

5-17-2014

## **Invested or Invasive?: Applying the Investment Model to Understanding Obsessive Relational Intrusion**

Katherine E. Collier

Follow this and additional works at: <https://scholarsjunction.msstate.edu/td>

---

### **Recommended Citation**

Collier, Katherine E., "Invested or Invasive?: Applying the Investment Model to Understanding Obsessive Relational Intrusion" (2014). *Theses and Dissertations*. 2796.  
<https://scholarsjunction.msstate.edu/td/2796>

This Graduate Thesis - Open Access is brought to you for free and open access by the Theses and Dissertations at Scholars Junction. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Scholars Junction. For more information, please contact [scholcomm@msstate.libanswers.com](mailto:scholcomm@msstate.libanswers.com).

Invested or invasive? Applying the investment model to understanding obsessive  
relational intrusion

By

Katherine E. Collier

A Thesis  
Submitted to the Faculty of  
Mississippi State University  
in Partial Fulfillment of the Requirements  
for the Degree of Masters of Science  
in Experimental Psychology  
in the Department of Psychology

Mississippi State, Mississippi

May 2014

Copyright by  
Katherine E. Collier  
2014

Invested or invasive? Applying the investment model to understanding obsessive  
relational intrusion

By

Katherine E. Collier

Approved:

---

H. Colleen Sinclair  
(Director of Thesis)

---

J. Martin Giesen  
(Committee Member)

---

Carolyn E. Adams-Price  
(Committee Member)

---

Deborah K. Eakin  
(Graduate Coordinator)

---

R. Gregory Dunaway  
Professor and Dean  
College of Arts & Sciences

Name: Katherine E. Collier

Date of Degree: May 17, 2014

Institution: Mississippi State University

Major Field: Experimental Psychology

Major Professor: H. Colleen Sinclair

Title of Study: Invested or invasive?: Applying the investment model to understanding obsessive relational intrusion

Pages in Study: 87

Candidate for Degree of Masters of Science

The present study applied the Investment Model (IM) to predict obsessive relational intrusion (ORI). Participants (n=685) were randomly assigned to read vignettes about a hypothetical relationship termination that manipulated 1) type of rejection, 2) level of investment, and 3) quality of alternatives. Next, participants were asked to report how likely it was that they would engage in pursuit (e.g., leaving gifts and calling) and aggressive (e.g., threatening behaviors) ORI. Contrary to predictions, results indicate that although level of investment affected one's likelihood of engaging in ORI, quality of alternatives did not. Further, it was expected that a more explicit rejection would lead to greater ORI; however, I found that no rejection lead to more pursuit ORI than either internal or external rejection conditions.

## DEDICATION

For anyone who has ever thought something was out of their reach...

## ACKNOWLEDGEMENTS

Throughout the process of writing my thesis, I have had many sources of encouragement.

First, and foremost, I would like to acknowledge Dr. H. Colleen Sinclair for believing in me. Four years ago, you saw a spark in me that even I did not know existed. You gave me a chance and have truly changed my life. Without your faith in me, none of this would have been possible. I am truly grateful for everything you have done for me.

I would also like to thank my committee members, Dr. J. Martin Giesen and Dr. Carolyn E. Adams-Price for your suggestions and encouraging words to help me through this process.

In addition, I would like to thank my parents Liz Collier and Bobby and Donna Collier for listening to me complain and then giving me the inspiration to keep going.

Further, George Vandiver Xaysuda will always hold a special place in my heart. For six months, George served as my distraction from everything, including my thesis. Looking back, I needed the distraction following the events that transpired February of 2011. Without such a distraction, I might not have gotten myself back.

A very special thanks goes to my beloved Lab-Pit mix, Cooper. Through the long nights, he has been a source of comic relief with his antics. Whether Cooper was eating my highlighters or knocking over furniture to get to the animal crackers, he always kept me laughing. Cooper definitely makes Marley look like the best dog ever.

In addition to my mentors and family, I would like to extend my gratitude to the bartenders of Ptolemy's Taproom and the Veranda. Your patience with my cluttering of the bar and service of many drinks over the past year has kept me going on those nights when I simply wanted to give up. Without all of you, this process would never have been completed.

Finally, the unhealthy energy drink RedBull and the hit television show Gossip Girl deserve recognition for keeping me going through your bursts of caffeine and dreams of city life. Without these items, my motivation to write would not have existed.

## TABLE OF CONTENTS

DEDICATION .....	ii
ACKNOWLEDGEMENTS .....	iii
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
CHAPTER	
I. INTRODUCTION .....	1
Stalking, Relationships, and Persistence.....	2
Rejection .....	4
Type of Rejection.....	6
The Investment Model .....	8
Investment.....	9
Quality of Alternatives.....	9
Satisfaction.....	10
Investment Model and ORI.....	11
Investment and ORI.....	12
Quality of Alternatives and ORI.....	13
Present Study .....	13
Hypothesis 1.....	14
Hypothesis 2.....	14
Hypothesis 3.....	15
II. METHOD .....	16
Participants.....	16
Design .....	16
Materials and Procedure .....	16
Investment and Quality of Alternatives Manipulation.....	17
Investment and Quality of Alternatives Manipulation checks.....	20
Rejection Manipulation.....	22
Processing Questions.....	24
Obsessive Relational Intrusion Scale.....	25
Rejection Manipulation Check.....	27

III.	RESULTS .....	28
	Manipulation Checks .....	28
	Rejection. ....	28
	Investment.....	29
	Quality of Alternatives.....	29
	Descriptive Statistics.....	30
	Hypothesis Testing.....	31
IV.	CONCLUSION.....	36
	Limitations .....	38
	Implications and Future Directions.....	40
	Take Home Point .....	43
	REFERENCES .....	44
APPENDIX		
A.	INVESTMENT AND QUALITY OF ALTERNATIVES HYPOTHETICAL VIGNETTES .....	51
B.	INVESTMENT AND QUALITY OF ALTERNATIVES MANIPULATION CHECKS .....	56
C.	REJECTION HYPOTHETICAL VIGNETTE .....	61
D.	PROCESSING QUESTIONS.....	65
E.	FORCED CHOICE QUESTIONS.....	67
F.	OBSESSIVE RELATIONAL INTRUSION SCALE.....	70
G.	REJECTION MANIPULATION CHECK.....	79

## LIST OF TABLES

1. Descriptive Statistics of ORI.....	31
---------------------------------------	----

## LIST OF FIGURES

1. The Investment Model.....8
2. Means of combined Rejection and Investment on Pursuit ORI.....34

## CHAPTER I

### INTRODUCTION

In the past decade, the number of stalking victimization reports has risen from 1.2 million per year in 1998 (Tjaden & Thoennes, 1998) to more than 3 million per year (Baum, Catalina, Rand, & Rose, 2009). Likewise, stalking research has been growing. Over the last decade, a number of studies (e.g., Frieze, Davis, & Mauiro, 2000; Dutton & Winstead, 2006; Rosenfeld et al., 2007) have been conducted in order to determine factors that contribute to the likelihood of stalking perpetration. Many focus on individual difference factors (e.g., attachment style of perpetrator; Dutton & Winstead, 2006), but some examine dyadic variables (e.g., prior victim-perpetrator relationship; see Spitzberg & Cupach, 2007 for review). More recently, communication variables have been examined (e.g., type of rejection, Sinclair, Ladny, & Lyndon, 2011). However, the majority of this research has been correlational, resulting in a lack of experimental examinations of predictors of stalking.

In addition to lacking experimental design, few studies examining stalking perpetration have been conducted using a theoretical framework. Currently, to the author's knowledge, only one study has attempted to experimentally test a theoretical model of stalking perpetration (Sinclair et al., 2011). Accordingly, the present study attempted to add to existing knowledge of stalking by experimentally manipulating factors of Rusbult's (1980) Investment Model (IM) in order to examine the effects of

investment on stalking-related behaviors. Given that a majority of stalking cases are relational in nature (i.e., former, current, or aspiring romantic partners; Baum et al., 2009; Cupach & Spitzberg, 2004; Emerson, Ferris, & Gardner, 1998; Tjaden & Thoennes, 1998), I argued that a model used to assess relationship persistence, such as the IM, could also be applied to study stalking, defined, in many cases, as the persistent pursuit of a relationship wanted by one party but unwanted by the other.

Specifically, the IM argues that high levels of investment and satisfaction, coupled with low levels of quality alternatives to a relationship, will result in more commitment to the relationship and ultimately a higher probability of the relationship persisting. Extending this model to predict stalking-related behavior, I examined whether individuals would remain committed to a terminated relationship and persist under similar circumstances, particularly in relationships involving a high level of investment and low quality of alternatives. To begin, I will define key concepts (e.g., stalking, courtship persistence, obsessive relational intrusion) and proceed to an explanation of how type of rejection plays a role in the severity of a stalking incident. Finally, I will connect aspects of the IM (e.g., investment, quality of alternatives) as potential predictors of stalking-related behavior.

### **Stalking, Relationships, and Persistence**

Stalking has been legally defined as a repeated course of harassing behaviors that causes one to fear of physical harm or death (Baum et al., 2009). As previously mentioned, over 3 million people are stalked each year; however, when the element of fear is taken out of the equation the estimate of annual prevalence nearly doubles (Baum et al., 2009). Stalking-related behaviors that occur within a relational context and are

viewed as invasive but not necessarily fear inducing are called obsessive relational intrusion (ORI; Cupach & Spitzberg, 1998). Research indicates that between 5% and 40% of college students, as well as other adult populations, have experienced various levels of ORI (Spitzberg & Rhea, 1999).

ORI has been classified as a continuum, where on one end there are mild pursuit behaviors, such as sending flowers and making phone calls, to more severe forms of aggression, such as intimidation and physical aggression (Cupach & Spitzberg, 2004). However, using participants who had been involved in a difficult breakup, Dutton and Winstead (2006) demonstrated that the ORI continuum divided itself into two factors: the nonthreatening, but sometimes annoying pursuit behaviors, and the more aggressive, severe behaviors (Cupach & Spitzberg, 2004). Where the line between nonthreatening and aggressive behaviors is drawn can vary. Sometimes the line is drawn between surveillance and intimidation (Sinclair & Frieze, 2002), or sometimes surveillance is included as a type of aggressive stalking (Cupach & Spitzberg, 2004; also see Sheridan & Davies, 2001). Further, even those allegedly nonthreatening behaviors can be distressing when unwanted, or even threatening depending on context. For example, calling someone 20 times in one day can be interpreted as nonthreatening and merely annoying. However, if the pattern of 20 phone calls a day continues over a period of time, even though the phone calls go unanswered, the annoying behavior can begin to feel as if it were a threat to the person receiving the phone calls. Thus, where to draw the line between a healthy, wanted pursuit and an unhealthy, unwanted pursuit has been unclear.

Accordingly, it is necessary to differentiate some terms. Healthy pursuit behaviors involve a *mutual* pattern of behaviors such as phone calls, self-disclosure, and

intimacy-seeking from both partners. All of these behaviors can be classified as a form of courtship. Courtship becomes "courtship persistence" when one continues the pursuit of a potential romantic relationship despite obstacles. However, persistence becomes unhealthy when what seems like normal courtship behaviors are no longer desired. Researchers have identified three levels of unhealthy persistence. Langhinrichsen-Rohling, Palarea, Cohen, and Rohling (2000) identified the first level of unhealthy persistence as unwanted pursuit behaviors (also known as pre-stalking; Emerson et al., 1998). From unwanted pursuit, the behaviors grow into invasive, ORI-type behaviors and then onto more fear-inducing behaviors, such as stalking (Cupach & Spitzberg, 2004). Therefore, the full array of courtship persistence ranges from mutually desired relationship pursuit, to one-sided unwanted persistence (when the pursuer has been rejected), to ORI (when the rejected pursuers' advances are harassing), to stalking (when the pursuit triggers fear).

### **Rejection**

The first step in drawing the line between the healthy and unhealthy forms of courtship persistence hinges on the question "is it wanted?" The line between healthy, wanted courtship persistence and unhealthy, unwanted persistence is crossed when the pursuer continues to persist despite the other party's rejection of the advances. Not surprisingly, the majority of stalking-related behaviors occur when there has been some type of rejection – either before a relationship begins or after a relationship ends. Clearly, rejection is a key to understanding stalking perpetration.

