BROODING OVER HURTFUL MESSAGES—EFFECT OF RELATIONAL FRAMES ON CLOSE RELATIONSHIPS

BY

JINGDA ZHOU

A Thesis Submitted to the Graduate Faculty of

WAKE FOREST UNIVERSITY GRADUATE SCHOOL OF ARTS AND SCIENCES

in Partial Fulfillment of the Requirements

for the Degree of

MASTER OF ARTS

Communication

August 2016

Winston-Salem, North Carolina

Approved By:

Jennifer S. Priem, PhD, Advisor

Michael Hazen, PhD, Chair

J. Robert Nations, DMin
DEDICATION AND ACKNOWLEDGMENTS

The completion of this project would not be possible without a number of people who support and encourage me along the way. I am deeply thankful to those who see me through my two years at Wake, from the beginning of autumn in 2014 to the end of summer in 2016.

To my parents: thank you for supporting my decision of pursuing further education overseas, and showing your care and love whenever I seek your support.

To my committee: Dr. Jennifer Priem, Dr. Michael Hazen, and Dr. Bob Nations—thank you for guiding and inspiring me in the process. To my advisor Jen Priem: thank you for your encouragement and invaluable suggestions on every section of this project. Without your knowledge and expertise on this subject, I would not be able to complete the work. To Mike Hazen, who not only inspired me to learn and explore as a researcher, but also backed me up when I doubt myself. I am deeply grateful for your friendliness and thoughtful support. To Bob Nations: I am very lucky to have you in the committee. Thank you for your willing support in every single request I made during the project, and for introducing me to your class and the counseling department.

And to those who accompany me from beginning to end—friends, faculty, and colleagues. To Charlie, Rachael, Coco, Shuo and Lei, who were there for me and whose friendships are deeply appreciated. To Song, Qiang, Vicky, and Jeff Lerner, who encouraged me to face challenges and make peace with myself. And to Dr. Giles, Dr. Louden, and Dr. Mitra: thank you for your kindness and gracious help.
TABLE OF CONTENTS

ABSTRACT .......................................................................................................................... v

CHAPTER ONE: INTRODUCTION ............................................................................... 1

CHAPTER TWO: SURVEY OF LITERATURE ............................................................ 3
  Explicating Brooding, Hurt, and Message Ambiguity ................................................. 3
  Relational Frames and Hurt experiences ................................................................ 5
  Brooding and Relational Outcomes ....................................................................... 13

CHAPTER THREE: METHODOLOGY ....................................................................... 15
  Participants ................................................................................................................. 15
  Procedures ................................................................................................................. 15
  Measures .................................................................................................................... 16
    Intensity of hurt ........................................................................................................ 16
    Brooding .................................................................................................................. 16
    Relationship satisfaction ......................................................................................... 16
    Distancing .............................................................................................................. 17
    Relational frames ................................................................................................. 17
    Message ambiguity ............................................................................................... 18

CHAPTER FOUR: RESULTS ................................................................................... 19
  Preliminary Analyses ................................................................................................ 19
  Hypothesis Testing .................................................................................................... 222

CHAPTER FIVE: DISCUSSION ............................................................................. 31
  Summary of Findings ............................................................................................... 31
  Theoretical Implications ......................................................................................... 31
  Practical Implications .............................................................................................. 35
  Limitations and Directions for Future Research ...................................................... 36
  Conclusion ................................................................................................................ 38

REFERENCES ........................................................................................................... 39

APPENDIX A ............................................................................................................... 53

APPENDIX B ............................................................................................................... 54

APPENDIX C ............................................................................................................... 56

APPENDIX D ............................................................................................................... 57

APPENDIX E ............................................................................................................... 58

APPENDIX F ............................................................................................................... 59

APPENDIX G ............................................................................................................... 60

APPENDIX H ............................................................................................................... 61

APPENDIX I ............................................................................................................... 62

CURRICULUM VITAE .............................................................................................. 63
ABSTRACT

Effect of a hurtful interaction can linger on a relationship after its initial occurrence. Extant research shows that ruminative thoughts about hurt elicit bitter feelings and intensify unfavorable relational outcomes. Relying itself on Relational Framing Theory (RTF), the current study emphasizes the relational nature of hurt experiences. According to RFT, individuals interpret a message using either dominance-submissiveness or affiliation-disaffiliation frame, and involvement is seen as a unipolar factor that emphasizes perception of either dominance or affiliation. The current study examines the relationship between hurt feelings, brooding, message ambiguity associated with perceived dominance, affiliation, and involvement. Besides, the current research forwards hypotheses concerning brooding and relational outcomes. Results suggest that intensity of hurt and message ambiguity positively predict brooding, which support H1a and H1b. Moreover, perception of offender’s affiliation and involvement reduces intensity of hurt. However, the effect of perceived dominance on hurt and brooding is not significant. In relation to message ambiguity and hurt, the study discovers that ambiguous hurtful messages are perceived as less hurtful than direct ones. Findings also suggest dating partners are more vulnerable to hurt and brood more than close friends. In addition, hurtful interactions that occur further in the past are associated with less relationship satisfaction and more relational distancing. Directions for further research on hurt and relational frame are discussed.
CHAPTER ONE: INTRODUCTION

Hurt is a social emotion that is elicited when people feel emotionally injured (Vangelisti, Young, Carpenter-Theune, & Alexander, 2005), or when a relational partner communicates relationship devaluation (Leary, Springer, Negel, Ansell, & Evans, 1998a). Hurtful message may take the form of rejection (Fitness, 2001), relational transgression (Feeney, 2005), or expectation violation (Bachman & Guerrero, 2006). Hurtful experiences have a detrimental effect on relationships, resulting in relational distancing (Vangelisti & Young, 2000), partner dissatisfaction and relational distrust (Leary et al., 1998a; Vangelisti, 1994). It can also have negative effects on individual partners, causing lower self-esteem (Mills, Nazar, & Farrell, 2002). Because hurt feelings are consequential and common in the context of intimate relationships, the subjective experience of hurt merits further research (Priem, McLaren, & Solomon, 2010).

Although some hurtful episodes are resolved quickly (Feeney, 2005), the effects of hurtful events can linger on relations and individuals (Feeney, 2004; Leary et al., 1998a; McLaren & Solomon, 2008, 2010). As Miller and Roloff (2014) point out, individuals tend to brood over a hurtful interaction after it occurs. Brooding is a counterproductive psychological process that individuals commonly engage in when they recall a hurtful interaction, and it usually elicits hostile and angry emotions (Kross, Ayduk, & Mischel, 2005). People ruminate over a hurtful message in order to understand its meaning for their relationships, but this re-experience of negative emotions is likely to affect victims’ relationship with the offender, modeling victims’ understanding of the offender’s motivations and behaviors towards them (Miller & Roloff, 2014), and thus has a residual influence on their further interactions with the relationship partner.
Current research has yet to examine the factors that influence the extent to which hurtful messages are brooded over and the impact of brooding. Accordingly, the goal of this study is to identify mechanisms that lead to negative rumination (brooding) after hurtful messages occur in personal relationships. People’s response to hurt raises a valuable question to communication scholars (McLaren, Solomon, & Priem, 2012). Researchers agreed that hurt is relational in nature (Feeney, 2005), and that appraisal of the transgressor’s behavior is central to experience of hurt (Leary et al., 1998a; Vangelisti & Young, 2000). Therefore, relational framing theory provides a valuable lens to examine reaction to hurtful messages in a way that explains the process by which people make sense of interpersonal message. The theory contends that individuals interpret relational message through either dominance-submissive frame, or affiliation-disaffiliation frame. Choice of relational frames will then draw people’s attention to particular cues and decide the meaning which people attach to ambiguous messages (Dillard & Solomon, 2005a; McLaren, Dillard, Tusing, & Solomon, 2014). Therefore, the current research will investigate the influence of the two relational frames on experience of hurt, and furthermore, how the frames will affect on-going relationships.
CHAPTER TWO: SURVEY OF LITERATURE

Explicating Brooding, Hurt, and Message Ambiguity

The process of repetitive intrusive thoughts about negative emotions or life situations is defined as rumination (Siegle, Steinhauer, Carter, Ramel, & Thase, 2003; Wade, Vogel, Liao, & Goldman, 2008). Some researchers conceptualize rumination as goal-oriented thoughts elicited by situations where a goal is not obtained, or goes beyond expectation. It includes thoughts of the past, present, or future until the individual attains a goal, disengages from the goal, or is distracted from it (Martin & Tesser, 1996).

