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## The Dark Side of Commitment: Intrasexual Vigilance Among the Chronically Jealous

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THE FLORIDA STATE UNIVERSITY  
COLLEGE OF ARTS AND SCIENCES

THE DARK SIDE OF COMMITMENT: INTRASEXUAL VIGILANCE AMONG THE  
CHRONICALLY JEALOUS

By

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# TABLE OF CONTENTS

List of Tables .....	v
List of Figures .....	vi
Abstract .....	vii
1. INTRODUCTION .....	1
Relationship Commitment.....	1
Jealousy and Intrasexual Vigilance toward Romantic Rivals .....	4
Overview of Current Research .....	5
2. STUDY 1 .....	6
Method.....	6
Results .....	8
Discussion.....	10
3. STUDY 2.....	12
Method.....	13
Results .....	13
Meta-analysis of Study 1 and 2 .....	15
Discussion.....	16
4. GENERAL DISCUSSION.....	17
Implications of Current Research .....	19
Limitations and Future Directions.....	20
Conclusion.....	21
APPENDICES .....	23
A. Brief Mood Introspection Scale.....	23
B. Multidimensional Jealousy Scale .....	24
C. Human Subjects Committee Approval Letter .....	26
D. Informed Consent .....	27
REFERENCES .....	29
BIOGRAPHICAL SKETCH .....	32

## **LIST OF TABLES**

1	Mean (SD) Number of “More Pleasant” Responses (Study 1) .....	9
2	Mean (SD) Number of “More Pleasant” Responses (Study 2) .....	14

## **LIST OF FIGURES**

1	Evaluations of Same-Sex Attractive Targets by Priming Condition (Study 1).....	10
2	Evaluations of Same-Sex Attractive Targets by Priming Condition (Study 2).....	15

## **ABSTRACT**

Commitment is essential to the long-term maintenance of romantic relationships. Commitment promotes relationship maintenance strategies and a variety of other positive relationship outcomes. However, when paired with jealousy, commitment may heighten people's concerns about infidelity and trigger vigilance toward romantic rivals. Two experiments tested the hypothesis that commitment and jealousy would interact to promote negative implicit evaluations of attractive same sex targets, reflecting a basic cognitive attunement to potential relationship threats posed by romantic rivals. Across both studies, priming feelings of commitment and love toward one's partner led people high in chronic jealousy (but not those low in chronic jealousy) to negatively evaluate attractive same sex individuals at implicit levels of cognition. The current research thus provides insight into an understudied negative consequence of being highly committed to a relationship: the more committed one is, the more one has to lose, and thus the more concerned one becomes about having one's partner stolen away by a potential competitor.



# CHAPTER ONE

## INTRODUCTION

Commitment is absolutely essential to the long-term maintenance of romantic relationships. Commitment is not just one element of most healthy, successful relationships, but *the* key mechanism by which other relationship-promoting factors lead to lasting relationships. That commitment plays a positive role in romantic relationships is practically a truism, as a wealth of research has linked commitment to a wide variety of relationship maintenance strategies that promote relationship esteem and relationship longevity (Maner, Rouby, & Gonzaga, 2008; Rusbult, Van Lange, Wildschut, Yovetich, & Verette, 2000).

Yet, might there be a downside to commitment? Although commitment generally leads to relationship satisfaction, trust, and other positive relationship outcomes, commitment may have a very different effect for people who chronically worry about infidelity. Among individuals predisposed toward jealousy, commitment could trigger or heighten concerns about partner infidelity and relationship loss. Because feelings of commitment signal that one has a lot to lose if the relationship were to end, commitment might heighten people's perceptions of relationship threat. Understanding the potential consequences of relationship commitment and jealousy could have implications for understanding processes ultimately underlying divorce and relationship violence. The current research begins to investigate the links among relationship commitment, romantic jealousy, and perceptions of relationship threat by examining the interactive effects of commitment and jealousy on implicit negative evaluations of potential romantic rivals.

### Relationship Commitment

Romantic relationships can be tumultuous and plagued by conflict. Not surprisingly, at least as many relationships fail as succeed. There is perhaps no better statistic to illustrate the difficulty in maintaining a relationship than the divorce rate in the U.S., which currently hovers around 50% (Tejada-Vera & Sutton, 2010). Yet, many relationships do succeed, some lasting a lifetime. Understanding the secret to lasting relationships has been the focus of decades of relationship research.

