b), this may be distinct from inferring similarity of intent with a target, and (assuming that perspective takers themselves are not behaving with hostile intent), inferring that a target behaved with less hostile intent. Inferring personality traits and observing (and imitating) behavior are comparatively easier tasks than inferring a target's intent, which is comparatively less salient, and perspective taking may function to enhance perceived similarity of personality and actual similarity in behavior but may not be effective in enhancing similarity in perceived intent due to comparative difficulty in inferring others' intent.

Furthermore, it could be that taking the perspective of a target and perceiving more overlap with the target prompted participants to understand or sympathize with

why the target behaved as he did, thereby having no effect on hostile attributional bias because by perspective taking, participants may have imagined behaving with similar intent had they been in the same situation. This could explain why perspective taking did not affect attribution patterns and interpersonal feelings toward the target based on intent, though it is difficult to know exactly why perspective taking intent did not influence attributional patterns and interpersonal feelings toward a target without further empirical investigation of these questions.

Lastly, there is some evidence that the effects of perspective taking are not always positive. For instance, Epley, Caruso, and Bazerman (2006) have shown that when perspective taking in competitive social interactions, individuals are more likely to behave selfishly due to cynical thoughts that others will behave selfishly. Contrary to much of perspective taking research that prompts individuals to take the perspective of relatively benign targets, Epley and colleagues examined perspective taking under circumstances in which there was direct competition between individuals (i.e., taking a share of a fixed group resource for oneself), uncovering “the bad and the ugly” side of perspective taking (Caruso, Epley, & Bazerman, 2006). The current study examined social interactions that were not clearly benign, but also not directly related to competition, though participants did view social interactions that could be construed to be at odds with the target (i.e., defending a test performance, being seated in a restaurant); it could be that nuances within these social situations susceptible to the hostile attributional bias lie somewhere in between benign interactions and competitive interactions, leading participants to not fully have more positive perceptions of the target (i.e., more positive feelings) or less negative perceptions of the target (i.e., less hostile

attributional biases), resulting in no differences in the hostile attributional bias and overall impression, as was seen in the current study.

### **Limitations**

There were a number of limitations in the current study. For one, the use of video clips, though more realistic than vignettes, may have lacked realism for the participants, thereby decreasing engagement or effects that may have been observed had a more naturalistic stimuli been used (i.e., interaction with confederates). Also, the video clips that participants viewed contained social interactions that involved a target of greater age and authority (i.e., a teacher and restaurant manager)—it could be that taking the perspective of targets that differed from participants in age and authority made it more difficult for the participants to identify with those targets.

### **Future Directions**

Future investigations examining the effect of perspective taking on the hostile attributional bias could address the current study's limitations by employing more naturalistic stimuli, such as interactions with a confederate. Furthermore, future studies may consider employing targets of similar age and status as the participant to see if this would facilitate perspective taking or change the likelihood of exhibiting the hostile attributional bias. Future studies should also examine the convergence or distinction between perceptions of hostile intent and target hostile personality type to examine whether the effect observed in the current study replicates, indicating that attributions of hostility may be distinct from perceptions of a target having a hostile personality type. Lastly, future studies might consider examining social situations that are susceptible to the hostile attributional bias when actors and targets are in direct competition with one another to examine whether perspective taking affects target perceptions differently

than in social situations where the actor and target have brief and ambiguous encounters with one another.

Future studies should also further examine the differential effects of gender and ethnicity on the effects of perspective taking in social situations that are susceptible to the hostile attributional bias. In post-hoc exploratory analyses of gender in the current study, it was found that there were gender differences for feelings toward the target and overlap with the target, with males feeling more positive feelings and overlap with the target than females did, with the greatest difference seen for the ambiguous target. It is not surprising that males felt more overlap with the targets, considering the targets were both male. Furthermore, men may have had more positive feelings toward the targets as a result of feeling more similarity, or possibly because hostility is comparatively more acceptable for men, as compared with women, due to greater social acceptability for aggression amongst men.