Previous research has distinguished rumination from related terms by deciding whether the intrusive thoughts are adaptive or maladaptive. Martin and Tesser (1996), for example, propose that rumination is ultimately adaptive because it helps reduce perceived discrepancies. However, Nolen-Hoeksema (1996) claims that rumination is maladaptive, because it does not entail effort to resolve a problem, but focuses on negative emotions and problems. Consequently, two distinct factors emerge from the umbrella term of rumination. The first is reflection which occurs when an individual actively seeks solutions to cognitive problems; while the second, brooding, denotes dwelling on the negative aspect of a hurtful interaction (Trapnell & Campbell, 1999; Treynor, Gonzalez, & Nolen-Hoeksema, 2003a). Brooding is a type of maladaptive rumination which is shown to connect with cognitive and emotional disturbance (Nolen-Hoeksema, 1991; Roberts, Gilboa, & Gotlib, 1998), maladaptive coping (Joormann, Dkane, & Gotlib, 2006), inability to inhibit irrelevant information and receiving new information (Whitmer & Banich, 2007), anger (Rusting & Nolen-Hoeksema, 1998), impaired concentration (Lyubomirsky, Kasri, & Zehm, 2003), anxiety (Nolen-Hoeksema, 2000),
and aggressive behavior (Bushman, 2002). In order to dismiss confusion, the current study will focus exclusively on depressive aspect of rumination, namely brooding, and examine its detrimental effects on relationships.

Brooding is commonly caused by hurtful messages. After a hurtful message occurs, victims often feel devalued by the offenders, and perceive their relationships with the offenders under threat (e.g., Feeney, 2005; Leary & Springer, 2001; Leary et al., 1998a; Miller & Roloff, 2014). Residual feelings of hurt can linger on relations and individuals (Feeney, 2004; Leary et al., 1998a; McLaren & Solomon, 2008, 2010), affecting individuals’ behavior, thoughts, and attitudes in current and future relationships (Vangelisti, 2009). Because it is a basic human need to maintain social connections (Baumeister & Leary, 1995), and people are motivated to make and remain in positive, stable bonds (Bowlby, 1977), messages that harm or terminate relationships can be seen as threatening to fundamental human need (Miller & Roloff, 2014). Hurt feelings are elicited when relational goals were obstructed. The strength of emotion that is evoked reflects intensity of hurt, which depends on the extent to which people’s goals of being valued and loved are threatened (McLaren & Solomon, 2008). As a response, people are driven to brood over hurtful messages and consider further reactions. The more intense the hurt feelings are, the more threatened an individual perceives his/her relational goals to be, and the stronger the reaction is enacted. As a result, intensity of hurt feelings will affect individuals’ tendency to brood. Therefore, the current study suggests:

H1a: Brooding is positively predicted by intensity of hurt.

Empirical evidence also suggests that the link between hurt and brooding is stronger when a hurtful message is ambiguous (Amin, Foa, & Coles, 1998; McLaren &
Ambiguous messages allow for multiple interpretations (Eisenberg, 1984) and may elicit more anxiety in individuals than clearer messages. One possible reason is that uncertainty about interpersonal relationships can be stressful and thus results in more negative interpretation. For example, uncertainty management theory (Gudykunst, 2005) maintains that uncertainty is positively related to anxiety across various cultures (Gudykunst & Nishida, 2001), and uncertainty is closely correlated with ambiguity (Einhorn & Hogarth, 1985). Similarly, scholars have found that ambiguity about a partner’s involvement in a relationship will lead an individual to interpret a relational message more negatively (Theiss, Knobloch, Checton, & Magsamen-Conrad, 2009), and feel more stress after a hurtful interaction (Priem & Solomon, 2011). Furthermore, implicit hurtful messages are found to be associated with negative cognitive reaction. For instance, Baldwin and Main (2001) suggest that implicit cues connoting rejection will cause negative self-judgments females with high level of self-consciousness. Because uncertainty is an unpleasant state that individuals want to avoid (Berger & Calabrese, 1975), people are motivated to reduce the amount of uncertainty they experience. In this aspect, brooding could be one way that individuals use to alleviate pressure caused by ambiguity. McLaren and Pederson (2014) also state that because communicators are likely to have discrepant views of an ambiguous message, misunderstanding is more likely to occur when a message is ambiguous. Therefore, the current research proposes:

H1b: Brooding is positively predicted by ambiguity of the hurtful message.

**Relational Frames and Hurt experiences**

Previous research has focused on the content of messages and the effect of the
content, but not as much on the relational cues contained in messages. Relational messages are verbal and nonverbal expressions indicating how communicators regard each other, view their relationship, and consider themselves within the relationship (Burgoon & Hale, 1984a). Relational messages are pertinent to hurt experience because they can convey cues that decrease intimacy or devalue a relationship. Indeed, how people react to a hurtful message is shaped by the way they interpret the offender’s behavior, and the reaction is stimulated when an individual thinks the offender’s words cause him/her harm or injuries (Vangelisti & Crumley, 1998). A few studies underline the importance of relational indication in hurtful messages. For example, Priem and her colleagues suggest that relational messages, such as affection and informality, are negatively correlated with intensity of hurt (Priem et al., 2010). However, how relational messages influence brooding has not yet been examined. In this respect, relational framing theory provides a context for understanding how relational cues influence brooding and consequently, affect relationships.

Relational framing theory (RFT) builds on Burgoon and Hale's (1984) fundamental conceptions of relational communication, which refers to the aspect of messages that defines a relationship (Priem et al., 2010; Rogers & Farace, 1975). Relational communication (or a relational message) is distinct from a content message, which emphasizes on the denotative meaning of an utterance. Burgoon and Hale (1984) have labeled 12 related but conceptually distinct themes emerging from messages that contain relational inference, including dominance, equality, involvement, composure, informality, receptivity, similarity, and affiliation. Among them, dominance, affiliation, and involvement become particularly pertinent to RFT. According to RFT, people rely on
cognitive structures called frames to make sense of messages and interpret relational messages in a way that consolidates the inferences about their relationship with others (Dillard, Solomon, & Samp, 1996a). The two fundamental frames are dominance-submissiveness, which concerns the degree of control, power, or status that one person has over another, and affiliation-disaffiliation, which captures the extent of liking, solidarity, esteem, or positivity that one person shows to the other. These two frames help individuals interpret messages by guiding their attention to certain cues, and shape the meaning that individuals attach to the message (Dillard & Solomon, 2005b; McLaren et al., 2014). By referring to one of the two frames, individuals are able to interpret a message. In particular, RFT views dominance-submissive and affiliation-disaffiliation as functional schemes that assist people in processing social messages, dismiss ambiguities, and draw relational inferences (McLaren & Solomon, 2008).

Other than the two mental structures mentioned above, RFT posits involvement as a third dimension that refers to the degree of coordination, engagement, and immediacy revealed in the interaction (McLaren & Solomon, 2008). It is a unipolar construct with no relational content, but can provide inferences about either of the two frames. In other words, the presence of involvement may intensify the relational judgment of affiliation or dominance. Since involvement can indicate either dominance or affiliation, it moderates the relational frame via which it is viewed. Moreover, because messages can convey either dominance-submissive or affiliation-disaffiliation, RFT proposes the differential salience hypothesis, which argues that the two frames are in competition with one another, and that activation of one frame displaces the competing frame (Dillard et al., 1996a). The process of adopting a frame is unconscious and fast, because people need to decide
their response in an interaction quickly.

RFT is especially valuable in the context of hurt, because it takes to heart the distinction between content and relational messages, and seeks to illustrate the process through which people decipher hurtful messages that are commonly ambiguous. Literature shows that hurt is a subjective experience shaped by multiple factors including relational quality (Priem et al., 2010; Young, 2004), personal characteristics (Maltby et al., 2008; Miller & Roloff, 2014; Morgan & Banerjee, 2008), and message features (McCullough, Bono, & Root, 2007), and the impact of hurtful messages is highly dependent on the way they are interpreted. Accordingly, relational frames become important in understanding the effects of a hurtful message because they assist individuals in understanding ambiguous messages that would otherwise yield various interpretations.

Much of previous research on RFT has focused on factors that affect framing, while relatively fewer have studied outcomes of framing on hurt experiences (McLaren & Pederson, 2014b). Previous research suggests that mental structures adopted by an individual will influence the experience of hurt (e.g., Priem et al., 2010). On the one hand, perceptions of dominance may intensify hurt feelings. For instance, individuals may feel more hurtful when they view hurtful messages as more dominant (e.g., “He’s trying to manipulate me”) rather than more submissive (e.g., “He just wanted to impress me with his ideas”). Because close relationship (i.e., romantic relationship and friendship) is established and maintained via mutual affection (Cocking & Kennett, 1998; Reis & Shaver, 1988), messages containing dominance or dislike contradict relationship expectations (Feeney, 2005). Additionally, because sense of devaluation elicits hurt
feelings (Leary et al., 1998a), messages that implicate disliking or exert power may be perceived as more hurtful (McLaren et al., 2012). Therefore, the current study posits:

H2a: Perceived dominance of hurtful messages is positively related to intensity of hurt.

Because RFT proposes that involvement can intensify dominance, a higher level of perceived involvement may render the offender as more dominant in the victim’s eyes. As a result, the offender’s comments may be perceived as more hurtful. Thus, the current research predicts that:

H2b: The effect of perceived dominance of hurtful messages on intensity of hurt is moderated by perceived involvement of the offender.

As has been discussed in the last section, implicit negative cues are likely to elicit negative interpretations because the ability to understand one another is limited when individuals interpret a message unfavorably (McLaren & Pederson, 2014b; Sillars, 2011). Previous research demonstrates that relational meaning people inferred from a message can vary profoundly despite message content is essentially the same (Watzlawick, Beavin, & Jackson, 1967). As a result, higher level of ambiguity may intensify the link between dominance and hurt because people feel more uncertain about the relational meaning and may thus more likely to amplify negative cues. Therefore, the current study predicts:

H2c: The effect of perceived dominance on hurtful messages on intensity of hurt is moderated by the ambiguity of the hurtful message.