Several models have been proposed to describe the factors that lead to the successful maintenance of romantic relationships. The most widely cited of these theories, the Investment

Model (Rusbult, 1980; Rusbult, Martz, & Agnew, 1998), suggests that the longevity of a relationship depends on three factors: current relationship satisfaction (how happy one is with the relationship), the quality of alternatives (the perceived desirability of alternative relationship partners), and investment size (the magnitude and importance of resources attached to and invested in the relationship). Other models include Johnson's (1991) commitment model, consisting of three types of commitment—personal, moral, and structural commitment and Levinger's (1979) model, which focuses on the balance between the forces that keep one in a relationship and the forces that draw one away. What these models share in common is the idea that relationship promoting factors lead to relationship longevity via one important mechanism: commitment. Relationship commitment is the essential key mechanism by which relationships fail or succeed.

Relationship commitment is a key predictor of relationship longevity in part because it motivates people to engage in a variety of relationship maintenance strategies designed to overcome threats to the relationships. Commitment buffers relationships from threats in a variety of ways. Relationship commitment encourages people to view their partners and relationship in a positive light, despite their flaws and imperfections (Arriaga, Slaughterbeck, Cappelz, & Hmurovic, 2007). These positive illusions are particularly strong after receiving relationship-threatening information (Rusbult et al., 2000). When partners behave badly, commitment leads to greater levels of forgiveness and accommodation, which in turn predict greater levels of personal well-being and increased relationship functioning (Etcheverry & Le, 2005; Karremans, Van Lange, Ouwerkerk, & Kluwer, 2003).

Commitment also plays an integral role in protecting romantically involved individuals from attractive tempting alternatives who might lure one away from the relationship. Miller (1997) demonstrated that commitment was associated with how long romantically involved participants spent gazing at advertisements with attractive opposite sex individuals in them. Participants who were more committed were less likely to spend time looking at attractive opposite sex individuals and this, in turn, predicted relationship persistence at a two month follow up. Furthermore, commitment leads people to evaluate attractive alternatives more negatively. A wealth of research has shown that committed individuals are more likely to devalue and underrate the attractiveness of attractive opposite sex individuals (Johnson & Rusbult, 1989; Lydon, Meana, Sepinwall, Richards & Mayman, 1999; Simpson, Gangestad, &

Lerma, 1990), presumably in an attempt to mitigate the temptation of attractive alternatives and maintain commitment to the current relationship.

A key emotional component of relationship commitment—romantic love—also plays an important role in relationship maintenance strategies. Romantic love entails an emotional attachment to the partner and relationship and acts as an emotional commitment device designed to foster long-term pair bonding (Buss, 1988; Frank, 1988). Feelings of romantic love are associated with the release of oxytocin, a hormone which promotes long-term social bonding in many species, including humans (Gonzaga, Keltner, Londhal & Smith, 2001). Together with commitment, romantic love plays an important role in protecting the long-term survival of the relationship in the face of relationship threats, such as attractive relationship alternatives. Maner, et al. (2008) found that a surge of romantic love toward one's partner inhibited romantically involved individuals attention toward attractive opposite sex targets. That is, feelings of romantic love help to buffer individuals from attending to people who pose the most threat to their commitment to their current relationship. Thus, romantic love is an important affective mechanism through which commitment helps people to maintain their relationship in the face of threats.

Overall, a vast literature suggests that commitment, and its emotional component (love) play an integral role in maintaining romantic relationships. Relationship commitment and romantic love encourage individuals to engage in relationship maintenance strategies that allow them to successfully navigate threats to their relationship and maintain their relationship esteem. By motivating individuals to engage in relationship maintenance strategies, commitment and love ensure the longevity of the relationship. Furthermore, many of those strategies also engender greater feelings of love, trust, and commitment in the relationship, creating a feedback loop whereby commitment and love lead to relationship maintenance strategies which, in turn, lead to greater relationship commitment (Boyes & Fletcher, 2007; Murray & Holmes, 1997; Wieselquist, Rusbult, Foster, & Agnew, 1999).

Thus, decades of relationship research point unequivocally to the fact that commitment and love are integral to a healthy, long-lasting relationship. Yet, might there be a downside to commitment? The more committed one is to a relationship and the more one has invested, the more one has to lose were the relationship to end. Although for many individuals commitment and love promote greater relationship esteem and trust, for some individuals it may promote

concerns over the loss of the relationship. Specifically, commitment may cause certain individuals to focus on the possibility that one may lose their partner to a romantic rival.