In fact, rejection has been shown to be a key to understanding what triggers aggressive behaviors generally. The majority of experimental studies examining the link

between aggression and rejection have found a propensity to aggress following a rejection or social isolation (see Gerber & Wheeler, 2009; Leary Twenge, & Quinlivan, 2006 for reviews). For example, Buckley, Winkel, and Leary (2004) demonstrated over a series of studies that when people are rejected, even in ambiguous social settings such as picking teams, those who were not chosen to be in a group were more likely than those who were chosen to show aggression by blasting white noise at their rejecters (also see Twenge, Baumeister, Tice, & Stucke, 2001; Twenge & Campbell, 2003).

In addition to determining that a link between rejection and aggressive behaviors exists, researchers have also posited possible explanations for *why* individuals have such an aggressive reaction to rejection. Many researchers have argued that rejection is so powerfully linked to aggression because our basic needs are threatened, namely one's basic need to belong (Baumeister & Leary, 1995), one's basic need to maintain positive self-regard (Leary, 2005), and one's need for control (Gerber & Wheeler, 2009). It is possible that multiple needs are being threatened with each rejection. Depending on which need is being threatened, different responses could result (i.e., aggression vs. emotional numbness vs. prosocial behavior). Further, it is possible that some threats merit different responses than others. For instance, an aggressive response to rejection could serve as a means for regaining one's need for control more than a regaining of one's need for belonging (Gerber & Wheeler, 2009). Accordingly, it is important to consider that there may be different *types* of rejection that trigger different perceptions of need threat, and, in turn, different means to satiate the threatened need.

## **Type of Rejection**

Researchers have operationalized rejection types in different ways (e.g., see Molden, Lucas, Gardner, Dean, & Knowles, 2009). Of interest to the present study is the discussion surrounding direct vs. indirect means of rejection (Carll, 1999; Cupach & Spitzberg, 2004; de Becker, 2002; Folks, 1982; Molden et al., 2009). Within stalking literature, the indirect rejection is most commonly known as the "letting him/her down easy" approach. Stalking researchers and advocates have argued that indirect rejections leave room for interpretation, which could result in continued, unwanted persistence allegedly due to the continued ambiguity about whether the relationship is in fact over (Carll, 1999; de Becker, 2002). However, other scholars argue that a more direct, explicit reason for the rejection might not be the best way to reject someone either (Cupach & Spitzberg, 2004) because it may trigger retaliation for the rejection and potentially more aggressive reactions.

Currently, only one stalking study has empirically examined different indirect vs. direct types of rejection as discussed above. By integrating attribution theory (Heider, 1958), Sinclair and colleagues (2011) examined how type of rejection affected severity of ORI behaviors by operationalizing direct vs. indirect rejections in terms of the types of attributions the rejections implied. Direct rejections -- which they labeled "internal rejections" -- were defined as rejections that make an internal attribution for the relationship's demise. For example, the rejecter cites the reasons for ending the relationship as personal things about the rejected person (e.g., s/he doesn't like the rejected's personality). In contrast, indirect rejections -- labeled "external rejections" -- are rejections where the rejecter makes an external attribution for ending the relationship.

For instance, the rejecter claims s/he is busy with school and has no time for a relationship. In order to examine the impact of type of rejection, Sinclair and colleagues manipulated type of rejection (e.g., internal attribution vs. external attribution vs. no rejection) by creating hypothetical scenarios about a breakup. Participants were then asked to complete the ORI scale (Cupach & Spitzberg, 2004), which assessed their likelihood to think about and engage in unwanted pursuit behaviors. Participants who read the internal attribution rejection scenario were more likely to report that they would engage in the unwanted pursuit behaviors, particularly the more extreme behaviors, than those participants in the external attribution rejection condition. Those in the external rejection condition were only likely to report ORI pursuit, not aggressive, behaviors if their self-control was low. I sought to replicate and extend the findings of Sinclair and colleagues (2011) by not only examining type of rejection, but also by examining how dyadic variables -- e.g., relationship quality -- might affect the likelihood to persist, and aggress, post-breakup. Specifically, the current study integrated the Investment Model (IM: Rusbult, 1980) as a theoretical framework.

## The Investment Model

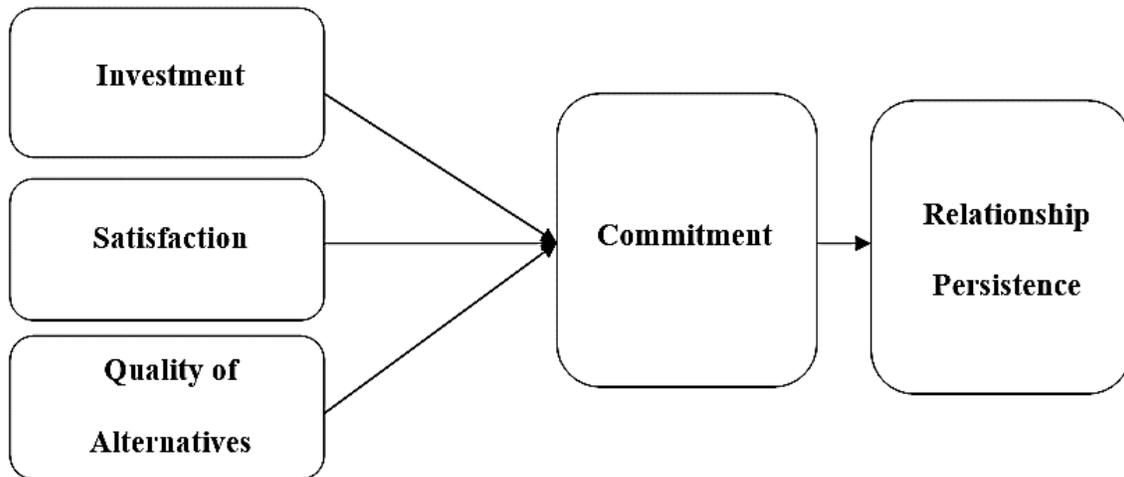


Figure 1. The Investment Model

Theoretically grounded in interdependence theory (Kelley & Thibaut, 1978), the IM (Rusbult, 1980) argues that amount of investment, level of satisfaction, and quality of alternatives to a relationship will directly affect commitment to that particular relationship. Since first proposed 30 years ago, the IM has become a powerful predictor for commitment across many types of relationships – both romantic and non-romantic; both healthy and unhealthy (see Le & Agnew, 2003 for review). Essentially, the IM (Rusbult, 1980) argues that a high amount of investment, a low quality alternative, and a high level of satisfaction to a relationship will lead to a greater commitment to one's relationship, and strengthen the propensity to persist in that relationship (Rusbult, Martz, & Agnew, 1998). I will review each variable in turn and then address how each variable may relate to ORI.

**Investment.**

The amount of investment in a relationship refers to the importance that one puts on his/her relationship and the resources involved in developing the relationship (Rusbult et al., 1998). As a relationship grows, the couple will most likely devote more intrinsic resources to the relationship. Intrinsic resources include disclosing intimate things with each other, as well as putting in time and effort (Le & Agnew, 2003). Investments also come in the form of extrinsic resources, such as buying material possessions (particularly joint possessions like furniture, a home) and developing an overlapping, mutual social network (Rusbult, Drigotas, & Verette, 1994). Greater investment into a relationship increases the potential loss one experiences if that relationship were to end, thus creating a powerful psychological barrier to ending the relationship (Rusbult et al., 1998).

**Quality of Alternatives.**

The quality of alternatives to a relationship can be defined as the extent to which one's physical and emotional needs could be fulfilled by someone (or something) outside of his/her relationship (Rusbult et al., 1998). If someone begins to perceive alternatives to his/her relationship to be more attractive than his/her current partner/relationship, s/he could be lead away from the relationship. Also, it is not always the case that another relationship or person is the attractive alternative, but it is possible that the attractive alternative could be no relationship. Provided there are no attractive alternatives to a relationship, people are more likely to persist in their current relationship to avoid being alone (Le & Agnew, 2003).

**Satisfaction.**

The level of satisfaction with a relationship refers to a cost-benefit analysis measuring the positive and negative aspects of a relationship (Rusbult et al., 1998). One's level of satisfaction can be influenced by the ability of his/her partner to fulfill emotional, as well as physical, desires. Satisfaction level tends to be a more subjective measure. The relationship is measured against one's personal standard of satisfaction; therefore, when aspects of the relationship surpass the personal standard, satisfaction is achieved. However, when aspects of the relationship fall short of the personal standard, dissatisfaction results (Le & Agnew, 2003).

Together, amount of investment, level of satisfaction, and quality of alternatives affect one's commitment to a relationship and, in turn, affect the amount of persistence towards maintaining that relationship. Commitment to one's relationship involves the decision and drive one has to perpetuate the relationship, whereas persistence is about the behavior to pursue a relationship. However, research has shown that not all components of the IM must be present in order for one to persist in a relationship (see Le & Agnew, 2003 for review). Specifically, clinical and experimental samples have concluded that satisfaction with one's relationship is not a predictor of persistence of a relationship post-breakup (Dutton & Winstead, 2006; Mullen, Pathé, & Purcell, 2000); therefore, satisfaction will not be discussed further. The present study will focus on the two aspects of the IM that have more empirical evidence for their relevance to unwanted courtship persistence.

## **Investment Model and ORI**

Each of the aforementioned factors - investment, satisfaction, and alternatives - predict the likelihood one would stay in a relationship. Typically, the IM focuses on one individual's perceptions, but a relationship is a dyad. Thus, just because one person might make the decision to end a relationship - based on his/her perceptions of investments, satisfaction, and alternatives - doesn't mean the other person in the relationship wants the relationship to end. Having reviewed the elements that predict the persistence of an existing relationship, the aim of the present study was to determine whether the IM factors can be used to predict persistence in terminated relationships, particularly when that persistence is unhealthy.

There is some evidence to suggest that the IM is useful in predicting the continuation of unhealthy relationships. For instance, in the case of abused women, a number of women ultimately leave the relationship because they find someone else (i.e., a more attractive alternative). Rusbult and Martz (1995) examined the stay-leave decisions of abused women and found that level of satisfaction was not a predictor of whether the women chose to stay or leave. After all, one is unlikely to be strongly satisfied with an abusive partner. However, the determining factor in stay-leave decisions was found to be the quality of alternatives available to the women. It is unclear, though, if the same conclusions about the role of quality of alternatives applies to perpetrators of relationship aggression. Drawing on the work by Rusbult and Martz (1995), Gaertner and Foshee (1999) argued that the IM could also be applied to predict the perpetration of relational violence in adolescent relationships.. Interestingly, males were more likely to commit acts of intimate violence as their perceived quality of

alternatives *increased*. They also found that perpetration of intimate violence became more likely for both males and females as satisfaction levels decreased. Finally, Gaertner and Foshee (1999) found that investment to the relationship was not related to the perpetration of intimate violence. Many argue that research on abusive relationships should extend to stalking research (Brewster, 2000; Logan, Leukfeld, & Walker, 2000). Research extending the IM to stalking perpetration are lacking.

### **Investment and ORI.**

Although there haven't been direct tests of all of the IM variables in relation to stalking perpetration, existing research lends support to the notion that elements of the IM could be linked to the propensity to engage in stalking (Dutton & Winstead, 2006; Mullen et al., 2000; Tjaden & Thoennes, 1998). With regard to investment, clinical assessments of stalking perpetration have found that stalking is likely to occur when the rejected feels as if s/he has invested a great deal of time and emotion into the relationship, particularly in close, sexual relationships (Mullen et al., 2000). If the rejected has invested a large amount of energy into a relationship, s/he is likely to experience a sense of loss once the relationship is terminated. It is when the rejected has lost a relationship in which s/he has invested so much that s/he may do anything to get the relationship back which is consistent with the idea of effort justification through cognitive dissonance theories (Festinger, 1957). Essentially, the more an individual has invested into making a relationship work, the less that individual is going to want the relationship to end and will be more likely to persist after the relationship post breakup.

## **Quality of Alternatives and ORI.**

Along with amount of investment, research also indicates that the quality of available alternatives to a relationship is also predictive of an individual's likelihood to continue pursuing his/her love interest (Dutton & Winstead, 2006; Kam & Spitzberg, 2005; Mullen et al., 2000; Tjaden & Thoennes, 1998). Stalking victimization surveys have found that victims perceive the primary reason the stalking ceased was because the stalker found someone else (Tjaden & Thoennes, 1998). Verifying victim perceptions, clinical examinations of stalking perpetrators found that stalkers are more likely to persist after an unwanted relationship when s/he has no available replacements for the lost relationship (Mullen et al., 2000). Further, rejected individuals who perceive that they have no other alternatives to the lost relationship are more likely to have a dependence upon that relationship, because they will view the lost relationship as the only one that is able to fulfill their needs (Kam & Spitzberg, 2005). Through correlational research, Dutton and Winstead (2006) found that when fewer relationship alternatives were perceived, the more likely one was to engage in ORI. Therefore, research has consistently shown that a lack of alternatives will lead to more persistence, even if unwanted, in that relationship.