As has been discussed in the last section, people are inclined to brood over a hurtful interaction after its initial occurrence, and the tendency to brood is affected by
intensity of hurt. Previous research reveals connection between brooding and a number of stress-related emotional disturbance (Kelly, Matheson, Ravindran, Merali, & Anisman, 2007). Because dominant messages are generally perceived as less polite and more face-threatening (Dillard, Wilson, Tusing, & Kinney, 1997; McLaren et al., 2014), it is reasonable to infer that they cause more psychological disturbance and thus elicit more brooding. Therefore, the current study posits that perceived dominance strengthens the tendency to brood:

H3a: Perceived dominance of hurtful messages positively predicts brooding.

In addition, because RFT claims that perceived involvement of the offender will increase dominance when the mental frame is activated, the current study predicts:

H3b: The effect of perceived dominance of hurtful messages on brooding is moderated by perceived involvement of the offender.

Furthermore, because ambiguity denotes uncertainty about present and past experiences (Carson, Madhok, & Wu, 2006), and that individuals are predisposed to reduce uncertainty by depressive rumination (Yook, Kim, Suh, & Lee, 2010), an ambiguous message is likely to cause more brooding. In line with this proposition, Mathews and MacLeod (1994) suggest that individuals focus on negative meaning to a disproportionate level when the information is ambiguous. Taken together, the current study proposes that ambiguity will intensify the relationship between perceived dominance and brooding:

H3c: The effect of perceived dominance of hurtful messages on brooding is moderated by the ambiguity of the hurtful message.

On the other hand, perception of affiliation will buffer hurt feelings. For instance,
experiences of hurt are more tolerable when people attach the message with affiliation (e.g., “She is trying to help”) rather than disaffiliation (e.g., “This just showed how much she disliked me”). Since affiliation contains positive assessment of the relationship which associates with attraction and liking, it decreases intensity of hurt (Priem et al., 2010). Similarly, couples who demonstrate greater affection are buffered from adverse relational impact of conflict (Caughlin & Huston, 2002), because affection between relationship partners will inspire generally positive views of each other which promote more positive appraisals of the hurt experience (Miller, Caughlin, & Huston, 2003). In addition, literature reports that relational affection is linked with active verbal responses, which reduce the degree of perceived hurt and relational impact of hurtful messages (Vangelisti & Crumley, 1998). Taken together, the results indicate that activation of an affiliation frame attenuates the negative impact of a hurtful message. Accordingly, the current research proposes:

H4a: Perceived affiliation of hurtful messages is negatively related to intensity of hurt.

Additionally, because RFT claims that involvement can be a sign of affiliation, the transgressor who is perceived more involved in a hurtful episode may appear more affective to the victim if his/her comment is regarded as affectionate. Accordingly, their comments may seem less hurtful to the victim. Thus, the current research predicts:

H4b: The effect of perceived affiliation of hurtful messages on intensity of hurt is moderated by perceived involvement of the offender.

Extant research shows a positive link between ambiguity and cognitive bias (Mathews & MacLeod, 1994). According to Eysenck and his colleagues, anxious and
depressed individuals tend to impose disproportionate negative interpretation on an ambiguous message (Eysenck, Mogg, May, Richards, & Mathews, 1991), thus it is reasonable to infer that message ambiguity will inhibit individuals’ ability to recognize affectionate and other positive signs. Thus the present study posits:

H4c: The effect of perceived affiliation on hurtful messages on intensity of hurt is moderated by the ambiguity of the hurtful message.

Correspondingly, the current study expects similar effects of affiliation, involvement, and ambiguity on brooding. Because perceived affiliation is found to promote pair bonds (Floyd, 2006) and enhance relationship satisfaction (Miller et al., 2003), individuals may regard relationship transgressions as less severe and resultantly brood less over the a hurtful interaction when an offender appears more affectionate (Horan, 2012). Therefore, the current study predicts:

H5a: Perceived affiliation of hurtful messages negatively predicts brooding.

RFT also suggests that involvement will highlight perception of affiliation. Accordingly, higher level of involvement will underline the relationship between affiliation and brooding. Therefore:

H5b: The effect of perceived affiliation of hurtful messages on brooding is moderated by perceived involvement of the offender.

As has been argued above, ambiguity is associated with interpretive bias and ambiguous messages are found to hamper individuals’ ability to process positive signs (Eysenck et al., 1991). Therefore, the current study posits that message ambiguity will undermine the relationship between affiliation and brooding:

H5c: The effect of perceived affiliation on hurtful messages on brooding is
moderated by the ambiguity of the hurtful message.

**Brooding and Relational Outcomes**

Previous research reveals various adverse outcomes of brooding on relationships. Although some effects are trivial and hardly harm a relationship, others may pose lingering threats to both personal and relational well-being (Feeney, 2004). Because brooding elicits strong negative emotions that in turn activate cognitive structures which focus on interpersonal harm, it is likely to have an injurious impact on relationships (McCullough et al., 2007). In fact, when individuals brood over a hurtful message, they experience similar affect as they felt in the initial hurtful interaction, and those emotions further spread to other episodes within the network, which subsequently affect the way victims interact with transgressors.

Extant literature implies that there may be a relationship between brooding and relational distancing. Researchers who have examined relational outcomes of various communication patterns reveal that couples who are more willing to express their emotions after a conflict episode perceived a higher relational satisfaction than those who tend to remain angry and keep negative thoughts to themselves (Guerrero, 1994). Additionally, brooding is shown to incur undesirable behavioral reactions against relational partners which aggravate an otherwise close relationship. For example, McCullough and his colleagues find a positive correlation between brooding and motivation to revenge and avoid the offender in their longitudinal study (McCullough et al., 2007). Similarly, Liu and Roloff (2015) report that negative rumination causes emotional exhaustion via stonewalling and silent treatment. Besides, brooding may correlate with relational distancing via hurt feelings. For example, Vangelisti and Young
(2000) claim that intensity of hurt is linked to relational distancing, and this relationship is intensified by three factors, namely perception of intentionality, ongoing pattern that occurs frequently in a relationship, and feelings of being disregarded by the other. Because brooding is found to intensify feelings of hurt, and intensity of hurt is positively associated with relational distancing, the current research hypothesizes that:

H6: Brooding leads to relational distancing.

Apart from relational distance, brooding is shown to be negatively associated with relational satisfaction. Previous research shows that depressive rumination contributes to negative affect and relationship problems. For example, brooding is found to be related with depression and lack of forgiveness (Ciesla & Roberts, 2007; Watkins, 2008; Ysseldyk, Matheson, & Anisman, 2007). It is also associated with higher interpersonal distress (Lam, Schuck, Smith, Farmer, & Checkley, 2003), and lower perceived social support (Nolen-Hoeksema & Davis, 1999). Indeed, in a longitudinal research conducted by Pearson and her colleagues (Pearson, Watkins, Kuyken, & Mullan, 2010), after controlling for baseline relationship satisfaction, baseline brooding is identified as a significant predictor of diminished relationship satisfaction three months later. The scholars also claim that brooding increases relationship difficulties, especially in individuals who are vulnerable to depression. Similarly, Kuehner and Buerger (2005) reveal a negative correlation between depressive rumination and relationship satisfaction. Accordingly, the current study predicts that:

H7: Brooding is negatively correlated with relationship satisfaction.
CHAPTER THREE: METHODOLOGY

Participants

A total of 110 respondents were recruited from a private university in southeastern United States. Most of the respondents were college students. All participants were required to have had a dating/marital relationship or close friendship of no less than three month duration in order to ensure they were in serious relationships. The reported length of time since occurrence of the hurtful interaction ranged from 1 week to 12 years.

Procedures

Participants were given a link to online survey, and provided consent to participate. Subsequently, they were instructed to recall an event in which a relationship partner said or did something hurtful to them. The prompt read: “For the next set of questions, we would like you to think about a time when someone said something that made you feel devalued or suggested that your relationship was not important. For example, people might make a joke that made you feel put down or may make a statement that shows they feel differently about your relationship than you do. Please think about a specific conversation in which a relationship partner (a dating partner, spouse, or close friend) said things that made you feel bad about yourself or your relationship. As you answer the next set of questions, please think only about that specific conversation.” Participants were asked to describe the hurtful message in as much detail as possible. For example, they were asked to write the initials of the offender and their relationship to them, and indicate the exact words when possible. In addition, participants were asked to indicate how long it has been since its occurrence. More specifically, they
were prompted to answer the following open-ended questions: What led up to the situation? What exactly did the partner said or did that was hurtful?

**Measures**

**Intensity of hurt.** The measurement was adopted from McLaren and Pederson’s scales of hurt intensity (2014). Participants were asked to indicate the intensity of the hurt experienced on three 7-point Likert-type items, which were: How hurt did you feel overall? (1 = *not at all hurtful* to 7 = *extremely hurtful*); To what extent did it cause you emotional pain? (1 = *no emotional pain* to 7 = *intense emotional pain*); and How hurtful was the interaction? (1 = *not at all hurtful* to 7 = *extremely hurtful*). The scale was reliable ($\alpha = .86$). On average, participants’ scores on this measure were high ($M = 5.20$, $SD = 3.761$).