In exploratory post-hoc analyses of ethnicity effects (examining Caucasian participants compared with minority participants), there were main effects of ethnicity for situational attributions and overlap, with Caucasian participants making more situational attributions and feeling more overlap with the targets (regardless of intent), as compared with minority participants. Furthermore, there were marginal interactions between ethnicity and target type for the hostile attributional bias (with Caucasian participants making stronger hostile attributions for hostile targets as compared with minority participants and minority participants making stronger hostile attributions for ambiguous targets as compared with Caucasian participants), dispositional attributions (with Caucasian participants making stronger dispositional attributions for hostile

targets as compared with minority participants and minority participants making stronger dispositional attributions for ambiguous targets as compared with Caucasian participants), and hostile personality type (with Caucasian participants perceiving the hostile target to have a less hostile personality type as compared with minority participants and minority participants perceiving the ambiguous target to have a less hostile personality type as compared with Caucasian participants). These analyses suggest that the positive effects of perspective taking may occur more for minority participants when they perceive an ambiguous target and more for Caucasian participants when they perceive a hostile target. Thus, future research on perspective taking and the hostile attributional bias should examine when perspective taking has differential effects for majority and minority group members since the exploratory analyses in the current study suggest that cross- or same-group interactions with targets behaving with ambiguous and hostile intents may yield differences in perceptions as a function of perspective taking.

### **Conclusion**

The findings of the current study reveal that although perspective taking results in increased self-other overlap and decreased perceptions of target hostility at a general level, it does not affect perceptions of a target behaving specifically with ambiguous intent, conditions under which the hostile attributional bias may occur. The current study builds upon past perspective taking research by showing that although perspective taking results in increased self-other overlap regardless of a target's intent, the positive effects of perspective taking do not generalize into the domain of potentially hostile social interactions.

## APPENDIX A PERSPECTIVE INSTRUCTIONS

### Other-perspective condition:

In this video you will be watching a story about a group of students hanging out in their neighborhood. As you will soon see, these students decide to visit a restaurant for an evening meal. We see the students, here, and the owner of the restaurant, here. As you watch the video, please imagine how *the restaurant owner* feels. In your mind's eye, try to take *the restaurant owner's* perspective in the story. Clearly and vividly imagine how *the restaurant owner* is feeling and what he is thinking about what is happening. Concentrate on *the restaurant owner* in the experience. Think about *the restaurant owner's* reactions. Try not to concern yourself with attending to all the information presented. Just imagine how *the restaurant owner* feels in this situation. Now please watch the following story.

### Observer-perspective condition:

In this video you will be watching a story about a group of students hanging out in their neighborhood. As you will soon see, these students decide to visit a restaurant for an evening meal. We see the students, here, and the owner of the restaurant, here. As you watch the video, closely look at and listen to what *the restaurant owner* does and says. Make careful observations of all his behavior. Concentrate your observations on *the restaurant owner's* mannerisms, posture, movements, facial expressions, speech characteristics, tone of voice, and other behavior. Notice exactly what *the restaurant owner* does, whatever it is. Try to take a neutral perspective, being as objective as possible. Now please watch the following story.

### No-perspective condition:

In this video you will be watching a story about a group of students hanging out in their neighborhood. As you will soon see, these students decide to visit a restaurant for an evening meal. We see the students, here, and the owner of the restaurant, here. Please watch the following story.

## APPENDIX B DEPENDENT MEASURES

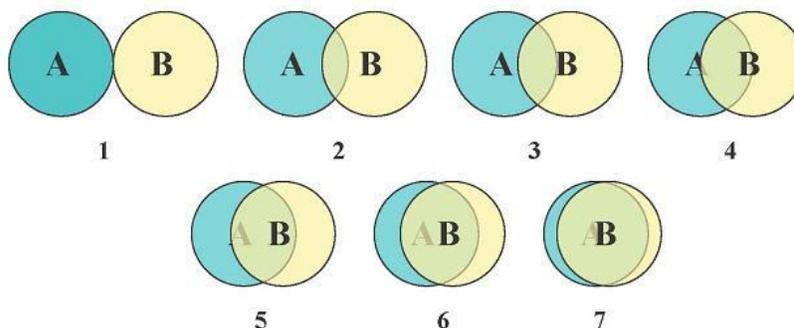
All questions, besides the final two, were answered on 1 (not at all) to 7 (very much) Likert scales.

### CAUSE 1:

1. To what extent do you think Mr. Stubbs acted in a hostile manner toward Billy?
2. To what extent do you think Mr. Stubbs was being **INTENTIONALLY** hostile toward Billy when he asked him to meet after class?
3. How confident are you that Mr. Stubbs asked Billy to meet after class because he believed Billy cheated on the test?
4. How confident are you that Mr. Stubbs asked Billy to meet for a reason **OTHER** than because he believed Billy cheated (for example, to congratulate him on a job well done)?