## **Present Study**

In order to test the applicability rejection type and these IM variables, I used an experimental vignette design. The present study asked participants to read a hypothetical vignette about a relationship that is either terminated (via internal or external rejection) or results in no breakup. In order to examine the ability of the IM to predict unwanted courtship persistence, the vignettes also manipulated amount of investment and quality of

alternatives. Given that research has indicated that satisfaction is not a significant predictor of persistence following a breakup (Dutton & Winstead, 2006; Mullen et al., 2000), the present study did not have a manipulation of satisfaction. After reading the hypothetical vignettes, participants were asked to complete the Obsessive Relational Intrusion scale (Cupach & Spitzberg, 2004) as a dependent measure of pursuit and aggressive behaviors.

### **Hypothesis 1.**

In line with research that suggests a link between rejection and aggressive behaviors (Buckley et al., 2004; Sinclair et al., 2011), I proposed that rejection would predict one's likelihood to engage in ORI. Specifically, I proposed that experiencing an internal rejection lead to a higher likelihood of someone engaging in ORI behaviors, particularly more aggressive ORI, than external or no rejection experiences. Therefore, I anticipated a main effect for rejection.

### **Hypothesis 2.**

Given the extensive ability of the IM to predict commitment to various types of relationships (Le & Agnew, 2003), I proposed that generally the Investment Model would predict a higher likelihood of persisting in unwanted pursuit. Specifically, [*Hypothesis 2a*], I proposed that a history of high investment in the relationship would lead to an increased likelihood of engaging in unwanted pursuit behaviors compared to low investment in the relationship. Also, in agreement with the findings of Mullen and colleagues (2000), Tjaden and Thoennes (1998), and Dutton and Winstead (2006) that a primary reason stalkers cease their unwanted pursuit behaviors is because they find

someone else, [*Hypothesis 2b*] I proposed that the availability of a quality alternative would result in lower likelihood to engage in unwanted pursuit behaviors than when one has no desirable alternative.

**Hypothesis 3.**

I proposed a three-way interaction between investment, quality of alternatives, and rejection. Specifically, I argued that when internal rejection is coupled with higher investment and low quality alternatives, the most aggressive types of ORI behaviors would ensue in comparison to more pursuit ORI behaviors.

## CHAPTER II

### METHOD

#### **Participants**

The sample consisted of 686 undergraduate students, of which 70.1% were Caucasian, 23.1% were African-American, 1.2% were Hispanic, 1.5% were Asian-American, and 3.6% of the races were not listed. 59.7% of the participants were female, and 39.6% of the participants were male. The mean age for participants was 18.90, with a minimum age 17 and a maximum age of 50 ( $SD=2.18$ ).

#### **Design**

This study employed a 3 (Rejection Type: internal, external, no rejection) x 2 (Amount of Investment: high, low) x 2 (Quality of Alternatives: high, low) x 2 (ORI type: pursuit vs. aggressive – within groups variable) mixed factorial design.

#### **Materials and Procedure**

Participants logged onto Mississippi State University's SONA systems website in order to take an online experimental survey. The title of the experiment appeared as "Decisions about Interpersonal Investments," or a close variation of that title. Title variations are used by the SONA systems website to help with random assignment for conditions. Condition assignment was determined by the last two digits of a participant's login identification number. Only one survey appeared for a given participant when s/he

signed onto SONA systems. Once participants selected the study, they were presented with a consent form. Those choosing not to participate indicated that they did not want to participate by closing the web browser (and were instructed to do such). Those choosing to participate clicked on the “continue” button. Participants then read a hypothetical scenario about a relationship detailing the level of investment, quality of alternatives to the relationship, and type of rejection used in relationship termination (if there was a termination). Then participants were asked a series of questions to determine whether they read and understood the scenario, their reactions to the scenario, and how they would react in the situation. I will now walk through the experiment in more detail, step by step as the materials were presented to participants.

### **Investment and Quality of Alternatives Manipulation.**

First, participants were given the first half of 1 of the 12 vignettes (see Appendix A) and asked to imagine the scenario is happening to them. The following is an example of the first part for 1 of the 12 vignettes presented to participants. The first half of each scenario included the investment and quality of alternatives manipulations. This particular vignette is an example of high investment, low quality of alternatives, and internal rejection. The italicized sections represent the portions that were manipulated.

You and your significant other have been seriously dating for over a year. The two of you are not able to spend as much time together as you would like, given that you are a student at Mississippi State University, and your significant other attends Ole Miss. *However, the two of you Skype almost every night and see each other every other weekend. You have put a lot of time and energy into maintaining your relationship. S/he*

*has met your friends and has become a part of many aspects of your life. You share many memories together and numerous Facebook photo albums of the times you spend together. You two spent some time at the beach in Destin over the summer with all of your friends. The two of you are so close, you can't imagine what your life would be like without him/her.*

**(high investment)**. So far, the relationship has been everything you could want. Your significant other satisfies all of your needs, both physically and emotionally. And you are very happy with the way things are going in your relationship.

One weekend, you and your friends decide to all go out one night since your significant other isn't visiting. While out, you run into a classmate. *You have never found this guy/girl to be attractive, but s/he seems friendly.* You decide to strike up a conversation about the class and how hard you think the upcoming test will be. *While talking, you discover that s/he has made A's on all of the tests and assignments.* You decide to exchange numbers and plan to study together for the upcoming test. *After a few get-togethers to study, you realize how little you have in common with him/her. They suggest getting together after Thanksgiving break to study for finals, but you aren't sure you want to* **(low quality of alternatives)**.

The hypothetical vignettes manipulated the amount of investment the couple has put into the relationship. There are two levels: high vs. low.

- *High Investment* –The couple in the vignette have been seriously dating for over a year. They make efforts to talk almost every night and spend as many weekends together as possible. Further, the couple shares a majority of the same friends.
- *Low Investment* –The couple in the vignette have been casually dating for only a few months. The couple rarely spends any time talking or any weekends together, and they make no efforts to do so. Further, the couple shares almost no friends.

Quality of alternatives was manipulated by the similarity to and physical attractiveness of a classmate in one partner's psychology class. There are two levels: high vs. low.

- *High Quality of Alternatives* – The alternative was presented as someone from the participant's psychology class. After making efforts to get to know this new guy/girl, the participant discovered s/he had a lot in common with the new guy/girl and finds the new guy/girl to be very attractive.
- *Low Quality of Alternatives* – After making efforts to get to know the new guy/girl from psychology class, the participant discovered s/he has little in common with the new guy/girl. Further, the participant finds the new guy/girl to be unattractive.

### **Investment and Quality of Alternatives Manipulation checks.**

After reading the first half of the scenario, participants responded to Part 1 of the manipulation checks. Participants were asked to respond to various statements as if they were in the hypothetical relationship to ensure that they were affected by the components of the Investment Model that were manipulated (e.g., investment and quality of alternatives) [see Appendix B]. Participants responded using a Likert scale ranging from 1 (*Do not agree at all*) to 5 (*Completely agree*) for each statement. The investment manipulation check included statements from the Investment subscale of the IM (Rusbult et al., 1998) with a reliability of  $\alpha = 0.82$ :

- “I have invested a great deal into our relationship.”
- “My partner and I are very close, such that I would not feel like myself when s/he is not around.”
- “My partner and I seem to share many memories.”
- “Many aspects of my life appear to be linked to my significant other.”
- “I would lose things (e.g., time, effort, friends, money) if this relationship were to end.”

Further, there were also several statements derived from the Quality of Alternatives subscale with a reliability of  $\alpha = 0.68$ , such as:

- “I think my needs for intimacy, companionship, etc., could easily be fulfilled by another relationship.”
- “I could easily find a more appealing person to date.” (R)
- “There are more desirable people I could see myself dating.” (R)

- “If I weren’t dating the person described in the scenario, I would do fine finding someone else quickly.” (R)

The response format was the same as the investment statements. In addition to the Investment and Quality of Alternatives subscales, participants were asked to answer questions about their satisfaction levels and feelings of commitment to their significant others in order to conduct exploratory analysis on the nonmanipulated components of the IM –satisfaction and commitment. I included a manipulation check of satisfaction and commitment in order to run exploratory analysis of the role each construct could potentially play in post breakup persistence. For example, if someone feels a strong commitment to a relationship post breakup, it could be argued s/he would persist despite the rejection. The response format for the commitment and satisfaction items was the same as for the investment and quality of alternative statements. Commitment (reliability  $\alpha = 0.73$ ) and satisfaction (reliability  $\alpha = 0.78$ ) items included:

- “I would be satisfied with my relationship.”
- “This relationship would make me very happy.”
- “This relationship would do a good job fulfilling my needs for intimacy, companionship, etc.”
- “I would not want our relationship to last a very long time.” (R)
- “I would not feel very upset if my relationship were to end.” (R)
- “I could imagine being with my partner several years from now.”
- “I would be committed to trying to maintain my relationship with my partner.”

## **Rejection Manipulation.**

Next, participants read the second half of the vignette: the rejection manipulation (See Appendix C). The second half was a continuation of the relationship presented in the first half of the vignette. The following example is from the internal rejection condition.

Thanksgiving weekend, MSU is playing Ole Miss in Starkville.

Your family has tickets in the Club Level and you have decided to invite your significant other to sit in the Club Level with your family. You have also arranged a party at your apartment for your significant other to meet your Starkville friends. When you and your significant other have your regularly scheduled Skype date two weeks before the big game, you tell him/her of the arrangements you have made for Thanksgiving weekend.

Excitedly, you say “I can’t wait to introduce you to my friends and family. I think you are such an amazing person and I know they will too!” However, you begin to notice the silence and lack of excitement from your significant other and ask, “What’s wrong? Aren’t you excited?”

S/he responds, “*Well, I’m not really sure if that is going to work. No matter what you have assumed about our relationship until now, I have come to lose romantic interest in you. I no longer find you attractive. You just seem so different now from when we first started seeing each other, and not in a good way. I wanted to make this work, but can’t force myself to feel something for you that I don’t. I just can’t be with you anymore. I deserve better. I have been meaning to tell you. I just haven’t gotten around to it until now. I really have to go.*” The call ends (**internal rejection**).

The three levels of manipulation for type of rejection were internal, external, and no relationship termination.

- *Internal Rejection:* Participants in the internal rejection condition were broken up with due to reasons about him/herself (e.g., s/he is not attractive anymore; his/her significant other sees no future with him/her).
- *External Rejection:* Participants in the external rejection condition were broken up with due to reasons relating to circumstances outside of his/her control (e.g., preoccupied with classes, trying to focus on graduate school). The exact wording for the external rejection is *“I rarely get to see you, my friends, or family and I’m constantly stressed out about school and work and getting into a good graduate program. I wanted to make this work, but can’t force life to stop to give us a chance. It really isn’t about you it is just that I don’t think we are able to give each other the relationship we deserve. I think it’s best if we just don’t see each other anymore.”*
- *No Termination:* Participants in this condition were not broken up with, but their significant other will say they cannot go out that night because s/he is already committed to going home for Thanksgiving. The exact wording for the no termination condition is *“It is so sweet what you have arranged and I wish I could be there to meet your family, but since it’s Thanksgiving weekend, I told my parents I would come home and spend the weekend with them because it’s my mom’s birthday. I would love to make this work, but unfortunately can’t be in two places at once. I do want*

*to meet your family, and I want you to meet mine, but this just isn't a good weekend."*

### **Processing Questions.**

After reading part two of the vignette, participants answered four processing queries. Processing queries asked participants to respond to any thoughts, feelings, and possible actions they may have had while reading the scenario (see Appendix D). Further, participants were given the option to write what they thought would happen next in the scenario. They were designed to be open-ended to determine if participants had read the scenarios. Specific wording included:

- What do you think will happen next in this scenario?
- List three things you would *feel* in the situation you read.
- List three things you would *think* in the situation you read.
- List three things you would *do* in the situation you read.