**Brooding.** Participants were asked the frequency of repetitive thoughts about their partner’s behavior on a five-point ($1 = *not at all* to 7 = *extremely* ) Likert-type scale including four items. The scale is adopted from ruminative response scale (Treynor, Gonzalez, & Nolen-Hoeksema, 2003b), including items such as: I often think “what am I doing to deserve this?; I often think “Why do I always react this way?”; Think about a recent situation, wishing it had gone better; I often think “Why can’t I handle things better?” The scale was reliable ($\alpha = .80$), and participants’ scores were moderate on this measure ($M = 4.31$, $SD = 5.99$).

**Relationship satisfaction.** Relationship satisfaction was measured a five-item scale adopted from the relevant component of the questionnaire assessing Investment Model constructs (Rusbult, Martz, & Agnew, 1998). Responses ranged from 1 (*very untrue of me*) to 7 (*very true of me*). Items included, “I feel satisfied with our
relationship”; “My relationship is much better than others’ relationships”; “My relationship is close to ideal”; “Our relationship makes me feel very happy”; and “”. Our relationship does a good job of fulfilling my needs for intimacy”. The average score of participants on this measure was moderate ($M = 3.35, SD = 8.63$). The scale was highly reliable ($\alpha = .93$).

**Distancing.** Tendency to distance from the relationship partner was measured on five 7-point semantic differential items. The scale was adopted from Vangelisti and Young (2000), and used by McLaren and Solomon (2008). Specifically, participants rated on seven-point scales the degree to which the hurtful interaction made their relationship more distant or close, relaxed or tense, more friendly or hostile, more distant or intimate, and more open or closed. Two items were reversely coded so that a higher score would indicate greater relational distancing. The average score of participants on this measure was moderate ($M = 5.16, SD = 6.09$). The scale demonstrated reliability ($\alpha = .87$).

**Relational frames.** The measure of relational frames was composed of three subscales, namely, dominance, affiliation, and involvement. There were 20 items in total, and all were measured on 7-point Likert-type scale (e.g., $1 = no dominance$ and $7 = extremely dominance$, $1 = no affection$ and $7 = extreme affection$, $1 = no engagement$ and $7 = extreme engagement$). Participants rated on each item to indicate their perceived dominance, affiliation, and involvement of the partner. Eight items measured dominance and affiliation separately, four items measured engagement. Several items were reversely coded before the scales were computed. Four items were removed from dominance scale to achieve reliability ($M = 3.35, SD = 4.95, \alpha = .72$). Another item was dropped from
involvement scale for sake of reliability ($M = 3.80$, $SD = 3.82$, $\alpha = .73$). Affiliation scale was also reliable ($M = 3.33$, $SD = 7.67$, $\alpha = .79$).

**Message ambiguity.** Instead of measuring message ambiguity directly, the current study assessed the extremity of relational message, because the more extreme a relational judgments are, the less ambiguous the message is. Questions was adapted from Blum-Kulka and Olshtain's (1986) measurement of direct and indirect message strategies. Participants used a 7-point Likert-type scale (1 = *strongly disagree* and 7 = *strongly agree*) to rate the degree to which the hurtful message was explicit or implicit. The five statements were "The message was stated in a direct way.” "The meaning of the message was clearly stated.” “There were a number of ways in which the message could have been interpreted.” “The message was stated as a joke or hinted at, rather than expressly stated.” “The message was ambiguous.” Items were averaged to create a composite measure in which items representing explicitness were recoded so that higher values indicated greater ambiguity. The scale achieved reliability after one item was dropped ($\alpha = .75$). On average, participants’ scores were moderate on this measure ($M = 3.28$, $SD = 5.63$).
CHAPTER FOUR: RESULTS

Preliminary Analyses

I ran exploratory analyses of sample demographics in order to better understand the participants and the hurtful incident. First, I compared frequencies of respondents who identified the relationship type they had with the offender during a hurtful interaction. A total of 63 respondents reported the relationship type they had with the transgressor as close friends (57%), followed by 43 dating partners (39%), and 3 married couples (2%). The majority ($N = 69, 63\%$) of the participants indicated that the hurtful interaction occurred within six months. Median number was 4 months, the minimum being 0, referring to “less than a month”, and the maximum was 12 years (see Table I).

*Table I: Participants descriptive data*

<table>
<thead>
<tr>
<th>Type of Relationship</th>
<th>$n$</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dating partners</td>
<td>43</td>
<td>39</td>
</tr>
<tr>
<td>Married couples</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Close friends</td>
<td>63</td>
<td>57</td>
</tr>
<tr>
<td>Not reported</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length of Time Since Hurt Occurred</th>
<th>$n$</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 month ago</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>1-3 months ago</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>4-6 months ago</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>7-9 months ago</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>10-12 months ago</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>13-24 months ago</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>25-36 months ago</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>More than 3 years ago</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>total</td>
<td>101</td>
<td>100</td>
</tr>
</tbody>
</table>
Next, bivariate correlations were run on all study variables to examine which, if any, variables were related. Due to limited space, only selected significant variables will be reported here, a comprehensive correlations result is seen in Error! Not a valid bookmark self-reference. Firstly, intensity of hurt and brooding were significantly positively correlated. Moreover, both variables were significantly associated with relationship type, indicating that dating partners were likely to experience more intense hurt and brood more after a hurtful interaction than close friends. Furthermore, both intensity of hurt and brooding were positively related to perceived dominance.

Unlike dominance, which positively correlated with intensity of hurt and brooding, affiliation was found to have significant associations with outcome variables, namely, relationship satisfaction and relational distancing: Affiliation was positively related to relationship satisfaction, and negatively related to relational distancing. Similar associations were also found with involvement, which was positively associated with relationship satisfaction, and negatively associated with relational distancing. Additionally, affiliation and involvement were positively correlated. Relationship satisfaction and relational distancing were significantly negative related to one another, and both had significant relationship with affiliation, involvement, message ambiguity, and length of time (how long has it been since the hurtful interaction occurred). In addition, distancing was significantly positively predicted by intensity of hurt.

Another noteworthy variable was message ambiguity. Contrary to what I had expected, ambiguity did not heighten intensity of hurt, nor brooding. Instead, it was significantly negatively correlated with intensity of hurt. Moreover, ambiguity is significantly negatively associated with relational distancing, but positively associated
with relationship satisfaction. These results denoted that rather than intensifying hurtful feelings, an ambiguous message in fact made victim of a hurtful interaction feel less hurt, and buffered relationship damage that was caused by the interaction.

Table II: Correlations Among Study Variables

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>V1: intensity of hurt</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V2: brooding</td>
<td>.41**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3: dominance</td>
<td>.21*</td>
<td>.26**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V4: affiliation</td>
<td>-.16</td>
<td>-.00</td>
<td>-.05</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5: involvement</td>
<td>-.04</td>
<td>.04</td>
<td>.02</td>
<td>.52**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V6: ambiguity</td>
<td>-.27**</td>
<td>.07</td>
<td>-.13</td>
<td>.11</td>
<td>-.02</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V7: distancing</td>
<td>.19*</td>
<td>-.06</td>
<td>-.10</td>
<td>-.50**</td>
<td>-.30**</td>
<td>-.19*</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V8: satisfaction</td>
<td>-.06</td>
<td>.03</td>
<td>-.02</td>
<td>.42**</td>
<td>.27**</td>
<td>.27**</td>
<td>-.68**</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>V9: type of relationship</td>
<td>-.22*</td>
<td>-.23*</td>
<td>-.11</td>
<td>-.00</td>
<td>.06</td>
<td>-.12</td>
<td>-.02</td>
<td>-.12</td>
<td>---</td>
</tr>
<tr>
<td>V10: length of time</td>
<td>.17</td>
<td>.08</td>
<td>-.04</td>
<td>-.24*</td>
<td>-.30**</td>
<td>-.18</td>
<td>.21*</td>
<td>-.19*</td>
<td>-.04</td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01
Finally, preliminary analyses revealed that relationship type and length of time since the occurrence of the hurtful encounter have significant associations with key dependent variables. First, relationship type was negatively correlated with intensity of hurt and brooding, as was mentioned above. An analysis of variance (ANOVA) compared dating partners with married couples and close friends on intensity of hurt and brooding (*Table III*). Results revealed that dating partners scored significantly higher on both variables than close friends. Secondly, length of time was positively related to relational distancing, and negatively associated with relationship satisfaction. Additionally, length of time had negative associations with perceived affiliation and perceived involvement. Correlation matrix suggested that earlier hurtful interactions were associated with more severe damage to relationship than more recent ones. These correlations showed that relationship type and length of time should be retained as covariates in subsequent analyses.