### **Jealousy and Vigilance toward Romantic Rivals**

Infidelity is a pervasive problem for many romantic relationships. Infidelity afflicts up to 44% of relationships in the United States (Wagers, 2003). Mate-poaching (i.e. attempting to attract someone currently in a romantic relationship) is a common and strategic practice among people of many different societies and, in the United States, approximately 60% of men and 40% of women admit to attempting to poach another's mate (Schmitt et al., 2004). Thus, for committed individuals, the potential for partner infidelity and the presence of romantic rivals (i.e. attractive same-sex individuals who might infiltrate the relationship) pose a major threat to relationship maintenance.

Highly jealousy individuals—those who are most concerned about potential threats to their partner's commitment—are particularly attuned to the relationship threat posed by potential romantic rivals (e.g., Maner Miller, Rouby, & Gailliot, 2009). Among highly jealous individuals, concerns of partner infidelity can lead to a host of adaptive and maladaptive strategies intended to protect the relationship from rivals. Those strategies tend to specifically target same-sex individuals who are highly attractive. Highly attractive rivals present a particularly threatening problem for relationships, as studies of mate selection suggest that both men and women place a premium on the physical attractiveness of extra-pair relationship partners (e.g., Gangestad & Thornhill, 1997; Haselton & Gangestad, 2006). When primed with infidelity concerns, highly jealous individuals pay ample attention to attractive same-sex individuals (Maner, Gailliot, Rouby, & Miller, 2007), as well as remember them better (Maner, et al., 2009). Furthermore, concerns about infidelity lead highly jealous individuals to negatively evaluate attractive same-sex targets, presumably because they are seen as a threat to the current relationship (Maner, et al., 2009). Thus, highly jealous participants are particularly vigilant toward rivals who could pose the most immediate threat to the partner's commitment—highly attractive same-sex individuals.

Beyond just psychological vigilance, concerns about infidelity can also lead to violence against the partner (Wilson & Daly, 1996), as well as violence against rivals (Buss & Shackelford, 1997). Jealousy and vigilance toward partner infidelity can lead to serious and

dangerous consequences. Thus, understanding the role relationship commitment plays in promoting vigilance toward romantic rivals is an important topic for research.

### **Overview of Current Research**

Love and commitment play an important role in encouraging people to engage in relationship maintenance strategies designed to enhance the longevity of the relationship. Among chronically jealous individuals, commitment may trigger concerns over the loss of their partner. Based on previous research showing that fears of partner infidelity can lead highly jealous individuals to display vigilance toward romantic rivals, I hypothesized that high levels of commitment would lead highly jealous people to display heightened vigilance to attractive same-sex individuals at an implicit level of cognition. That is, high levels of commitment are predicted to attune highly jealous individuals to the threat of partner infidelity and relationship loss, thus leading them to implicitly perceive attractive same-sex individuals as dangerous threats to the relationship.

To examine the combined effects of commitment and jealousy on intrasexual vigilance, the current research tested the hypothesis that commitment and jealousy would interact to cause romantically involved individuals to negatively evaluate attractive same-sex individuals. I conducted two studies that manipulated feelings of commitment and love, in order to examine the extent to which those feelings would interact with individual differences in chronic jealousy to affect implicit evaluations of attractive same-sex targets. I predicted that commitment and love would cause participants high in chronic jealousy to negatively evaluate attractive same-sex targets.

## CHAPTER TWO

### STUDY 1

Study 1 tested the hypothesis that feelings of love and commitment would interact with chronic jealousy to cause implicit negative evaluations of attractive same-sex targets. After undergoing a priming procedure intended to evoke either salient feelings of love and commitment for their partner or general happiness, participants performed an evaluation task that assessed their implicit evaluations of attractive and average-looking same-sex targets, as well as opposite-sex targets.

#### Method

##### Participants

Participants were 60 undergraduate students (15 males, 45 females), ranging in age from 18 to 24 years old. All participants were currently in a romantic relationship. Relationship length ranged from less than a month to 5 years, with the average length being 6 – 12 months. Participants were compensated with partial course credit.

##### Procedure

Upon entering the lab, participants were told they were taking part in two ostensibly unrelated experiments, one on memory for personal events and the other on evaluations of art. Following these instructions, participants wrote a priming essay intended to elicit either feelings of love and commitment for their current partner or a control state (happiness). Next they took part in the implicit evaluation task, the Affect Misattribution Procedure (AMP; Payne, Cheng, Govorun, & Stewart, 2005), in which participants implicitly evaluated pictures of males and females of varying attractiveness. Last, participants completed a questionnaire measuring chronic jealousy.