As a further assessment of whether participants read the vignettes, they were also given forced choice questions in order to evaluate their accuracy in recalling details about what they read (see Appendix E). An example of a forced choice question is: "Which of the following is a reason that your boyfriend/girlfriend decided not to go to the game with you? A) does not like football, B) not physically/emotionally attracted to you anymore, C) apprehensive because there is not enough time for work, school, and friends, D) his/her parents disapprove of the relationship, E) it is Thanksgiving weekend and s/he is going home, or F) s/he is not feeling well." No participants were deleted due to lack of vignette recall.

### **Obsessive Relational Intrusion Scale.**

Next, participants were given the ORI scale (Cupach & Spitzberg, 2004) that provided the dependent measure (see Appendix F). The scale measures behaviors that are related to incidents of unwanted pursuit, ranging from low severity (i.e., pursuit tactics) to high severity (i.e., aggressive tactics). Participants were asked how likely it is that they would engage in certain ORI behaviors, with a Likert response format ranging from 0 (*not likely at all*) to 5 (*very likely*). The ORI has a reliability of  $\alpha = 0.96$  and contains 42 items that fall under two categories: pursuit tactics (reliability  $\alpha = 0.88$ ) and aggressive tactics (reliability  $\alpha = 0.97$ ). The two categories of pursuit vs. aggressive behaviors will be used as the within subjects dependent variable. Pursuit tactics include three subscales:

- *Hyper-intimacy (6 items)*: The hyper-intimacy items assess a pattern of inappropriate and excessive face to face encounters and desires to enhance the relationship. For example, leaving gifts and making exaggerated expressions of affection (i.e., saying 'I love you') would be considered being hyper-intimate.
- *Mediated contacts (5 items)*: Mediate contacts items assess the frequency and different types of communication efforts. For example, leaving mean voicemails and/or text messages would be considered mediated contacts.
- *Interactional contacts (5 items)*: Interactional contacts items assess the frequency of attempted and/or actual face to face communications. For example, showing up at someone's work or school in attempt to talk to him/her would be considered making interactional contact with someone.

Aggressive tactics include:

- *Surveillance (5 items)*: The surveillance items assess the discrete methods used to monitor the victim and obtain information about the victim. For example, following someone home or driving by his/her work would be considered surveillance type activities.
- *Invasion (4 items)*: The invasion items assess the trespassing of private and/or legal boundaries, but not directly the destruction of property. For example, looking through someone's possessions or entering someone's house without permission would be considered invasion.
- *Harassment and Intimidation (4 items)*: By using harassment and intimidation tactics, a perpetrator is attempting to change the victim's behavior or a general decrease in the quality of life for the victim. For example, trying to befriend someone's friends and filing false police reports against the victim would be considered harassment and intimidation tactics.
- *Coercion and Threat (6 items)*: The coercion and threat items assess messages that contain implicit or explicit threats of harm to occur. For example, a perpetrator may say s/he will hurt him/herself if the victim does not talk to him/her as a means of coercion and threat.
- *Aggression and Violence (7 items)*: Aggression and violence items assess any actions taken by the perpetrator with the intention of harming the victim or anyone close to the victim. For example, the perpetrator may

destroy the victim's property, sexually assault the victim, or physically harm the victim as a means of aggressive and violent tactics.

All 42 items were randomized in order to combat predictability because the ORI scale, when taken in order, increases with severity. For example, the first questions asks how likely it is that one would leave gifts post breakup, whereas the final questions asks how likely it is that one would engage in behaviors that would endanger one's well-being.

### **Rejection Manipulation Check.**

Next, participants were asked to answer the remaining manipulation checks about rejection, as well as a few demographic questions. In order to determine if participants felt rejected after reading the hypothetical vignette, questions were asked to assess how participants felt about the rejection itself and his/her relationship after the rejection (see Appendix G). The first question is "How likely or unlikely do you think it is that this relationship will survive?" The possible responses ranged from 0 (*very unlikely*) to 5 (*very likely*). The second question is "How strong or weak do you think this relationship is?" The possible responses ranged from 0 (*very weak*) to 5 (*very strong*). The third question is "How accepted or rejected do you feel?" The possible responses ranged from 0 (*very rejected*) to 5 (*very accepted*). The final question used to measure the extent of the rejection asked "Do you feel this relationship is over or continuing?" The possible responses ranged from 0 (*definitely over*) to 5 (*definitely continuing*). These items reached a combined reliability of  $\alpha = .76$ . Finally, participants were asked to report their demographic information (i.e., age, sex, race, and current relationship status). After completing all materials, participants were shown the closing text/debriefing information.

## CHAPTER III

### RESULTS

Before providing hypotheses testing results, manipulation checks for the independent variables (i.e., rejection, investment, and quality of alternatives) and descriptive statistics for the dependent variable (i.e., ORI type: pursuit vs. aggressive) will be reported.

#### **Manipulation Checks**

##### **Rejection.**

Four questions were used to assess the extent to which participants felt the relationship was over. An Analysis of Variance (ANOVA) using the set of rejection manipulation questions as the dependent variable and rejection type (internal vs. external vs. no rejection) as the independent variable was conducted. Results indicated that participants in the internal and external conditions felt significantly more rejected than participants in the no rejection (control) condition,  $F(2, 669) = 70.31, p < 0.001, \eta^2 = 0.57$ . The means for each condition were as follows: Internal rejection  $M = 2.46 (SE = 0.07)$ , external rejection  $M = 2.77 (SE = 0.06)$ , no rejection  $M = 3.08 (SE = 0.08)$ . Post hoc testing using Tukey's honest significant difference test (HSD) revealed no significant differences between internal and external rejection with regard to participants feeling the relationship was over, thus both were equally clear. The only significant difference found was

between the rejection conditions and the no rejection condition. Therefore, results indicate that the rejection manipulation was successful in making participants realize the relationship was terminated.

### **Investment.**

Five questions were used to assess how invested (or not invested) participants felt towards their hypothetical relationship. An ANOVA was run using the mean score on the investment manipulation questions as the dependent variable and level of investment (high vs. low) as the independent variable. Results indicated that participants in the high investment condition felt significantly more invested in their relationship than participants in the low investment condition [ $F(1, 681) = 210.23, p < 0.001, \eta^2 = 0.24$ ]. The mean for low investment was 4.13 ( $SE = 0.069$ ) and the mean for high investment was 5.52 ( $SE = 0.066$ ). Therefore, results indicate that the investment manipulation was successful in making participants feel more or less invested in their hypothetical relationship.

### **Quality of Alternatives.**

Four questions were used to assess how much participants felt they had quality alternatives to their hypothetical relationship. An ANOVA was run using the quality of alternatives questions as the dependent variable and level of quality alternatives (high vs. low) as the independent variable. Results indicated no significant differences between the high quality of alternatives and low quality of alternatives conditions [ $F(1, 679) = 1.07, p = 0.302, \eta^2 = 0.002$ ]. The mean for low quality of alternatives was 3.88 ( $SE = 0.07$ ) and the mean for high quality alternatives was 3.98 ( $SE = 0.08$ ). Therefore, results indicate that

the manipulation used for quality of alternatives was not successful and thus I did not include quality of alternatives in any further analysis.<sup>1</sup>

### **Descriptive Statistics**

The descriptive statistics for overall pursuit vs. aggressive behaviors, as well as the means for each subscale are presented in Table 1. Skewness and kurtosis reports were within normal ranges (-2 to 2). Further, a pair-sample test revealed that participants were significantly more likely to report a willingness to engage in pursuit tactics than aggressive tactics [ (1, 368)= 499.92,  $p < 0.005$ ,  $\eta^2 = .58$ ].

---

<sup>1</sup> In hypothesis testing, quality of alternatives was included in analyses, but there were no significant findings, further reinforcing the need to drop the variable.

Table 1

*Descriptive Statistics of ORI*

	Mean	Standard Deviation
Hyper-intimacy	2.43	1.19
Mediated Contacts	1.71	0.98
Interaction Contacts	1.61	1.00
Overall Pursuit	1.94	0.90
Surveillance	1.20	1.07
Invasion	0.80	1.06
Harassment	1.07	1.04
Coercion	0.62	1.07
Violence	0.59	1.04
Overall Aggressive	0.83	0.94
ORI Total	1.25	0.83

**Hypothesis Testing**

For hypothesis testing, a profile analysis was performed on two subscales of the ORI scale: pursuit behaviors and aggressive behaviors. Profile analysis is a type of multivariate analysis of variance (MANOVA) used when there are several dependent variables (DVs) measured on the same subscale. Repeated measures ANOVAs are used to measure a single DV that is measured more than once; however, the two different subscales require the use of profile analysis (Tabachnick & Fidell, 2006).

A profile analysis was run using Investment and Type of Rejection as the between-subjects factors and ORI type (pursuit vs. aggressive) in the place of the within-subjects factor. As anticipated, results indicated a significant main effect for type of rejection on combined ORI scores,  $F(2, 675) = 10.311, p < .000, \eta^2 = 0.03$ . Tukey's HSD post-hoc tests only revealed a significant difference between the types of rejection when it comes to pursuit ORI behaviors,  $F(2, 666) = 17.62, p < .001, \eta^2 = 0.05$ . The means for each condition are as follows: no rejection ( $M = 2.188, SE = 0.058$ ), internal rejection ( $M = 1.695, SE = 0.059$ ), and external rejection ( $M = 1.95, SE = 0.057$ ). There was no significant difference between internal and external rejection conditions for ORI Total.

Further examination of the effect of rejection on ORI pursuit vs. aggressive behaviors, yielded a significant interaction of rejection and type of ORI,  $F(2, 676) = 18.18, p < .005, \eta^2 = 0.05$ . Tukey's HSD post-hoc tests revealed that participants in the no rejection condition had higher scores on the pursuit ORI scale than participants in either the internal or external rejection conditions. The means for each condition were as follows: no rejection ( $M = 2.19, SD = 0.75$ ), external rejection ( $M = 1.95, SD = 0.86$ ), and internal ( $M = 1.69, SD = 1.01$ ).

An additional analysis separating out the sub-scales of the pursuit ORI scale was conducted. Of the three sub-scales for pursuit behaviors (i.e., hyperintimacy, mediated contacts, and interactional contacts), significant differences between the types of rejection were found for hyperintimacy [ $F(2, 676) = 28.466, p < 0.005, \eta^2 = 0.07$ ] and mediated contacts [ $F(2, 674) = 9.701, p < 0.005, \eta^2 = 0.027$ ]. Participants who experienced no rejection ( $M = 2.81, SD = 0.73$ ) were more likely to engage in hyperintimacy behaviors than those in either the external rejection conditions ( $M = 2.46, SD = 0.81$ ) and internal rejection

conditions ( $M=1.99, SD=0.76$ ). Further, participants who experienced no rejection ( $M=1.93, SD=0.77$ ) were more likely to engage in mediated contacts than participants who experienced internal rejection ( $M=1.53, SD=0.85$ ) and external rejection ( $M=1.66, SD=0.82$ ). Although significantly different from no rejection, there was no significant difference found between participants experiencing internal rejection and external rejection. No significant differences were found between rejection conditions with regard to aggressive ORI.

Further, I predicted that the elements of the IM would lead to an increase in persistent pursuit behaviors. Specifically, I predicted that a higher investment in one's relationship and a low quality alternative would lead to an increase in pursuit behaviors. Results indicated a significant difference between high investment ( $M=2.02, SD=0.93$ ) and low investment ( $M=1.87, SD=0.86$ ) conditions, where individuals highly invested in their relationships were more likely than individuals not invested in their relationships to engage in pursuit behaviors,  $F(2, 680) = 4.29, p < .04, \eta^2 = .01$ . Given the nonsignificance of the quality of alternatives manipulation, I did not include a test of quality of alternatives effect on ORI. Therefore, hypothesis two is partially confirmed.

In order to identify the driving force behind investment's effect on ORI, specifically pursuit ORI, I conducted exploratory simple comparisons. I started by combining the two types of rejection (i.e., internal and external) since there was no significant difference between the two conditions. Then I created four groups: rejected but not invested, rejected but invested, not rejected and not invested, and not rejected but invested. I ran an ANOVA including these combined categories as the IV and pursuit ORI as the DV, then ran LSD post-hoc tests to determine where higher frequencies of

pursuit behaviors were reported. I excluded aggressive ORI from the analysis because previous analysis did not yield significant results for aggressive ORI. Results of the simple effects comparison indicated a significant difference between individuals who were not rejected, but invested and individuals who were rejected, but not invested,  $F(2, 678) = 10.35, p < .005, \eta^2 = .04$ . Specifically, I found that individuals who were not rejected, but invested ( $M = 2.23, SD = 0.78$ ) engaged in more pursuit behaviors than individuals who were rejected and not invested ( $M = 1.74, SD = 0.89$ ). Additionally, I found a difference between individuals who did not experience rejection, but were invested ( $M = 2.15, SD = 0.88$ ) and individuals who were rejected, but not invested ( $M = 1.74, SD = 0.89$ ). A graph of these results can be seen in Figure 2.