*Table III: Mean Differences between Relationship Types for Intensity of Hurt and Brooding*

<table>
<thead>
<tr>
<th></th>
<th>Dating partners*(a)</th>
<th>Married couples*(b)</th>
<th>Close Friends*(c)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intensity of hurt</strong></td>
<td>3.26 .04</td>
<td>5.53*&lt;sub&gt;ac&lt;/sub&gt;</td>
<td>5.88</td>
</tr>
<tr>
<td><strong>Brooding</strong></td>
<td>3.03 .05</td>
<td>4.76*&lt;sub&gt;ac&lt;/sub&gt;</td>
<td>4.33</td>
</tr>
</tbody>
</table>

*Note. * LSD shows significant differences between types of relationships at the .05 level.

**Hypothesis Testing**

H1 hypothesized that brooding is positively predicted by (a) intensity of hurt, and (b) ambiguity of the message. A hierarchical multiple regression was performed to assess the relationships. In order to control the effects of relationship type and length of time on the dependent variable, these two factors were entered on the first step. The model was
significant ($R = .24, R^2 = .05, F(2,105) = 3.28, p < .05$), and relationship type significantly predict intensity of hurt ($\beta = -.35, p < .05$), indicating that dating partners tended to brood more over a hurtful event than married couples and close friends. Next, intensity of hurt and ambiguity were entered on the second step, rendering a significant model, with $R = .49, R^2 = .24, \Delta R = .18, F(4,103) = 8.29, p < .001$. More specifically, both intensity of hurt ($\beta = .45, p < .001$) and ambiguity ($\beta = .22, p < .05$) positively predicted brooding. Results suggested that individuals who felt more intensely hurt by their partners were likely to brood more, and that more ambiguous message was related to more brooding. Therefore, H1a and H1b were supported.

Prior to testing H2, H3, H4, H5, four variables were created to test moderation effects proposed by H2bc, H3bc, H4bc, and H5bc. The variables were computed by multiplying four pairs of predictors, namely, dominance and involvement, dominance and ambiguity, affiliation and involvement, and affiliation and ambiguity. Regression tests were then performed to assess each group of hypotheses.

H2a hypothesizes that perceived dominance of hurtful messages is positively related to intensity of hurt, a relationship that is moderated by perceived involvement of the offender (H2b), and ambiguity of the hurtful message (H2c). Per the logic of relational framing theory, the perception of an offender’s involvement was hypothesized to intensify the effect of dominance on intensity of hurt, because high level of involvement indicates partner’s seriousness. In addition, because an ambiguous message allows for multiple interpretations, it is prone to misunderstanding. Thus, a higher level of ambiguity of the message was hypothesized to strengthen the relationship between dominance and intensity of hurt. A hierarchical multiple regression test was performed in
order to assess relationship between dominance, intensity of hurt and moderators including involvement and ambiguity. Because bivariate correlation matrix indicated that relationship type and length of time were significantly correlated with relational frames, intensity of hurt, and brooding, they were entered into the model as control variables on the first step. The model was significant, with $R = .24$, $R^2 = .07$, $F(2,104) = 4.22$, $p < .05$. Specifically, relationship type was negatively related to intensity of hurt ($\beta = -.21$, $p < .05$), indicating that people are likely to experience greater intensity of hurt from their romantic partners than close friends. Next, dominance, involvement and ambiguity were entered on the second step. This model was significant, too ($R = .42$, $R^2 = .17$, $\Delta R^2 = .10$, $F(5,101) = 4.33$, $p = .001$), with ambiguity ($\beta = -.25$, $p < .01$) and relationship type ($\beta = -.22$, $p < .05$) negatively predicting intensity of hurt. Contrary to the expectation, the more ambiguous the message is, the less hurtful an individual perceives. Additionally, dominance did not significantly predicted intensity of hurt after controlling relationship type and length of time. Therefore, H2a was not supported. On the third step, interaction variables of dominance and involvement, and dominance and ambiguity were added. The model was significant overall ($R = .44$, $R^2 = .19$, $\Delta R^2 = .01$, $F(7,99) = 3.44$, $p < .01$), but neither main effects nor interactions were significant. Dominance was not a significant predictor of intensity of hurt, and ambiguity and involvement did not significantly moderate the relationship between dominance and intensity of hurt. Therefore, H2b and H2c were not supported.

H3a proposed that dominance positively predicts brooding, and that the relationship between dominance and brooding is moderated by involvement (H3b) and ambiguity (H3c). A hierarchical multiple regression analysis was conducted to test these
hypotheses. Control variables were entered on the first step, yielding a significant model 
(R = .23, \(R^2 = .05\), \(F(2,104) = 3.12, p < .05\)). Relationship type emerged as a significant 
predictor (\(\beta = -.22, p < .05\)), indicating that participants were more likely to brood when 
the hurtful message was delivered by a romantic partners than close friends. Next, 
dominance, involvement, and ambiguity were entered on the second step, and the model 
remained significant (\(R = .39, R^2 = .15, \Delta R^2 = .09, F(5,101) = 3.72, p < .01\)). Dominance 
emerged as sole significant predictor of brooding (\(\beta = .30, p = .001\)). The results 
indicated that after taking relationship type and length of time into consideration, the 
more dominant a victim perceived the message to be, the more likely he/she is to brood, 
which supported H3a. Next, product of dominance and involvement and product of 
dominance and ambiguity were added to the model on the third step, which was 
significant as well (\(R = .41, R^2 = .17, \Delta R^2 = .01, F(7,99) = 2.93, p < .01\)). However, none 
of the individual predictors was significant in this model. Dominance was no longer 
significant after the two interaction variables were added. Therefore, H3a was partially 
supported, and H3b, H3c were not supported.

H4a predicted that affiliation is negatively related to intensity of hurt, and this 
relationship is moderated by level of involvement (H4b) and ambiguity of the message 
(H4c). A hierarchical multiple regression was used to test these hypotheses. Control 
variables were entered at the first step, and the model was significant (\(R = .27, R^2 = .07, 
F(2,103) = 4.20, p < .05\)), with relationship type (\(\beta = -.21, p < .05\)) negatively predicting 
intensity of hurt. The results suggested that dating partners experienced more intense 
feelings than close friends after a hurtful interaction. Next, affiliation, involvement, and 
ambiguity were entered on the second step. This model was significant, with \(R = .41, R^2 \))
In addition to relationship type ($\beta = -.261, p < .01$), ambiguity emerged as a significant predictor, $\beta = -.27, p < .01$, indicating that the more ambiguous a message appears, the less hurtful its receiver felt. However, this relationship no longer existed after interaction variables were added to the model on the third step. The model remained significant, with $R = .47, R^2 = .22, \Delta R = .04, F(7,98) = 4.01, p = .001$. Relationship type ($\beta = -.23, p < .05$), affiliation ($\beta = -.93, p < .05$), involvement ($\beta = -.59, p < .05$), and interaction between affiliation and involvement ($\beta = 1.17, p < .05$) were all significant. The result indicated that the more affiliative a receiver perceived a message to be, the less hurtful he/she felt, which supported H4a. There was also a main effect of involvement on intensity of hurt: the more involved the offender appeared, the less hurt the victim felt. Significant interaction between affiliation and involvement on intensity of hurt also supported the H4b (Table IV), which claims that involvement moderated the relationship between affiliation and intensity of hurt. In order to better understand how involvement moderated the relationship, an Andrew Haye’s MODPROBE test was used, where the dependent variable was intensity of hurt, the focal factor was affiliation, and moderating variable was involvement (see Error! Reference source not found.). Results showed the interaction effect was driven by low levels of involvement with marginal significance ($p = .06$). To be specific, at low levels of involvement affiliation was negatively related to intensity of hurt, but affiliation and intensity of hurt are unrelated at moderate and high levels of involvement.
Table IV: Summary of Hierarchical Regression Analysis for Variables Predicting Intensity of Hurt

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>Relationship type</td>
<td>-.28</td>
<td>-.21*</td>
<td>-.34</td>
</tr>
<tr>
<td>Length of time</td>
<td>.01</td>
<td>.16</td>
<td>.00</td>
</tr>
<tr>
<td>Affiliation</td>
<td>-.19</td>
<td>-.14</td>
<td>-1.24</td>
</tr>
<tr>
<td>Involvement</td>
<td>.06</td>
<td>.06</td>
<td>-.60</td>
</tr>
<tr>
<td>Ambiguity</td>
<td>-.25</td>
<td>-.27**</td>
<td>-.38</td>
</tr>
<tr>
<td>Affiliation x Involvement</td>
<td>.22</td>
<td>1.17*</td>
<td></td>
</tr>
<tr>
<td>Affiliation x ambiguity</td>
<td>.04</td>
<td>.22</td>
<td></td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.07</td>
<td>.17</td>
<td>.22</td>
</tr>
<tr>
<td>( F )</td>
<td>4.20*</td>
<td>4.15**</td>
<td>4.01**</td>
</tr>
</tbody>
</table>

Note. * \( p < .05 \), ** \( p < .01 \)

Table V: Summary of Andrew Haye’s MODPROBE of Interaction between Affiliation and Involvement on Intensity of Hurt

<table>
<thead>
<tr>
<th>Value of involvement</th>
<th>Coefficient of affiliation</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.60</td>
<td>-.65</td>
<td>.34</td>
<td>-1.88</td>
<td>.06</td>
</tr>
<tr>
<td>3.84</td>
<td>-.37</td>
<td>.30</td>
<td>-1.19</td>
<td>.23</td>
</tr>
<tr>
<td>5.09</td>
<td>-.08</td>
<td>.31</td>
<td>-.27</td>
<td>.78</td>
</tr>
</tbody>
</table>

Note. Focal predictor variable: perceived affiliation; Moderator variable: perceived involvement

Because none of the coefficients had a significant \( p \) value, results of this test called for a closer scrutiny. In order to better understand the effect of affiliation at various values of involvement, I split involvement into subgroups by quartiles (0 = lowest, 1 = moderately low, 2 = moderately high, 3 = highest), and plotted out the effect of affiliation on intensity of hurt at each of the four levels of involvement (Figure 1). The graph demonstrated that affiliation was negatively related to intensity of hurt when perceived involvement was low (involvement = 0 or 1). However, at higher levels of involvement
(involvement = 2 or 3), affiliation showed a negative correlation with intensity of hurt. The interaction plot suggested a contradictory effect of affiliation on the dependent variable at different levels of involvement. Take Andrew Haye’s MODPROBE test and the plot together, one may infer that both affiliation and involvement decrease intensity of hurt independently; there is also a conditional interaction effect between affiliation and involvement: affiliation reduced hurt feelings only on condition that the offender appeared less involved in the episode. Therefore, H4a was supported, H4b was partially supported, and H4c was not supported.