Personality and environment both contribute to a person's actions. For example, someone with an "extraverted" personality will tend to act more outgoing and sociable than someone with an "introverted" personality (regardless of the type of situation they are in), illustrating how actions are determined in part by personality differences. At the same time, most people (regardless of their individual personalities) will tend to act more outgoing and sociable in some situations than in others, illustrating how actions are determined in part by the situation. With this in mind:

5. To what extent do you think that Mr. Stubbs's actions towards Billy reflects something about Mr. Stubbs's personality?
6. To what extent do you think Mr. Stubbs's actions towards Billy reflects something about the situation Mr. Stubbs was in?
7. To what extent do you think Mr. Stubbs is the type of person who generally picks on people?
8. To what extent do you think Mr. Stubbs is a generally hostile person?
9. If you were Billy, how angry would you be with Mr. Stubbs?
10. If you were Billy, how much would you like Mr. Stubbs?
11. If you were Billy, to what degree would you enjoy having Mr. Stubbs as a friend?
12. In your opinion, to what degree are you and Mr. Stubbs similar?



13. Above are seven pairs of circles. The left circle represents YOU, the right circle represents MR. STUBBS. Please choose the number of the picture that best describes how you view you and Mr. Stubbs right now.
14. In the instructions you were given before watching the video, were you told to:
  - a. Simply watch the video
  - b. Watch the video from Billy's perspective
  - c. Watch the video from Mr. Stubbs's perspective
  - d. Watch the video from a neutral perspective
  - e. None of the above

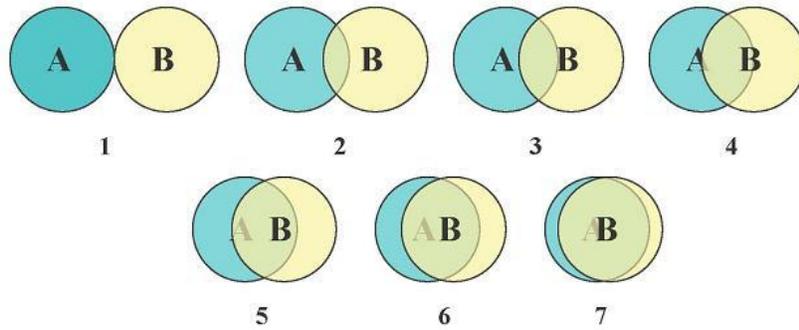
#### CAUSE 2:

1. To what extent do you think the restaurant owner acted in a hostile manner toward the students?
2. To what extent do you think the restaurant owner was being INTENTIONALLY hostile toward the students when he told them the restaurant was closed?
3. How confident are you that the restaurant owner told the students the restaurant was closed because he did not want to serve them specifically?
4. How confident are you that the restaurant owner told the students the restaurant was closed for a reason OTHER than because he did not want to serve them specifically (for example, because it was actually time for the restaurant to close)?

Personality and environment both contribute to a person's actions. For example, someone with an "extraverted" personality will tend to act more outgoing and sociable than someone with an "introverted" personality (regardless of the type of situation they are in), illustrating how actions are determined in part by personality differences. At the same time, most people (regardless of their individual personalities) will tend to act more outgoing and sociable in some situations than in others, illustrating how actions are determined in part by the situation. With this in mind:

5. To what extent do you think that the restaurant owner's actions towards the students reflects something about his personality?
6. To what extent do you think the restaurant owner's actions towards the students reflects something about the situation he was in?
7. To what extent do you think the restaurant owner is the type of person who generally picks on people?
8. To what extent do you think the restaurant owner is a generally hostile person?
9. If you were one of the students in the group, how angry would you be with the restaurant owner?
10. If you were one of the students in the group, how much would you like the restaurant owner?
11. If you were one of the students in the group, to what degree would you enjoy having the restaurant owner as a friend?

12. In your opinion, to what degree are you and the restaurant owner similar?



13. Above are seven pairs of circles. The left circle represents YOU, the right circle represents THE RESTAURANT OWNER. Please choose the number of the picture that best describes how you view you and the restaurant owner right now.

14. In the instructions you were given before watching the video, were you told to:

- a. Simply watch the video
- b. Watch the video from the students' perspective
- c. Watch the video from the restaurant owner's perspective
- d. Watch the video from a neutral perspective
- e. None of the above

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## BIOGRAPHICAL SKETCH

Bonnie Le was born in Modesto, California in 1985. She graduated from the University of California, Berkeley in 2007 with Bachelors of Arts in psychology and integrative biology. Before moving to Gainesville to enroll in the University of Florida's doctoral program in social psychology, Bonnie interned at the non-profit College Track, where she worked to help under-resourced high school students in Oakland, California graduate from high school and apply to college. Bonnie received her Master of Science in social psychology from the University of Florida in the spring of 2011. In her spare time, Bonnie enjoys running and competitive Scrabble.