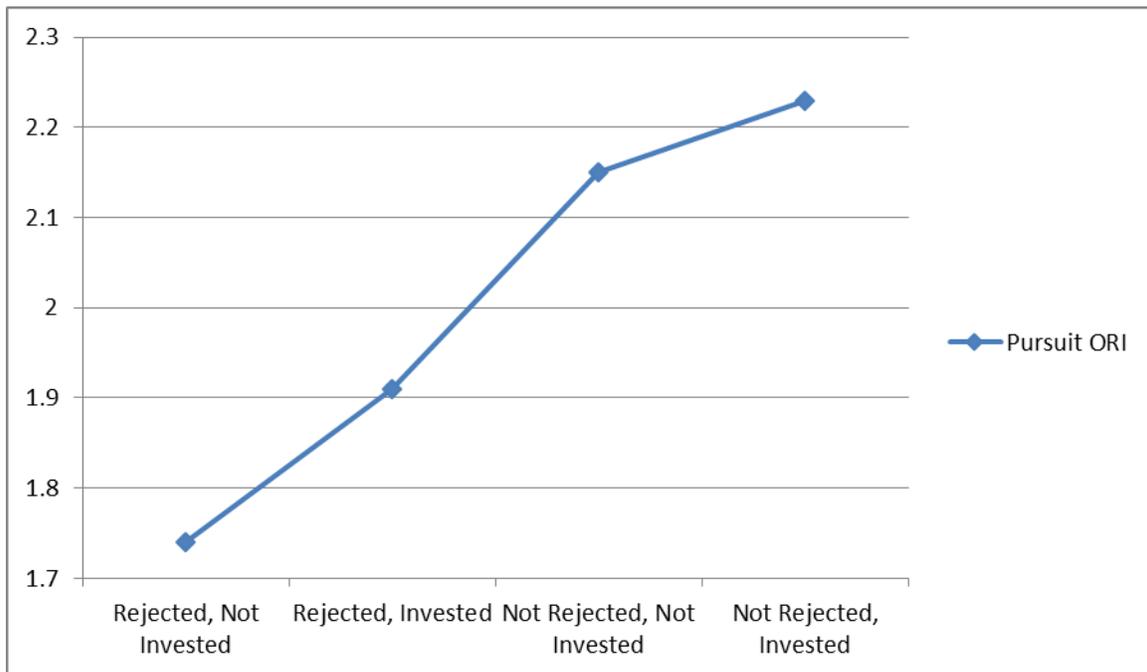


Figure 2. Means of combined Rejection and Investment on Pursuit ORI

Finally, I predicted a three-way interaction between Investment, Quality of Alternatives, and Rejection. Specifically, I believed that highly invested individuals with low quality alternatives to their relationship who were internally rejected would be the most likely to engage in aggressive ORI behaviors post breakup. Again, as the quality of alternatives manipulation was ineffective, this three-way interaction could not be examined. However, I was able to examine the possible interaction of Investment and rejection type. This was found to be non-significant,  $F(2,680) = .016$ ,  $p = \text{NS}$ . Therefore, hypothesis three was not confirmed.

## CHAPTER IV

### CONCLUSION

The IM states that individuals with high investment, high satisfaction, and low quality of alternatives to an existing relationship will be more committed to maintaining their present relationship. In previous research individual components of the IM have been used to examine both stalking and intimate partner violence (Dutton & Winstead, 2006; Gaertner & Foshee, 1999; Mullen et al., 2000; Slotter et al., 2012). The present study manipulated two components of the Investment model: investment and quality of alternatives. While results of the present study demonstrated that investment in one's relationship is a factor in one's decision to persist in that relationship, which is consistent with Rusbult's (1980) IM. However, the present study did not find that quality alternatives had any effect on persistence in one's relationship.

In addition to aspects of the IM, type of rejection was also found to affect pursuit ORI tactics. Although type of rejection was found to be significant, it was individuals in the no rejection condition who were the most likely to report that they would engage in pursuit ORI tactics. However, in no situation was it the case that those externally rejected (i.e., the reasoning behind the breakup was situational and had nothing to do with the individual) were significantly different in their response from those internally rejected on ORI. Rather, the manipulation seemed to only show a contrast between rejected and not rejected scenarios. This finding is in contrast with previous findings of Sinclair and

colleagues (2011), where individuals who were internally rejected (i.e., direct, explicit rejection that places the reasoning for the relationship termination on the individual) were most likely to engage in aggressive ORI tactics. The results of the present study are also inconsistent with previous findings of Mullen and colleagues (2000), where individuals were found to admit their willingness to engage in more aggressive behaviors post breakup as opposed to when the relationship was intact as I found no difference in the likelihood to engage in aggression across conditions. Reports of aggressive responses were consistently low. Yet numerous other studies have linked rejection and aggression (see Baumeister et al., 1998 for review), such as Buckley and colleagues (2004). Thus it is surprising that the present study did not find that either type of rejection resulted in reports of a higher likelihood to engage aggressive behaviors as measured by the ORI scale.

Rather, results indicate that individuals were more likely to report a willingness to engage in pursuit behaviors, rather than aggressive behaviors. In fact, none of the potential differences of the manipulations of either rejection or investment on the aggressive subscales were found to be significant. Instead, the present study demonstrated that individuals who were not rejected and invested were the most likely to engage in the pursuit behaviors of hyperintimacy and mediated contacts, which include behaviors of leaving gifts, flirting, and leaving affectionate voicemails. Given there was no rejection, these behaviors were not unwanted. Thus, it could be that the present study is really an examination of relationship maintenance more so than about unwanted pursuit behaviors post breakup.

## **Limitations**

A major limitation of the current study is the nonsignificance of the quality of alternatives manipulation. One reason could be that the quality of the alternative in my scenario was described as either “attractive” with a lot in common with the participant or “not very attractive” with not very much in common with the participant. A stronger quality of alternatives manipulation could be to use pictures of attractive and unattractive individuals. Viewing an image of an attractive, quality alternative (or an unattractive, non-quality alternative) would likely have more of an impact on someone than simply reading “You have always found this person to be attractive.” Alternatively, introducing a past partner as interested in reigniting a relationship that was missed might also be a more effective manipulation. Further explorations into how to effectively manipulate the perception of alternatives would be worthwhile for this study and others seeking to experimentally test aspects of the IM.

Another limitation of the current study is the use of the convenient college student sample. With a majority of the participants being under 20 years of age, it could be argued that the results of this study do not reflect the behaviors of the adult population. However, it has been found that individuals between the ages of 18 and 24 are the most likely to experience stalking (Baum et al., 2009; Spitzberg & Rhea, 1999); therefore, using a college sample for stalking research could be the most relevant age group to study.

An additional concern of the present study is the lack of replication of Sinclair and colleagues (2011) study with regard to which type of rejection leads to individuals being more likely to engage in aggressive ORI. Although the present study was similar

to Sinclair et al.'s design, there are several differences between the present study and Sinclair et al.'s study. For example, the present study was conducted as an online survey format whereas Sinclair and colleagues had participants come into the laboratory to be monitored while participating in her study. Secondly, Sinclair et al.'s study involved a depletion of self-regulation prior to participants filling out the ORI scale. Finally, the present study created a new hypothetical vignette that differed from Sinclair and colleagues. Therefore, it could be the differences in study design that is responsible for the difference in findings.

Finally, the use of survey style research could be considered a limitation due to participant responding fatigue, as well as socially desirable responding. However, a majority of stalking research is survey in nature. This study has an experimental component in order to examine relational variables that could affect one's likelihood to persist after a relationship post breakup. Therefore, while the survey style of the present study could be the cause for lack of significance in my hypotheses, this has not proven to be a limitation in published stalking research thus far. Nonetheless, if a behavioral measure of stalking could be emulated in the lab this would likely add to the validity of any conclusions - significant or non-significant. However, multiple challenges exist with operationalizing stalking behavior in a laboratory setting. For although numerous proxies for aggressive behavior exist (e.g., shocks, white noise, voodoo dolls, uncomfortable yoga poses, hot sauce) in the research literature these are usually examined as one-time "attacks" on another in the lab setting. Stalking requires a *pattern* of behavior. Further, a lot of the most prototypical stalking behavior is "surveillance" which could be difficult to recreate in a lab setting and still be interpretable as having hostile motives. Other

challenges exist to the behavioral operationalization of stalking in a lab, see Davis et al., 2012 or Sinclair et al., 2011 for discussion.

### **Implications and Future Directions**

Two components of the IM were manipulated in the present study: the effects of amount of investment and quality of alternatives on one's likelihood to persist after a relationship. Although the investment manipulation was found to work (and investment proved to be a significant factor in one's decision to engage in pursuit ORI), quality of alternatives manipulation did not work. Therefore, it could be that a stronger manipulation quality of alternatives should be used in the future. The present study found that individuals who are not rejected but highly invested in a relationship will persist in that relationship, which can be considered engaging in relationship maintenance and therefore, wanted pursuit. However, clinical samples of stalking perpetrators have found that investment and quality alternatives to the relationship affect the length of unwanted pursuit post breakup (Mullen et al., 2000); therefore, it is important to continue to test these components of the IM to determine when a high investment will lead to pursuit post breakup. Additionally, future research could include the components of the IM that were not manipulated in the present study (i.e., satisfaction and commitment) in order to test the model as a whole. Slotter and colleagues' (2012) recent study discusses commitment as an inhibitor of intimate partner violence; therefore, commitment could be further investigated to determine if one's commitment to their present relationship that keeps them from engaging in unwanted pursuit (and even stalking) behaviors. Further, with regard to the IM as a whole, it could be argued that highly satisfied people (and therefore, individual's committed to their relationship) persist post breakup because the

relationship makes them happy; however, it could also be argued that despite a low satisfaction with one's relationship, individuals may persist because of their high investment and lack of alternatives to the relationship (and therefore, individual's committed to their relationship). More research is needed to determine the role satisfaction and commitment play in one's willingness to engage in unwanted pursuit behaviors.

With regard to rejection, the present study found that when participants were not rejected and there was no relationship termination, they were more likely to report planning to engage in pursuit behaviors than individuals experiencing both direct and indirect rejection. Previous findings have shown that a more direct approach to relationship termination leads to an increase in aggressive behaviors post breakup (Sinclair et al., 2011). However, other researchers advocate that a direct rejection will reduce post breakup persistence (Carll, 1999; de Becker, 2002). Future research is needed to parse the differences in when a rejection (or no rejection at all) leads to mere pursuit behaviors as opposed to the times when a rejection leads to more severe, stalking-related aggressive behaviors. It could be that letting one down easy results in more courtship persistent type behaviors, such as calling and leaving gifts, whereas taking a more direct approach to relationship termination could lead to the more stalking behaviors. This was originally proposed by Sinclair et al. (2011), but they still found that those let down easy engaged in the lowest amount of ORI.

In addition to testing the IM as a whole and dissecting type of rejection further to determine if different types of rejection lead to different types of post breakup behaviors, future research should determine the motives for the different types of post breakup

behaviors. For example, if one's motivation for post breakup persistence is to regain the relationship, s/he may be motivated to engage in more pursuit type behaviors. Further, if one's motivation post breakup is for revenge against his/her former partner, s/he may be motivated to engage in more aggressive behaviors. The latter is likely more of concern to stalking researchers than the former.