**Priming essay.** The priming essay was a between subjects variable in which participants either wrote an essay about a time they felt very strong feelings of love and commitment for their current partner (love prime condition), or wrote about a time they were happy with friends and family members (control prime condition). The control condition was chosen to match the experimental condition in several respects. First, the control essay matched the experimental essay in valence, by asking participants to write about a positive memory. Second, the control

essay also asked participants to write about a memory dealing with someone close to them—a family member or friend, rather than a romantic partner. This priming procedure is similar to that used in previous relationship research (Maner, Rouby & Gonzaga, 2008).

**Brief Mood Introspection Scale (BMIS).** Immediately following the priming manipulation, participants completed the BMIS (Mayer & Gasechke, 1988), a 15-item scale in which participants indicate the extent to which they are currently feeling a variety of states (e.g. grouchy, content, peppy, calm) from 1 (not at all) to 5 (extremely). This scale provides measures of affective valence and arousal and was included to ensure that there were no mood valence or arousal differences between priming conditions. A composite score was created for mood valence by reverse scoring all negative moods (e.g. grouchy, tired, sad) and then summing scores across all 15 items. A composite score for arousal was created by reverse scoring low arousal items (e.g. tired, calm) and summing scores across the 12 items related to arousal level.

**Affect Misattribution Procedure (AMP).** Following the priming essay, participants were told they were moving on to the second experiment, involving judgments of Chinese symbols. Participants actually performed the AMP (Payne, et al., 2005). In this procedure, participants briefly viewed a picture of a target followed by a Chinese character. Participants were told to ignore the first picture (the target picture) and only rate the Chinese character as more pleasant or less pleasant than the average Chinese character. The task is designed so participants misattribute their evaluations of the target picture to the Chinese character (toward which participants should have an otherwise neutral attitude). Thus, this task provides a measure of implicit social evaluations. For this version of the experiment, target pictures consisted of attractive and average-looking males and females (photos were extensively pre-tested to ensure substantial differences between attractive and average targets and to equate male and female targets). There were 10 pictures of each target type (attractive males, attractive females, average males, average females) and 10 filler pictures (gray squares), for a total of 50 trials. For each trial, participants were presented with the target picture for 75 ms followed by a Chinese character for 100 ms and then backward masked. Participants indicated whether they found the Chinese character more pleasant than the average Chinese character (by pressing the “e” key) or less pleasant than the average Chinese character (“i” key). Following previous research using the AMP (Payne et al., 2005), the number of “more pleasant” responses was totaled for each target category. Higher scores indicate more positive implicit evaluations of targets.

**Chronic jealousy scale.** Individual differences in chronic jealousy were measured using the Multidimensional Jealousy scale ( $\alpha = .88$ ; Pfeiffer & Wong, 1989). This scale consists of 24 statements about one's current and past romantic relationships that tap into people's jealous thoughts, emotions, and behaviors. Sixteen items asked participants to indicate how often (ranging from 1 "never" to 7 "all the time") they engaged in various jealous thoughts and behaviors (e.g., "I am worried that some members of the opposite sex may be chasing after X"; "I look through X's drawers, handbags, or pockets"). Eight items asked participants to indicate how upset they would be (ranging from 1 "very pleased" to 7 "very upset") upon witnessing their partner engaging in a variety of ambiguous behaviors (e.g., "X smiles in a friendly manner to someone of the opposite sex"). As in previous research (Maner et al., 2007), a composite measure of jealousy was created by averaging responses across all 24 questions. Higher scores indicate greater levels of chronic jealousy and greater concern over threats posed by romantic rivals.

## Results

### Preliminary Analyses

To ensure that any differences found between priming conditions were not due simply to affect or arousal, current mood valence and arousal were compared between priming conditions. No significant differences between priming conditions were found for current mood valence ( $\beta = -.19, p = .158$ ) or current arousal ( $\beta = -.07, p = .594$ ).

### Implicit Evaluation Effects

Descriptive statistics are provided in Table 1. To test my main hypothesis, regression analyses were performed to assess the effect of priming condition, level of jealousy, and their centered interaction on evaluations of attractive same-sex individuals. There was a marginally significant gender difference on the dependent variable of interest—attractive same-sex individuals,  $b = 1.7, p = .06$ , such that men evaluated attractive same-sex individuals more negatively than women. Gender did not interact with any other predictor, including priming condition ( $b = .67, p = .71$ ), level of chronic jealousy ( $b = .02, p = .77$ ), or their interaction ( $b = -.178, p = .24$ ). Thus, for all following regression analyses, gender was included in the model only as a covariate to control for gender differences.