*Figure 1: Conditional effect of affiliation on intensity of hurt at four different levels of involvement.*
H5a hypothesized that affiliation was negatively related to brooding, and this relationship was moderated by involvement (H5b) and ambiguity (H5c). A hierarchical multiple regression was performed to assess these hypotheses. Control variables were entered into the first block, generating a significant model ($R = .24, R^2 = .06, F(2,103) = 3.28, p < .05$). Similar to previous tests, relationship type was a significant predictor in this model ($\beta = -.37, p < .05$). However, the model was no longer significant after affiliation, involvement, ambiguity were added ($R = .26, R^2 = .06, \Delta R = .00, F(5,100) = 1.47, p = .20$). The third model was not significant either, $R = .33, R^2 = .11, \Delta R^2 = .04, F(2,105) = 2.67, p = .09$. Overall, H5a, H5b, and H5c were not supported.

H6 claimed that brooding lead to relational distancing. A hierarchical multiple regression test was used to assess the relationship. Relationship type and length of time were controlled on the first step. The model was marginally significant, with $R = .22, R^2 = .04, F(2,105) = 2.67, p = .07$. Length of time positively predicted distancing ($\beta = .21, p < .05$), suggesting that people who described a hurtful incident further in the past also reported greater distancing. Brooding was entered into the second block, and the model was not significant, $R = .23, R^2 = .05, \Delta R = .40, F(3,104) = 2.01, p = .11$. Length of time was the only significant predictor in this model ($\beta = .22, p < .05$). The result suggested that partners tended to drift apart after hurt occurred; and unhealed wound damaged the relationship more severely as time went by. Because brooding did not significantly predict relational distancing after controlling length of time and relationship type, H6 was not supported.

To test H7, which posited that brooding was negatively related to relationship satisfaction, a hierarchical multiple regression test was performed. Control variables were
entered into the first block, and the model was narrowly significant \( R = .23, R^2 = .05, F(2,105) = 3.02, p = .05 \). Length of time \( (\beta = -.19, p < .05) \) was a significant predictor on this step. Brooding was added into the model on the second step, and this model was not significant \( (R = .23, R^2 = .05, \Delta R = .00, F(3,104) = 2.04, p = .83) \). Despite the fact that the model was not significant overall, length of time \( (\beta = -.19, p < .05) \) remained a significant predictor of the outcome variable. The results indicated that partners are likely to feel less satisfied about their relationship if a hurtful interaction happened longer time ago.

Because brooding did not have a significant effect on relationship satisfaction over and above length of time, H7 was not supported.
CHAPTER FIVE: DISCUSSION

Summary of Findings

The goal of the current study was to better understand how a hurtful interaction might influence an ongoing relationship, and how interpretation of hurt can shape the hurtful experience and relational outcomes. As such, participants of this study were asked to reflect on a hurtful interaction inflicted by a relationship partner (i.e., dating partner, spouse, or close friend), and respond to scales measuring their intensity of hurt, tendency to brood, ambiguity of the message, perceived dominance, affiliation, and involvement of the offender, and relational outcomes concerning that specific interaction. Self-reported data was analyzed to examine correlations among those variables. In general, results revealed a positive association between brooding and intensity of hurt, and negative relationship between affectionate mental frame and intensity of hurt. In the following section, I review the theoretical and practical implications of the findings and make suggestions for future research.

Theoretical Implications

The results expand the study of hurtful experiences in two major ways. First of all, I examine relationships between intensity of hurt, ambiguity, and brooding. As expected, individuals who reported greater intensity of hurt and higher level of message ambiguity brood more. These findings are consistent with previous research (Nolen-Hoeksema, 1991), which claims that by reinforcing one another, ruminative thoughts and negative affect form a focusing unpleasant circle. According to Nolen-Hoeksema, negative mood interferes with information processing by leading individuals to emphasize on unfavorable hints when reflecting on the event and thus make more
negative evaluations and attributions of self and the situation, which in turn intensifies depressed mood. Likewise, bad feelings resulting from hurt enhance negative self-focusing thoughts. Resultantly, the biased brooding process which focuses on negative hints strengthens hurt feelings.

In addition to providing insight to the relationship between brooding, intensity of hurt and ambiguity, the study also examined Relational Framing Theory (Dillard, Solomon, & Samp, 1996b) in the context of hurt. Overall, the findings emphasized effect of affiliation over dominance on hurt feelings. Although bivariate correlations revealed significant associations between dominance and brooding and intensity of hurt, these associations no longer existed after a) type of relationship was controlled and, b) interaction variables were introduced into the regression models. In comparison, perceived affiliation more effectively predicted intensity of hurt than dominance. Main effect of affiliation on intensity of hurt and interaction between affiliation and involvement on hurt were both significant. It was notable that even during a hurtful interaction, individuals were still aware of affiliation and attentiveness shown by the offender, and that display of affiliation could reduce hurt feelings. The strong association between affection and intensity of hurt was consistent with prior research (McLaren et al., 2012; Priem, McLaren, & Solomon, 2009), which suggests that perceptions of affiliation negatively correlate with hurt feelings.

The study also highlighted the need for a more critical examination of involvement’s role in hurtful interactions. Being the third component of RFT, involvement is typically considered a unipolar variable that underlines perception of either dominance or affiliation, and thus may either intensify or mitigate hurt feelings.
Findings of the current study emphasized buffering effect of involvement, discovering that higher level of the offender’s engagement reduced hurt feelings, rather than intensifying the negative dimension. Indeed, the results revealed positive correlations between involvement and affiliation as well as relationship satisfaction. In addition, involvement was also negatively correlated with relational distancing. One explanation concerns intrinsic distinction between the nature of hurt and involvement. On the one hand, hurt is characterized by disassociation, including ignoring the partner, excluding the partner in one’s activities, and other implicit rejections (Feeney, 2004; Leary, Springer, Negel, Ansell, & Evans, 1998b). On the other hand, involvement conveys the opposite cues to ignorance and exclusion by expressing attention and interest (Cappella, 1983; Priem et al., 2009). Thus it is possible that participants of the study perceived engaged offenders as taking them seriously instead of being nonchalant and withdrawing from a conversation. As a result, involvement cushions unfavorable effects of a hurtful interaction by making the offender appear less indifferent.

Another variable of reasonable magnitude is ambiguity. The present study proposed that ambiguity positively predicts brooding and intensity of hurt. Indeed, the results of the study confirmed the positive relationship between ambiguity brooding, indicating that the more ambiguous a message was, the more it caused individuals to brood. However, the proposed positive relationship between ambiguity and hurt was nonsignificant. Contrary to the hypothesis, a negative association was discovered between the two variables—the more ambiguous a message was, the less hurtful a victim felt. Furthermore, bivariate correlations demonstrated that ambiguity actually buffered relational damage caused by a hurtful interaction. Higher level of ambiguity was related
to greater relationship satisfaction and less relational distancing. Taken together, one may infer that while an ambiguous message is related to more brooding, it may diminish hurt feelings and cushion the damaging effect of a hurtful episode on relationship. A possible explanation concerned context of the message (i.e., neutral/positive vs. hurtful episode). Generally speaking, because an ambiguous message may elicit multiple interpretations, it can be processed either positively or negatively. Consider, for instance, if a neutral or positive comment is uttered in an ambivalent manner, it may be more likely to elicit doubt and misinterpretations compared to a less ambiguous utterance which shows clearer positive regard. However, when it comes to a negative comment which is potentially hurtful, ambiguity may allow for less negative interpretations because an ambiguous message, again, may contain hints that save the message from appearing completely harsh. In other words, ambiguous hurtful messages may be seen as less negative or aggressive than clearer-stated ones.

Additionally, I suggest humor as another reason of ambiguity’s buffering effect on hurt and relational outcomes. Because humor is ambiguous (Carrell, 1997), it can be used as a mask for hurt intentions (Zajdman, 1995). It is possible that when a hostile comment is humorously packaged, it is perceived as more ambiguous and less hurtful. To conclude, the study demonstrated that in the context of hurt, ambiguous utterances elicit less hurt feelings and lessen impact of hurt on relationship outcomes.