Finally, the present study is in conflict with the results of Sinclair and colleagues (2011). First, the present study did not find individuals as a whole being likely to engage in any type of aggressive ORI. Further, when participants did engage in pursuit ORI, they only engaged in the hyperintimacy and mediated contacts behaviors that can be seen as relationship promoting behaviors, and not necessarily unwanted pursuit especially when engaged in while presently in a committed relationship. For example, no difference was found between individuals' likelihood of reporting the likelihood to engage in mediated contacts when either internally or externally rejected. However, the difference exists between individuals who were not rejected (i.e., and therefore no relationship termination) and individuals who were rejected, both internally and externally. This suggests that the behaviors engaged in could be more about maintaining and strengthening a relationship than about getting one's love interest back post breakup, which begs the question –what is the ORI measuring? Whereas Cupach and Spitzberg (2004) have factored the scale into two larger factors (pursuit and aggressive behaviors), research work conducted by Fay (2012) found that the scale could be factored into three subscales –pursuit, aggressive, and surveillance behaviors. As an exploratory measure, I conducted a principal components factor analysis and consistent with Fay's work, I found that the ORI could be factored into three subscales instead of two, with the third subscale

being surveillance items. While Cupach and Spitzberg (2004) divided the behaviors into pursuit and aggressive, then further divided each factor into a set of subscales (with surveillance being a subscale of aggressive behavior), I found that all but one surveillance item loaded on one factor, separate from all other items. Future researchers using the ORI scale should consider using a three-factor model instead of the recently suggested two-factor model and might further consider whether the pursuit behaviors are in fact obsessive and intrusive, or are in fact more relational.

### **Take Home Point**

The present study seems to tell a tale of relationship maintenance behaviors more than a tale of unwanted pursuit post breakup. It could be that when one member of a relationship appears to be pulling away (i.e., unable to keep plans with his/her significant other), one tends to engage in relationship maintenance behaviors such as leaving gifts, flirting, and sending affectionate text messages. Although engaging in such behaviors post breakup could be viewed as unwanted pursuit, engaging in such behaviors while in a relationship with someone is relationship maintenance and therefore, wanted pursuit behaviors.

## REFERENCES

- Baum, K., Catalina, S., Rand, M., & Rose (2009). *Stalking Victimization in the United States*. Washington DC: The United States Department of Justice. Office of Justice Programs, Bureau of Justice Statistics.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: is the active self a limited resource? *Journal of Personality and Social Psychology, 74*, 1252–1265.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Baumeister, R. F., & Vohs, K. D. (2004). Four roots of evil. In A. G. Miller (Ed.) *The Social Psychology of Good and Evil* (pp. 85-101). New York: Guilford Press.
- Brewster, M. P. (2000). Stalking by former intimates: Verbal threats and other predictors of physical violence. *Violence and Victims, 15*, 41-54.
- Buckley, K. E., Winkel, R. E., & Leary, M. R. (2004). Reactance to acceptance and rejection: Effects of level and sequence relational evaluation. *Journal of Experimental and Social Psychology, 40*, 14-28

- Carll, E. K. (1999). *Violence in our lives: Impact on workplace, home, and community*.  
Needham Heights, MA: Allyn & Bacon.
- Cupach, W. R. & Spitzberg, B. H. (1998). Obsessive relational intrusion and stalking. In:  
B. H. Spitzberg & W. R. Cupach (1998). *The dark side of close relationships*. (pp.  
233–263). Hillsdale, NJ: Erlbaum.
- Cupach, W. R. & Spitzberg, B. H. (2000). Obsessive relational intrusion: incidence,  
perceived severity, and coping. In K. E. Davis, I. H. Frieze, & R. D. Maiuro (Eds.),  
*Stalking: Perspectives on victims and perpetrators* (pp. 138-160). New York:  
Springer.
- Cupach, W. R. & Spitzberg, B. H. (2004). *The Dark Side of Relationship Pursuit: From  
Attraction to Obsession and Stalking*. Mahwah, NJ: Lawrence Erlbaum  
Associates.
- Davis, K. E., Swan, S. C., & Gambone, L. J. (2012). Why doesn't he just leave me alone?  
Persistent pursuit: A critical review of theories and evidence. *Sex Roles*, 66(5-6),  
328-339
- de Becker, G. (2002). *The gift of fear: Survival signals that protect us from violence*. New  
York: Dell.
- Dutton, L. B., & Winstead, B. A. (2006). Predicting unwanted pursuit: Attachment,  
relationship satisfaction, relationship alternatives, and break-up distress. *Journal  
of Social and Personal Relationships*, 23, 565-586.

- Emerson, R. M., Ferris, K. O., & Gardner, C. B. (1998). On being stalked. *Social Problems, 45*, 289-314.
- Fay, B. (2012). *Rejection, rumination, and revenge: A test of the relational goal pursuit theory of stalking perpetration*. (Order No. 1516356, Mississippi State University). *ProQuest Dissertations and Theses*, , 101. Retrieved from <http://search.proquest.com/docview/1036656971?accountid=34815>. (1036656971).
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford, CT: Stanford University Press.
- Folks, V. S. (1982). Communicating the reasons for social rejection. *Journal of Experimental Social Psychology, 18*, 235-252.
- Frieze, I. H., Davis, K. E., & Maiuro, R. D. (2000). *Violence and Victims, 15*, Special Issue.
- Gaertner, L., & Foshee, V. (1999). Commitment and the perpetration of relationship violence. *Personal Relationships, 6*, 227-239.
- Gerber, J., & Wheeler, L. (2009). On being rejected: A meta-analysis of experimental research on rejection. *Perspectives on Psychological Science, 4*, 468-488.
- Heider, F. (1958). *The psychology of interpersonal relationships*. Hillsdale, NJ: Lawrence Erlbaum Associates.

- Kam, J. A. & Spitzberg, B. H. (2005). *A test of a relational goal pursuit theory of unwanted relationship pursuit*. Paper presented to the Interpersonal Communication Division of Western States Communication Association Conference, San Francisco, CA.
- Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence*. New York: Wiley.
- Langhinrichsen-Rohling, J., Palarea, R. E., Cohen, J., & Rohling, M. L. (2000). Breaking up is hard to do: Unwanted pursuit behaviors following the dissolution of a romantic relationship. *Violence and Victims, 15*, 73-90.
- Le, B., & Agnew, C. R. (2003). Commitment and its theorized determinants: A meta-analysis of the investment model. *Personal Relationships, 10*, 37-57.
- Leary, M. R. (2005). Sociometer theory and the pursuit of relational value: Getting to the root of self-esteem. *European Review of Social Psychology, 16*, 75-111.
- Leary, M. R., Twenge, J. M., & Quinlivan, E. (2006). Interpersonal rejection as a determinant of anger and aggression. *Personality and Social Psychology Review, 10*, 111-132.
- Logan, T. K., Leukfeld, C., & Walker, B. (2000). Stalking as a variant of intimate violence: Implications from a young adult sample. *Violence & Victims, 15*, 91-111.

- Molden, D. C., Lucas, G. M., Gardner, W. L., Dean, K., & Knowles, M. L. (2009). Motivation for prevention or promotion following social exclusion: Being rejected versus being ignored. *Journal of Personality and Social Psychology, 96*, 415-431.
- Mullen, P. E., Pathé, M., & Purcell, R. (2000). The rejected stalking and the resentful stalker. In P.E. Mullen, M. Pathé, & R. Purcell (Eds), *Stalkers and their victims* (pp. 79-97). New York: Cambridge University Press.
- Rosenfeld, B., Galietta, M., & Ivanoff, A., Garcia-Mansilla, A., Martinez, R., Fava, J., ..., Green, D. (2007). Dialectical behavior therapy for the treatment of stalking offenders. *The International Journal of Forensic Medical Health, 6*, 95-103.
- Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16*, 172-186.
- Rusbult, C. E., Drigotas, S. M., & Verette, J. (1994). The Investment Model: An interdependence analysis of commitment processes and relationship maintenance phenomena. In D. J. Canary & L. Stafford (Eds), *Communication and relational maintenance* (pp. 115-139). San Diego: Academic Press.
- Rusbult, C. E., & Martz, J. M. (1995). Remaining in an abusive relationship: An investment model analysis of nonvoluntary dependence. *Personality and Social Psychology Bulletin, 21*, 558-571.

- Rusbult, C. E., Martz, J. M., & Agnew, C. A. (1998). The Investment Model: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships, 5*, 357-391.
- Sheridan, L., & Davies, G. M. (2001). Violence and the prior victim-stalker relationship. *Criminal Behavior and Mental Health, 11*, 102-116.
- Sinclair, H. C., & Frieze, I. H. (2002). Initial courtship behavior and stalking: How should we draw the line? In K. E. Davis, I. H. Frieze, & R. D. Maiuro (Eds), *Stalking: Perspectives on victims and perpetrators* (pp. 138-160). New York: Springer Publishing.
- Sinclair, H. C., Ladny, R. T., & Lyndon, A. (2011). Adding insult to injury: Effects of interpersonal rejection types and self-regulation on obsessive relational intrusion. *Aggressive Behavior, 37*, 503-520.
- Slotter, E. B., Finkel, E. J., DeWall, C. N., Pond, R. S., Lambert, N. M., Bodenhausen, G., & Fincham, F. (2012). Putting the brakes on aggression toward a romantic partner: The inhibitory influence of commitment. *Journal of Personality and Social Psychology, 102*, 291-305
- Spitzberg, B. H., & Cupach, W. R. (2007). The state of the art of stalking: Taking stock of the emerging literature. *Aggression and Violent Behavior, 12*, 64-86.
- Spitzberg, B. H., & Rhea, J. (1999) Obsessive relational intrusion and sexual coercion of victimization. *Journal of Interpersonal Violence, 14*, 3-20.

Tabachnick, B. G., & Fidell, L. S. (2006). *Using Multivariate Statistics* (5<sup>th</sup> ed.). New Jersey: Pearson.

Tjaden, P., & Thoennes, N. (1998). *Stalking in America: Findings from the national violence against women survey*. Washington, DC: National Criminal Justice Reference Service.

Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001) If you can't join them, beat them: Effects of social exclusion on aggressive behavior. *Journal of Personality & Social Psychology*, *81*, 1058-1069.

Twenge, J. M., & Campbell, W. K. (2003). "Isn't it fun to get the respect that we're going to deserve?" Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin*, *29*, 261-273.

APPENDIX A  
INVESTMENT AND QUALITY OF ALTERNATIVES  
HYPOTHETICAL VIGNETTES

**NOTE: The scenario presented will be presented in 2 parts. This is Part 1. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

### **Hypothetical Vignette 1 (High investment, Low quality of alternatives)**

Italicized portions are the manipulations of the independent variables.

You and your significant other have been *seriously* dating for *over a year*. The two of you are not able to spend as much time together as you would like, given that you are a student at Mississippi State University, and your significant other attends Ole Miss. *However, the two of you switch off driving to see each other every other weekend and spend a small fortune in text and cell phone costs texting throughout the day and calling each night. But it is all worth it, you are constantly reminiscing and laughing about how much fun the two of you had over the summer when you spent almost all of your time together hanging out together with your group of friends – that was how you met the previous year. You both share a lot of friends and your friends tell you how they have never seen you invest as much in a relationship as you have in this one.* **(high investment)** So despite not being able to spend as much time together as you would like, you tell your friends s/he makes you very happy. You greatly enjoy the time you do get to spend together.

One weekend, you and your friends decide to all go out one night when your significant other isn't visiting. While out, you meet a new guy/girl who you realize is in your psychology class. *You find this guy/girl very attractive* and decide to strike up a conversation about the class and how hard you think the upcoming test will be. You decide to exchange numbers and plan to study together for the upcoming test. After a few get-togethers to study, *you realize how much you have in common with him/her.* **(high quality of alternatives)** *Still,* you find yourself thinking frequently of your significant other. You are about to head home on Tuesday for the Thanksgiving holidays, and you know you will see your significant other and get to spend time with him/her.

**NOTE: The scenario presented will be presented in 2 parts. This is Part 1. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

### **Hypothetical Scenario 2 (High investment, Low quality of alternatives)**

Italicized portions are the manipulations of the independent variables.

You and your significant other have been *seriously* dating for *over a year*. The two of you are not able to spend as much time together as you would like, given that you are a student at Mississippi State University, and your significant other attends Ole Miss. *However, the two of you switch off driving to see each other every other weekend and spend a small fortune in text and cell phone costs texting throughout the day and calling each night. But it is all worth it, you are constantly reminiscing and laughing about how much fun the two of you had over the summer when you spent almost all of your time together hanging out together with your group of friends – that was how you met the previous year. You both share a lot of friends and your friends tell you how they have never seen you invest as much in a relationship as you have in this one.* **(high investment)** So despite not being able to spend as much time together as you would like, you tell your friends s/he makes you very happy. You greatly enjoy the time you do get to spend together.

One weekend, you and your friends decide to all go out one night when your significant other isn't visiting. While out, you meet a new guy/girl who you realize is in your psychology class. *You never found this guy/girl attractive but decide to strike up a conversation about the class and how hard you think the upcoming test will be. You decide to exchange numbers and plan to study together for the upcoming test. After a few get-togethers to study, you realize how little you have in common with him/her.* **(low quality of alternatives)** Thus, you find yourself thinking frequently of your significant other. You are about to head home on Tuesday for the Thanksgiving holidays, and you know you will see your significant other and get to spend time with him/her.

**NOTE: The scenario presented will be presented in 2 parts. This is Part 1. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

### **Hypothetical Scenario 3 (Low investment, High quality of alternatives)**

Italicized portions are the manipulations of the independent variables.

You and your significant other have been *casually* dating for *a few months*. So far, the relationship has been everything you could want. Your significant other satisfies all of your needs, both physically and emotionally. The two of you are not able to spend as much time together as you would like, given that you are a student at Mississippi State University, and your significant other attends Ole Miss. *You haven't been able to afford to drive to see each other every other weekend as you thought you might and keep missing each other's phone calls. When you do talk, you find you mostly talk about what you did over the summer when you met but because that is basically the experience you've shared so far, you don't really even share a lot of friends, just some acquaintances back home. Your friends tell you that they have seen you invest more in other relationships than you have in this one.* **(low investment)** *Still* despite not being able to spend as much time together as you would like, you tell your friends s/he makes you very happy. You greatly enjoy the time you do get to spend together.

One weekend, you and your friends decide to all go out one night when your significant other isn't visiting. While out, you meet a new guy/girl who you realize is in your psychology class. *You find this guy/girl very attractive* and decide to strike up a conversation about the class and how hard you think the upcoming test will be. You decide to exchange numbers and plan to study together for the upcoming test. After a few get-togethers to study, *you realize how much you have in common with him/her.* **(high quality of alternatives)** *Still*, you find yourself thinking frequently of your significant other. You are about to head home on Tuesday for the Thanksgiving holidays, and you know you will see your significant other and get to spend time with him/her.

**NOTE: The scenario presented will be presented in 2 parts. This is Part 1. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

#### **Hypothetical Scenario 4 (Low investment, Low quality of alternatives)**

Italicized portions are the manipulations of the independent variables.

You and your significant other have been *casually* dating for *a few months*. So far, the relationship has been everything you could want. Your significant other satisfies all of your needs, both physically and emotionally. The two of you are not able to spend as much time together as you would like, given that you are a student at Mississippi State University, and your significant other attends Ole Miss. *You haven't been able to afford to drive to see each other every other weekend as you thought you might and keep missing each other's phone calls. When you do talk, you find you mostly talk about what you did over the summer when you met but because that is basically the experience you've shared so far, you don't really even share a lot of friends, just some acquaintances back home. Your friends tell you that they have seen you invest more in other relationships than you have in this one.* **(low investment)** *Still* despite not being able to spend as much time together as you would like, you tell your friends s/he makes you very happy. You greatly enjoy the time you do get to spend together.

One weekend, you and your friends decide to all go out one night when your significant other isn't visiting. While out, you meet a new guy/girl who you realize is in your psychology class. *You never found this guy/girl attractive* but decide to strike up a conversation about the class and how hard you think the upcoming test will be. You decide to exchange numbers and plan to study together for the upcoming test. After a few get-togethers to study, *you realize how little you have in common with him/her.* **(low quality of alternatives)** *Thus,* you find yourself thinking frequently of your significant other. You are about to head home on Tuesday for the Thanksgiving holidays, and you know you will see your significant other and get to spend time with him/her.

APPENDIX B  
INVESTMENT AND QUALITY OF ALTERNATIVES  
MANIPULATION CHECKS

**The following questions will ask you to recall the relationship and details about the relationship you have read about in the scenario. Please indicate the degree to which you agree with each of the following statements regarding your relationship in the scenario.**

1. I have invested a great deal into our relationship.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

2. My partner and I are very close, such that I think I would feel like the same person when s/he is not around.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

3. My partner and I seem to share many memories.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

4. I would be committed to trying to maintain my relationship with my partner.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

5. Many aspects of my life appear to be linked to my significant other.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

6. I could imagine being with my partner several years from now.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

7. I think I would feel very attached to my partner and our relationship.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

8. This relationship would make me very happy.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

9. This relationship would do a good job fulfilling my needs for intimacy, companionship, etc.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

10. I would be satisfied with my relationship.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

11. I would not feel very upset if my relationship were to end.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

12. I would not want our relationship to last for a very long time.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

13. Compared to my other relationships, I appear to have invested more in this one.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

14. I would lose things (e.g., time, effort, friends, money) if this relationship were to end.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

15. My alternatives for dates described in the scenario were attractive to me.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

16. If I weren't dating the person described in the scenario, I would do fine finding someone else quickly.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

17. I think my needs for intimacy, companionship, etc., could easily be fulfilled by another romantic relationship.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

18. I could easily find a more appealing person to date.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

19. There are more desirable people I could see myself dating.

1	2	3	4	5	6	7
Completely Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Completely Agree

APPENDIX C  
REJECTION HYPOTHETICAL VIGNETTE

**NOTE: This is the second part of the scenario. While reading, please keep the same relationship from the previous scenario in mind. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

### **Hypothetical Vignette 1 (Internal Rejection)**

Italicized portions are the manipulations of the independent variables.

Thanksgiving weekend, MSU is playing Ole Miss in Starkville. Your family has tickets in the Club Level and you have decided to invite your significant other to sit in the Club Level with your family. You have also arranged a party at your apartment for your significant other to meet your Starkville friends. When you and your significant other have your regularly scheduled Skype date one night, you tell him/her of the arrangements you have made for Thanksgiving.

Excitedly, you say “I can’t wait to introduce you to my friends and see my family. I think you are such an amazing person and I know they will too!” However, you begin to notice the silence and lack of excitement from your significant other and ask, “What’s wrong? Aren’t you excited?”

S/he responds, “*Well, I’m really not sure that is such a great idea. We haven’t really been getting along lately. You have changed so much from when we first started dating. I’m just not interested in you anymore. I don’t find this person you’ve become attractive. I just don’t see any future in a relationship with you. As far as the game goes, I am going with other people. I think it is best that we not see each other anymore. I really have to go. Sorry.*” **(internal rejection)** The call ends.

**NOTE: This is the second part of the scenario. While reading, please keep the same relationship from the previous scenario in mind. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

### **Hypothetical Vignette 2 (External Rejection)**

Italicized portions are the manipulations of the independent variables.

Thanksgiving weekend, MSU is playing Ole Miss in Starkville. Your family has tickets in the Club Level and you have decided to invite your significant other to sit in the Club Level with your family. You have also arranged a party at your apartment for your significant other to meet your Starkville friends. When you and your significant other have your regularly scheduled Skype date one night, you tell him/her of the arrangements you have made for Thanksgiving.

Excitedly, you say “I can’t wait to introduce you to my friends and family. I think you are such an amazing person and I know they will too!” However, you begin to notice the silence and lack of excitement from your significant other and ask, “What’s wrong? Aren’t you excited?”

S/he responds, “*Well, I’m really not sure that is such a great idea. I am going to be working all weekend. I have just been so busy lately. I rarely get to see my friends, family, or you, and I’m constantly stressed out about school, work, and getting into graduate school. I just don’t have any extra time for a relationship, and the distance doesn’t help. I really think it’s best for me if we just don’t see each other anymore. I really have to go. Sorry.*” **(external rejection)**  
The call ends.

**NOTE: This is the second part of the scenario. While reading, please keep the same relationship from the previous scenario in mind. Please read the following scenario carefully, as you will be asked to recount the story in your own words and provide answers to questions based on the scenario details afterwards. Remember, you are to read the scenario as if the events are actually happening to you. Imagine how you would think, act, and feel in this situation.**

### **Hypothetical Vignette 3 (No Rejection)**

Italicized portions are the manipulations of the independent variables.

Thanksgiving weekend, MSU is playing Ole Miss in Starkville. Your family has tickets in the Club Level and you have decided to invite your significant other to sit in the Club Level with your family. You have also arranged a party at your apartment for your significant other to meet your Starkville friends. When you and your significant other have your regularly scheduled Skype date one night, you tell him/her of the arrangements you have made for Thanksgiving.

Excitedly, you say “I can’t wait to introduce you to my friends and family. I think you are such an amazing person and I know they will too!” However, you begin to notice the silence and lack of excitement from your significant other and ask, “What’s wrong? Aren’t you excited?”

S/he responds, “*Well, I’m not really sure if that is going to work. It is so nice that you have arranged all this and I wish I could be there to meet your friends and see the game, but since its Thanksgiving weekend, I told my parents I would come home and spend the weekend with them. This just isn’t a good weekend. I really have to go finish some assignments before break. I’m sorry. I do still care about you a lot and will miss you.*” **(no rejection)** The call ends.

APPENDIX D  
PROCESSING QUESTIONS

1. What do you think will happen next in this scenario? Please be as specific as possible.

---

---

---

---

---

---

---

---

2. List THREE things you would FEEL in the situation you read?
3. List THREE things you would THINK in the situation you read?
4. List THREE things you would DO in the situation you read?

APPENDIX E  
FORCED CHOICE QUESTIONS

### “What Just Happened?”

Based on what you have just read, please write a summary of the events that happened to you and you partner. Describe what your partner did and how you reacted.

To be clear in stating: Please put all details in first person terms such as: "I felt..." and "My partner did..."

---

---

---

---

---

---

---

---

1. Where do you and your significant other attend school?
  - A) Both at Mississippi State
  - B) Both at Ole Miss
  - C) You at Mississippi State, s/he at Ole Miss
  - D) Auburn
  
2. How did you and your significant other meet?
  - A) Through a group of friends
  - B) Over the summer
  - C) Took a class together
  - D) At church
  
3. Which of the following is a reason that your boyfriend/girlfriend chose to not attend the football game with you?
  - A) does not like football
  - B) not physically/emotionally attracted to you anymore
  - C) apprehensive because there is not enough time for work, school, and friends
  - D) his/her parents disapprove of the relationship
  - E) it is Thanksgiving weekend and s/he is going home
  - F) is not feeling well
  
4. How many friends do you share with your significant other?
  - A) Almost all of our friends, we all hang out in a big group
  - B) Almost none, just a few acquaintances
  - C) I don't like any of my significant other's friends
  - D) My significant other doesn't have friends

5. What were you hoping would take place at the football game?
- A) s/he would get to meet your friends
  - B) you could find a way to break up with him/her
  - C) discussion about making a final commitment to each other
  - D) discussion about future vacation plans
6. What class were you taking that you needed to study for?
- A) Calculus
  - B) Psychology
  - C) History
  - D) English Lit

APPENDIX F  
OBSESSIVE RELATIONAL INTRUSION SCALE

## WHAT WOULD YOU DO?

Please answer the following questions. Think about the scenario you have just read, and consider all the aspects about it. If you were in that situation, how likely is it that you would actually **ENGAGE** in the following behaviors?

Use the following scale:

**0-definitely not, 1-probably not, 2- maybe not, 3- maybe, 4- probably, 5-definitely**

1. Leaving gifts (e.g., flowers, stuffed animals, photography, jewelry, etc.)

**Do**

**0 1 2 3 4 5**

2. Flirting (e.g., ask out on a date, smile, engage in a small talk, be sexually suggestive, etc.)

**Do**

**0 1 2 3 4 5**

3. Making exaggerated expressions of affection (e.g., saying "I love you" after limited interaction, doing large and unsolicited favors for her/him, etc.)

**Do**

**0 1 2 3 4 5**

4. Being especially nice (ingratiation) (e.g., performed favors, offer to do things for the person, etc.)

**Do**

**0 1 2 3 4 5**

5. Leaving messages of affection in person (e.g., romantically-oriented notes, cards, letters, messages with friends, etc.)

**Do**

**0 1 2 3 4 5**

6. Trying to repair or deepen the relationship (e.g., ask to be friends, ask to be taken back, etc.)

**Do**

**0 1 2 3 4 5**

7. Leaving affectionate electronic messages (e.g., expression of attraction or affection left on voice-mail, e-mail, instant messages, fax, etc.)

**Do**

**0 1 2 3 4 5**

8. Leaving electronic messages that he/she might consider “not nice” (e.g., expressions of insult or demands left on voice-mail, e-mail, instant messages, fax, etc.)