Finally, the present study identified the necessity of better operationalization of relational frame. The original measurement adopted in the study consisted of 20 items, including three subscales for dominance, affiliation, and involvement. The original scale
used to measure dominance was not reliable ($\alpha = .58$) before four items were dropped. The unreliable scale merited further development, and I offered the following reflection.

There were eight items to measure perceived dominance in total, and the scale was constructed in a way that each item opposed its immediate previous one. For example, the first four items were “no dominance-extreme dominance”, “no submission-extreme submission”, “no persuasion-extreme persuasion”, and “no concession-extreme concession” in sequence. Therefore, the scale gave an impression that items jumped to and fro. Indeed, results revealed that some participants gave same ratings to consecutive items whose semantic means were opposite to one another. For better understanding of the problem, I halved the scale and grouped odd numbered items to one scale, and even numbered items to another. Bivariate comparison demonstrated a mildly negative correlation between the two groups. I solved this problem by dropping all even numbered items and keeping only odd numbered ones, which increased the reliability to $\alpha = .72$.

This hurdle was possibly due to sequence of items, because participants might not notice that each item was acronym of its predecessor, especially when all items appeared simultaneous in one webpage. Besides, a clearer and briefer wording might make it easier for participants who did not had a lot of time for a survey. For example, the first two items (“no dominance-extreme submission” and “no submission-extreme submission”) might be replaced by a single semantic differential item “dominance-submission”.

Further research can use this information to develop more reliable scales for relational frames.

**Practical Implications**
The current study also shed light on importance of two factors that had appreciable impact on hurt experiences. The first influencer was relationship type, which underlines how things may differ for dating partners versus close friends. An exploratory ANOVA pointed out that participants who were hurt by their dating partners generally scored higher in both brooding and intensity of hurt than those who were hurt by a close friend. The finding showed that dating partners were more vulnerable to intense hurt feelings and negative rumination after hurt occurred. One possible interpretation of this distinction is that romantic love was characterized by higher expectations of attachment (Hazan & Shaver, 1987), intimacy (Feiring, 1996; Sternberg, 2004), and trust (Rempel, Ross, & Holmes, 2001), thus individuals might find it especially unacceptable once these expectations are broken. Another interpretation is that because dating partners (vs. friends) involve more frequently in activities that demonstrate higher levels of interdependences, such as sharing tasks (Canary, Stafford, Huse, & Wallace, 1993), they are more sensitive to lack of assurance of interdependence, and consequently, brood more over the incidents that made them uneasy.

Additionally, the current study identified length of time as significant influencer of relationship outcomes including relational distancing and relationship satisfaction, as well as perception of affiliation and involvement. Specifically, people felt less satisfied about their relationship, and distanced more from their partner as time went by. Besides, perception of the offender’s affection and involvement during the episode decreased as time passed. In a nut, relational damages caused by a hurtful interaction were likely to accumulate over time if the wound was left unattended.

Limitations and Directions for Future Research
Upon closing, I should acknowledge limitations of the current study. The first concern is the sample’s generalizability. Participants were recruited from a private university, and the majority of them were college students, hence the results are not generalizable to a wider population. Secondly, because of limited demographic information, the current research cannot answer whether gender, race, and age had any impact on test results, which may be of interest to future research. Third, due to limitations of the sample, very little information has been revealed about married couples. Although the current study identified noticeable difference between dating partners and close friends, more is yet to be explored about married couples.

Moreover, the current study differentiates brooding from other more constructive forms of rumination reflection, emphasizing that brooding is harmful to relationships. Due to the hypothetical positive correlation between hurt and brooding, as well as hurt’s detrimental influence on relationship, the present study assumed a corresponding injurious effect of brooding on relationship outcomes. Although brooding closely correlated with intensity of hurt, it predicts neither of the two outcome variables (i.e., relational distancing and relationship satisfaction), as did hurt. Subtle distinctions between brooding and intensity of hurt calls for further investigation, and future research may explore the role of brooding in relationship outcomes.

Finally, although the study has discovered several correlations between variables, it should be noted that those were not causal relationships, especially when it comes to intensity of hurt and brooding. There is no evidence showing whether it is intense hurt feelings that aggravate brooding, or the other way around. To be more specific, one can claim that a person tends to brood more because he/she feels intense hurt, or that negative
repetitive thoughts make an unfavorable incident seem more hurtful. Similar considerations hold for ambiguity and brooding. For example, does ambiguity cause brooding, or does excessive brooding hamper individual’s ability to understand the original message, thus making it more impenetrable? In order to answer these questions, future researchers may use experiment or longitudinal study to explore the highly subjective experience of hurt and track changes of thoughts and perceptions of a hurtful interaction.

**Conclusion**

The results of the study identified the significance of affiliative mental frame on hurt experiences, as well as intertwined associations among hurt, brooding, and relational outcomes. Although all of the three components of RFT do not predict intensity of hurt, the study emphasized the buffering effect of affiliation and involvement, as well as their interaction on hurt feelings. As surmised, message ambiguity and intensity of hurt positively predict brooding. The study also specified relationship type and length of time as two noteworthy factors that shape a hurt experience. Within the limitations of the current study, the findings reinforced the constructive role of affectionate cues in the context of hurtful interaction, and clarified the distinction between dating couples and close friends in hurtful experience.
REFERENCES


http://doi.org/10.1080/03637758409390195


http://doi.org/10.1177/0146167202289002


http://doi.org/10.1080/08824099309359913


http://doi.org/10.5465/AMJ.2006.22798187


http://doi.org/10.1080/01463373.2014.890118


http://doi.org/10.1177/0265407502196001

http://doi.org/10.1016/j.janxdis.2008.01.001


http://doi.org/10.1037/0021-843X.100.4.569

http://doi.org/10.1037/0021-843X.109.3.504

their social support networks. *Journal of Personality and Social Psychology,

Oliveira, C. M. (2008). *Perceptions of the aversiveness teasing as a function of perceived
identity confrontation, aggression, ambiguity and humor, and the perception of
intent to cause harm*. ProQuest Information & Learning, US.

context of depressive rumination: Ruminative brooding predicts diminished
relationship satisfaction in individuals with a history of past major depression.
http://doi.org/10.1348/014466509X480553

Perceptions of Hurt, and Biological Stress Reactions to a Disconfirming

perceptions of hurt, and biological stress reactions to a disconfirming interaction.
*Communication Research, 37*(1), 48–72.
http://doi.org/10.1177/0093650209351470


APPENDIX A

Participant Email

Dear Students,

You are asked to participate in a study being conducted by researchers and students from Wake Forest University Reynolda campus. The study aims to understand the influence of hurtful interactions on close relationships (friendships/romantic relationships) within which hurt occurs (IRB# IRB00022351).

The study will ask you to participate in an online survey, which consists of **13 questions in total** and will take **approximately 4-6 minutes**. The survey will ask you to reflect on an event when you felt hurt by a relationship partner, and subsequently, identify the descriptions that capture your feelings. Close relationship is pivotal to individuals, and your response will help us better understand how unfavorable interactions between partners will shape a relationship. **Your answers will be anonymous and kept confidential.** The aggregated results of the survey will be analyzed using SPSS statistical analysis software. Please read the consent form following the link for your convenience.

**Follow this link to the Survey:**
{web link to Qualtrics survey}

Or copy and paste the URL below into your internet browser:
{SurveyURL}

Follow the link to opt out of future emails:
{web link to unsubscribe}
APPENDIX B

Participant Informed Consent

STUDY TITLE: EFFECT OF RELATIONAL FRAMES ON CLOSE RELATIONSHIPS

You are invited to take part in the research study called effect of relational frames on close relationships conducted by researchers and student at Wake Forest University Reynolda campus. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

The purpose of this study is to investigate the influence of a hurtful experience on the relationship within which hurt occurs. Because people tend to interpret hurt interactions differently, impact of the interaction on relationship may vary. Therefore, the current study aims to examine how perceptions of a hurtful event will affect the quality of a close relationship. By answering the following questions, you will help us understand how some key factors may shape the experience of hurt.

In this study we would like to ask you to reflect on a situation where your relationship partner said or did something that hurt your feelings. Your responses will be collected online via Qualtrics. There are 13 questions in total, including both open and close-ended questions. The first few questions will ask you to describe the event that you felt hurt by a close friend or intimate partner; other questions will ask you to choose the description that captures your feelings. It may take 5-6 minutes to complete the survey.

Potential Risks and Benefits
We do not anticipate any risks to you participating in this study. However, you may find some of the questions asking about your recalled interaction sensitive. If any question triggers an emotional response, you can skip it, or seek help from the University Counseling Center at 118 Reynolda Hall during 8:30am-5:00pm Monday-Friday for scheduled and emergency walk-in appointments.

We do not expect you to benefit directly from taking the survey, but we hope your involvement might help you understand your thoughts of the experience. Close relationship is pivotal to individuals, and we want to learn more about how interactions between partners will shape the relationship.

Confidentiality
While we can't guarantee total confidentiality, the researchers will take the following precautions to protect your anonymous data: the records of this study will be kept private, and we will not include any information that will make it possible to identify you in any sort of report we make. The aggregated results of the survey will be downloaded to a computer to which only the researchers of this study will have access. Only researchers who have permission from the Institutional Review Board (IRB), a group of people at
Wake Forest University who make sure that research is appropriate, will be able to know survey report. We will erase your answers when we do not need them anymore.

**Taking part is voluntary:** Taking part in this study is completely voluntary, and you are free to withdraw at any time. If you wish to withdraw from the study, please notify Dr. Priem in writing, or by closing the browser. There are no penalties for refusing to participate or withdrawing.

**If you have questions:**
If you have questions regarding this study, you may contact Dr. Jennifer Priem at (336) 758-5405. You may also contact the IRB at irb@wfu.edu or 758-5888 for about your rights as a participant.

I agree

I disagree
APPENDIX C

Participant Descriptive Information

For the next set of questions, we would like you to think about a time when someone said something that made you feel devalued or suggested that your relationship was not important. For example, people might make a joke that made you feel put down or may make a statement that shows they feel differently about your relationship than you do.

For this survey, please think about a specific conversation in which a relationship partner (dating/marital member, close friend) said things that made you feel bad about yourself or your relationship. As you answer the next set of questions, please think only about that specific conversation.

1. Write the initials of the person who hurt you in that conversation.
2. What was/is his/her relationship to you?
3. How long (months) has it been since the interaction occurred? (please enter "0" if less than one month)
4. What exactly did the partner said or did that was hurtful? Please be as specific as possible.
APPENDIX D

Intensity of Hurt Scale

During and following the conversation, how hurt did you feel overall?
From 1 = *not at all hurtful* to 7 = *extremely hurtful*

To what extent did the conversation cause you emotional pain?
1 = *no emotional pain* to 7 = *intense emotional pain*

How hurtful was the interaction?
From 1 = *not at all hurtful* to 7 = *extremely hurtful*
APPENDIX E

Brooding Scale

_After the interaction, I often think..._

“What am I doing to deserve this?

“Why do I always react this way?”

about a recent situation, wishing it had gone better

“Why can’t I handle things better?”

_Note._ Unless otherwise noted, response categories ranged from _1 = very untrue of me_ to _7 = very true of me_.


APPENDIX F

Relationship Satisfaction Scale

Please rate the degree to which you agree or disagree with the following statements about your relationship with this person CURRENTLY.

- I feel satisfied with our relationship.
- My relationship is much better than others’ relationships
- My relationship is close to ideal
- Our relationship makes me feel very happy
- Our relationship does a good job of fulfilling my needs for intimacy

Note. Unless otherwise noted, response categories ranged from 1 = strongly disagree to 7 = strongly agree
APPENDIX G

Relational Distancing (Semantic Differential Scale)

Please rate the degree to which the hurtful interaction made your relationship:

| From 1 = distant to 7 close*       |
| From 1 = relaxed to 7 = tense     |
| From 1 = friendly to 7 = hostile  |
| From 1 = distant to 7 = intimate* |
| From 1 = open to 7 = closed        |

Note. * Reversely coded items
APPENDIX H

Message Ambiguity Scale

Please rate the extent to which you agree or disagree with the statements about the way in which the person stated the hurtful message.

---

The message was stated in a direct way.*

The meaning of the message was clearly stated.*

There were a number of ways in which the message could have been interpreted.

The message was stated as a joke or hinted at, rather than expressly stated.

The message was ambiguous.

---

* Reversely coded items

Note. Unless otherwise noted, response categories ranged from 1 = strongly disagree to 7 = strongly agree;
### APPENDIX I

*Relational Frame Scale*

*How do you rate your partner's words/ action during the hurtful interaction?*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Extreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Dominance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Dominance</td>
</tr>
<tr>
<td>No Submission</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Submission*</td>
</tr>
<tr>
<td>No Persuasion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Persuasion</td>
</tr>
<tr>
<td>No Concession</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Concession*</td>
</tr>
<tr>
<td>No Influence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Influence</td>
</tr>
<tr>
<td>No Compliance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Compliance*</td>
</tr>
<tr>
<td>No Controlling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Controlling</td>
</tr>
<tr>
<td>No Yielding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Yielding*</td>
</tr>
<tr>
<td>No Affiliation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Affection</td>
</tr>
<tr>
<td>No Disaffection</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Disaffection*</td>
</tr>
<tr>
<td>No Liking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Liking</td>
</tr>
<tr>
<td>No Disliking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Disliking*</td>
</tr>
<tr>
<td>No Attraction</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Attraction</td>
</tr>
<tr>
<td>No Aversion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Aversion*</td>
</tr>
<tr>
<td>No Positive regard</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Positive regard</td>
</tr>
<tr>
<td>No Negative regard</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Negative regard*</td>
</tr>
<tr>
<td>No Engagement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Engagement</td>
</tr>
<tr>
<td>No Withdrawal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Withdrawal*</td>
</tr>
<tr>
<td>No Interest</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Interest</td>
</tr>
<tr>
<td>No Disinterest</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Extreme Disinterest*</td>
</tr>
</tbody>
</table>

*Note.* *Reversely coded items*
EDUCATION

**Wake Forest University**
Winston-Salem, North Carolina  
Master of Arts in Communication  
*August 2016*

**Shanghai International Studies University**
Shanghai, China  
Bachelor of Arts in Journalism, minor in French  
*June 2014*

**Seminar on Media and Public Relations**
Columbia University, New York City, New York  
*February 2013*

*Completed intensive training courses including public relations, integrated marketing communication, etc.*

PROFESSIONAL EXPERIENCE

**Intern, Marketing Analytics**
Mullen Lowe U.S., Winston-Salem, NC  
*January-April 2016*

- Analyze performance of digital campaigns by Google Analytics, Tableau, Twitter Analytics, Facebook Insights, etc.
- Perform data pulls on excel and optimize campaigns for CSX, Ulta Beauty, Hanes Brands, and Youfit Health Clubs
- Create visual presentations of findings to clients

**Research Assistant**
Wake Forest University Student Wellbeing Project, Winston-Salem, NC  
*January-May 2015*

- Created and specified key items for student wellbeing research, including confidence, conscientiousness, perseverance, etc.
- Created master interview guide, performed cognitive interviews, and edited interview questions of tested items
- Generated literature review on self-report validity from psychology, sociology and health databases and encoded findings

**Intern, Assistant Editor**
News Update, China Central Television (CCTV news), Beijing, China  
*July-September 2013*

- Ensured effective collaboration between editors, directors, and anchors by updating all parties on working process
- Documented live-cross signals sent by correspondents from Washington, West Asia, Europe and Africa, and managed files
- Printed and proofread scripts, checked anchor's prompter for error, entered advertising video

**Intern, Assistant Director**
News & General Channel, Shanghai Media Group  
*April-June 2013*

- Gathered background information and wrote program plans for a weekly parental-children relationship TV program
- Planned weekly topics, prepared materials; welcomed and coordinated with guests who attended the program
- Edited video clips and participated in post-production

PROJECT EXPERIENCE

**Study Team**
Building a Culture of Health through Youth Soccer, Winston-Salem, NC  
*September-December 2015*

- Conducted interviews with soccer players at Twin City Youth Soccer Club about their health concerns and family relations
• Collected data and reflected on findings about young athletes, i.e., body image, family eating behaviors, time constraint.
• Wrote an individual proposal based on my interviews and literature research

Researcher & Writer National Undergraduates' Innovation Project, Shanghai, China October 2012-June 2013
• Conducted research for Image of China in American Newspapers at Shanghai Library and school database
• Collected and categorized all news pictures of China appearing in New York Times from 2012.01.01-2012.06.30
• Analyzed data and wrote final report, titled The Image--New York Times' Representation of China

Team Leader Media Design and Management, Shanghai, China September-December 2012
• Proposed framework of media design project for Popcorn Social Networking Services, designed logo
• Identified target audience for the networking service, evaluated its market value and potential competitors
• Ensured smooth collaboration among team members and managed process of the project

Co-Founder, Designer All Walks of Love, Shanghai, China September-December 2010-2011
• Initiated campaigns to sell post-cards, coordinated with online suppliers to purchase materials
• Designed brand logo and made campaign posters for off-line events
• Promoted brand by generating campaign feeds on social media, including Weibo (Chinese twitter) and Renren

EXTRACURRICULAR EXPERIENCE

• Student Interviewer Shanghai International Studies University 2013.07-2013.08
• PR Secretary School of Journalism, Shanghai International Studies University 2010.09-2011.12
• Event Coordinator College Theater Gala & VJ Contest, Shanghai Intl. Studies University 2010.09-2011.06

AWARDS AND HONORS

• Tuition Stipend Wake Forest Office of Personal and Career Development January-May 2015
• Partial scholarship Wake Forest communication department 2014-2016
• Tuition waiver (15%) Advanced Seminar on Media and Public Relations January-February 2013
• Scholarship Shanghai International Studies University 2011-2013

SPECIAL SKILLS

• Computer Proficient in SPSS, Google Analytics, Curalate, MS Word, Excel,
• Foreign Language Bilingual in Chinese and English, plus entry level French
• Logo design Skillful in designing logo and posters