**Do**

**0 1 2 3 4 5**

9. Contacting 'live' through electronic media (e.g., talking to on the phone, exchanging e-mails-chat-IM, etc.)

**Do**

**0 1 2 3 4 5**

10. Sending messages through the mail (e.g., mailing notes, letters, pictures, etc., through the mail)

**Do**

**0 1 2 3 4 5**

11. Spamming (e.g., dumping large quantities of messages into his/her email, intruding into his/her chat or game space, crashing their computer)

**Do**

**0 1 2 3 4 5**

**12.** Having arguments or conflicts with the person (e.g., argued about relationship, complained to person, conversed with at work or school, etc.)

**Do**

**0 1 2 3 4 5**

**13.** Approaching the person (i.e., physically approached the person in attempt to initiate conversation but without actually talking)

**Do**

**0 1 2 3 4 5**

**14.** Making appearances (e.g., shown up at the person's work, school, gym, place of worship, etc.)

**Do**

**0 1 2 3 4 5**

**15.** Putting yourself in her/his interactions (e.g., "hover" around his/her conversations, interrupting an ongoing conversation with someone else, etc.)

**Do**

**0 1 2 3 4 5**

**16.** Putting yourself in her/his personal space (e.g., getting too close to her/him in conversation, touching her/him, etc.)

**Do**

**0 1 2 3 4 5**

**17.** Coordinating activities around the person (e.g., alter schedule to be more like this person's, going to places at times this person tends to be at, etc.)

**Do**

**0 1 2 3 4 5**

**18.** Loitering or hanging around (e.g., hanging around places in the hope of encountering or seeing this person, etc.)

**Do**

**0 1 2 3 4 5**

**19.** Following her/him around (e.g., following her/him to or from work, school, home, gym, daily activities, etc.)

**Do**

**0 1 2 3 4 5**

**20.** Watching her/him (e.g., driving by home or work, watching her/him from a distance, gazing at her/him in public places, etc.)

**Do**

**0 1 2 3 4 5**

**21.** Monitoring her/him or her/his behavior (e.g., calling to check on her/his whereabouts, checking up on her/him through mutual friends, checking his/her Facebook page etc.)

**Do**

**0 1 2 3 4 5**

**22.** Obtaining private information (e.g., listening to her/his message machine, taking photos of her/him without their knowledge, checking her/his mail or e-mail, etc.)

**Do**

**0 1 2 3 4 5**

**23.** Approaching or surprising her/him in public places (e.g., showing up at places such as stores, work, gym; etc.)

**Do**

**0 1 2 3 4 5**

24. Looking through her/his possessions OR personal property (e.g., getting into and entering her/his car, desk, backpack or briefcase; handling her/his possessions, etc.)

**Do**

**0 1 2 3 4 5**

25. Accessing her/his living space without his/her permission (e.g., getting access into her/his home, walking on lawn or property without his/her permission. etc.)

**Do**

**0 1 2 3 4 5**

26. Involving others in contacting the person (e.g., asking friends about him/her, talking to colleagues or family of the person to get information, etc.)

**Do**

**0 1 2 3 4 5**

27. Involving her/him in activities s/he is not interested in (e.g., enrolling her/him in programs, putting her/him on mailing lists, using her/his name as a reference, etc.)

**Do**

**0 1 2 3 4 5**

28. Contacting her/his friends, family, or coworkers (e.g., trying to befriend her/his friends, family or coworkers; seeking to be invited to social events, seeking employment at her/his work, etc.)

**Do**

**0 1 2 3 4 5**

29. Engaging in getting him/her in trouble with authority (e.g., filing official complaints with authorities, spreading false rumors to officials--boss, instructor, etc., obtaining a restraining order on her/him, etc.)

**Do**

**0 1 2 3 4 5**

**30.** Making vague actions or statements by (e.g., hang-up calls; notes, cards, letters, voice-mail, e-mail, messages with friends that may imply harm or potential harm, etc.)

**Do**

**0 1 2 3 4 5**

**31.** Saying you might hurt yourself (even if you do not mean it) (e.g., saying that something bad will happen to you, saying you will commit suicide, etc.)

**Do**

**0 1 2 3 4 5**

**32.** Saying you might hurt others she/he cares about (even if you do not mean it) (e.g., saying you will cause harm or making vague warnings about romantic partners, friends, family, pets, etc.)

**Do**

**0 1 2 3 4 5**

**33.** Saying you might hurt her/him personally (even if you do not mean it) (e.g., saying or making vague warnings that something bad will happen to her/him, saying you will personally hurt her/him, etc.)

**Do**

**0 1 2 3 4 5**

**34.** Leaving or sending her/him atypical objects (e.g., marked up photographs, photographs taken of her/him without her/his knowledge, pornography, weapons, etc.)

**Do**

**0 1 2 3 4 5**

**35.** Taking physical action towards her/him (e.g., throwing something at her/him, acting as if you will hit her/him, running finger across neck implying throat slitting, etc.)

**Do**

**0 1 2 3 4 5**

**36.** Physically restraining her/him (e.g., grabbing her/his arm, blocking her/his progress, holding the car door while she/he is in the car, etc.)

**Do**

**0 1 2 3 4 5**

**37.** Taking some valued possessions (e.g., vandalized her/his property; taking, damaged, or hurting thing only this person had access to, such as prior gifts, pets, etc.)

**Do**

**0 1 2 3 4 5**

**38.** Showing up at places they might not expect you to be (e.g., showing up at class, office or work, staring from across a street, being inside her/his home, etc.)

**Do**

**0 1 2 3 4 5**

**39.** Sexually coercing her/him (e.g., attempted/succeeded in kissing, feeling, or disrobing her/him, exposing yourself, forced sexual behavior, etc.)

**Do**

**0 1 2 3 4 5**

**40.** Physically hurting her/him (e.g., pushing or shoving her/him, slapping her/him, hitting her/him with fist, hitting her/him with an object, etc.)

**Do**

**0 1 2 3 4 5**

**41.** Trying to get him/her to go somewhere with you even though they do not really want to (e.g., using some force to do so, keeping her/him in a car or room; bound her/him; took her/him places against their will; etc.)

**Do**

**0 1 2 3 4 5**

**42.** Engaging in behavior that may endanger his/her or your own well-being (e.g., strangle her/him, trying to run her/him off the road, showing a weapon to her/him, using a weapon to subdue her/him, etc.).

**Do**

**0 1 2 3 4 5**

APPENDIX G  
REJECTION MANIPULATION CHECK

The following questions will ask you to recall the relationship and details about the relationship you have read about in the scenario. Please indicate the degree to which you agree with each of the following statements regarding your relationship in the scenario.

1. Do you feel like there was a breakup in the scenario? (*Circle one*)

0	1	2	3
No, no breakup	Yes, I broke up with him/her	Yes, s/he broke up with me	Yes, it was a mutual breakup

2. If there was a breakup, to what extent was the PRIMARY reason for the breakup due to something about you or some other reason?

- A) No breakup
- B) Was due to something about me
- C) Was due to something about my partner
- D) Was due to something about the both of us
- E) Was due to some external/situational factor (e.g., parental disapproval, moving, work/school demands)

3. How “*accepted or rejected*” did you feel when talking to your boyfriend/girlfriend?

0	1	2	3	4	5
very rejected	somewhat rejected	slightly rejected	slightly accepted	somewhat accepted	very accepted

4. How “*mean or nice*” do you think your boyfriend/girlfriend was towards you?

0	1	2	3	4	5
very mean	somewhat mean	slightly mean	slightly nice	somewhat nice	very nice

5. How “*direct* or *indirect*” do you think your boyfriend/girlfriend was when talking to you?

0	1	2	3	4	5
very indirect	somewhat indirect	slightly indirect	slightly direct	somewhat direct	very direct

6. How “*unclear* or *clear*” do you think your boyfriend/girlfriend was when giving you reasons?

0	1	2	3	4	5
very unclear	somewhat unclear	slightly unclear	slightly clear	somewhat clear	very clear

7. How “*unsatisfied* or *satisfied*” were you with your boyfriend/girlfriend’s explanations?

0	1	2	3	4	5
very unsatisfied	somewhat unsatisfied	slightly unsatisfied	slightly satisfied	somewhat satisfied	very satisfied

8. How “*unresolved* or *resolved*” do you think the current issue with your boyfriend/girlfriend is?

0	1	2	3	4	5
completely unresolved	somewhat unresolved	slightly unresolved	slightly resolved	somewhat resolved	completely resolved

9. How “*likely or unlikely*” is it that your relationship with your boyfriend/girlfriend will survive?

0	1	2	3	4	5
very unlikely to survive	somewhat unlikely to survive	slightly unlikely to survive	slightly likely to survive	somewhat likely to survive	very likely to survive

10. How “*likely or unlikely*” is it that you will move on to a new relationship with someone else?

0	1	2	3	4	5
very unlikely to move on	somewhat unlikely to move on	slightly unlikely to move on	slightly likely to move on	somewhat likely to move on	very likely to move on

11. How “*strong or weak*” do you think your relationship with your boyfriend/girlfriend is?

0	1	2	3	4	5
very weak	somewhat weak	slightly weak	slightly strong	somewhat strong	very strong

12. To what extent do you feel your relationship with your boyfriend/girlfriend is “*over or continuing?*”

0	1	2	3	4	5
definitely over	probably over	maybe over	maybe NOT over	probably NOT over	definitely NOT over

13. How “*likely or unlikely*” do you think it is that you will end up alone?

0	1	2	3	4	5
very unlikely to end up alone	somewhat unlikely to end up alone	slightly unlikely to end up alone	slightly likely to end up alone	somewhat likely to end up alone	very likely to end up alone

14. How “*honest or dishonest*” do you think your boyfriend/girlfriend was when talking to you?

0	1	2	3	4	5
completely dishonest	mostly dishonest	slightly dishonest	slightly honest	mostly honest	completely honest

15. To what extent do you feel your boyfriend/girlfriend was “*serious* (meant what s/he said) or *not serious* (didn’t really mean it)?”

0	1	2	3	4	5
definitely meant it	probably meant it	maybe meant it	maybe didn’t mean it	probably didn’t mean it	definitely didn’t mean it

16. How “*considerate* or *inconsiderate*” of your feelings do you think your boy/girlfriend was trying to be?

0	1	2	3	4	5
very inconsiderate	somewhat inconsiderate	slightly inconsiderate	slightly considerate	somewhat considerate	very considerate

17. How “*likely* or *unlikely*” is it that you will confront your boy/girlfriend?

0	1	2	3	4	5
very unlikely to confront him/her	somewhat unlikely to confront him/her	slightly unlikely to confront him/her	slightly likely to confront him/her	somewhat likely to confront him/her	very likely to confront him/her

18. Has the situation that you read about ever happened to you before?

Yes	No	Somewhat
-----	----	----------

19. How honest were you when answering the previous questions?

0	1	2	3	4
not honest at all	slightly honest	somewhat honest	mostly honest	very honest

APPENDIX J  
IRB APPROVAL



MISSISSIPPI STATE  
UNIVERSITY

Compliance Division  
Administrative Offices  
William E. Broad (Rm 3400C)  
Human Resources Function  
Campus Drive  
PO Box 3870  
Stateville, MS 39762  
(662) 325-5224

Safety Division  
Safety Office  
Office 3400C  
Hazardous Waste  
Chemical & Lab Safety  
Fire & Life Safety  
2000 South Avenue  
Mississippi State, MS 39762  
(662) 325-5224

<http://www.msstate.edu/complianceResearch>  
compliance@research.msstate.edu  
(662) 325-5224

September 21, 2010

Katie Collier  
Mailstop 9514  
Mississippi State, MS 39762

RE: IRB Study #10-222: Invested or Invasive?: Applying the Investment Model to Understanding Obsessive Relational Intrusion (SONA Title: Decisions about Interpersonal Investments)

Dear Ms. Collier:

The above referenced project was reviewed and approved via administrative review on 9/21/2010 in accordance with 45 CFR 46.101(b)(2). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

**Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at <http://www.org.msstate.edu/human/aghmp.php>. The first of these changes is the implementation of an approval stamp for consent forms. The approval stamp will assist in ensuring the IRB approved version of the consent form is used in the actual conduct of research.**

Please refer to your IRB number (#10-222) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at [cwilliams@research.msstate.edu](mailto:cwilliams@research.msstate.edu) or call 662-325-5220.

Sincerely,

Christine Williams  
IRB Compliance Administrator

cc: Colleen Sinclair  
Kristine Jacquie (SONA)