Table 1. Mean (SD) Number of “More Pleasant” Responses by Priming Condition and Target Category

Variable	Control (Happy) Prime (n = 29 )	Love Prime (n = 31)
Attractive same-sex targets	5.40 (2.77)	5.12 (3.35)
Average same-sex targets	4.13 (2.18)	4.19 (2.99)
Attractive opposite-sex targets	6.40 (2.17)	7.10 (2.65)
Average opposite-sex targets	4.93 (2.56)	4.61 (2.39)

*Note.* Higher numbers indicate greater positive evaluations.

Analyses were conducted for evaluations of attractive same-sex targets. I observed the predicted (marginally significant) interaction between chronic jealousy and priming condition for attractive same-sex targets,  $b = -.094$ ,  $p = .07$ , *semipartial*  $r = -.23$  (see Figure 1). To interpret this interaction, I probed the simple effect of priming condition at high and low levels of jealousy (one standard deviation above and below the mean, respectively). For participants low in chronic jealousy, the priming manipulation did not affect evaluations of attractive same-sex targets,  $b = 1.30$ ,  $p = .25$ . For participants high in chronic jealousy, however, the effect of the priming manipulation trended toward significance,  $b = -1.66$ ,  $p = .13$ , such that highly jealousy participants in the love-prime condition rated attractive same-sex targets somewhat more negatively than those highly jealousy participants in the control-prime condition (though the comparison was not statistically significant).

I conducted additional analyses to examine potential effects of the priming manipulation on the other three target types. There was no main effect of priming condition on average-looking same-sex individuals, ( $b = -.02$ ,  $p = .973$ ), attractive opposite-sex individuals ( $b = .87$ ,  $p = .16$ ), or average-looking opposite-sex individuals ( $b = -.39$ ,  $p = .53$ ). Nor was there any interaction between priming condition and jealousy for the other three target types (average-looking same-sex targets,  $b = .01$ ,  $p = .88$ ; attractive opposite-sex targets,  $b = -.05$ ,  $p = .20$ ; average-looking opposite-sex targets,  $b = .02$ ,  $p = .57$ ). Thus, effects were specific to attractive same-sex targets.

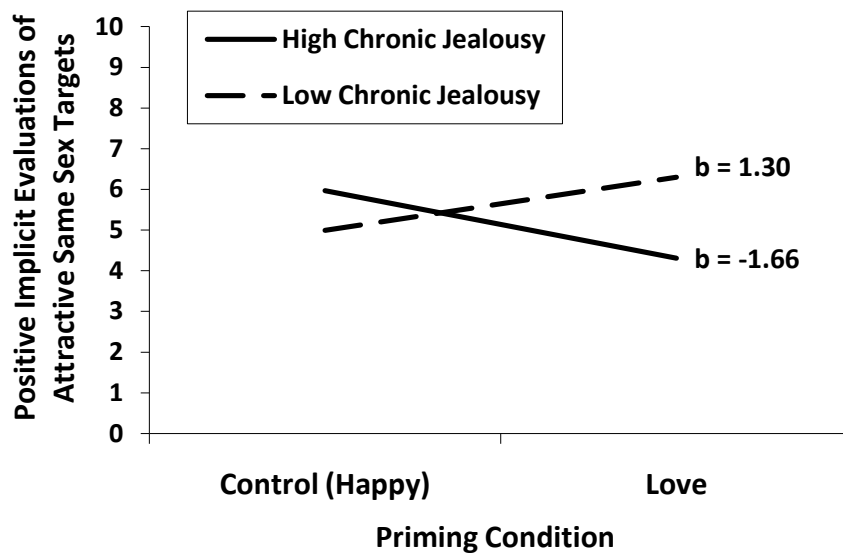


Figure 1. Evaluations of Same-Sex Attractive Targets by Priming Condition (Study 1)  
 Love prime led highly jealous participants to form less positive implicit evaluations of attractive same sex targets, though results were not significant. Unstandardized regression coefficients are reported.

### Discussion

The results of Study 1 provide preliminary support for the hypothesis that commitment encourages individuals high in chronic jealousy to negatively evaluate attractive romantic rivals on an implicit level. Although the priming condition did not produce significant effects, the predicted trend was found. Low jealousy participants in both priming conditions and high jealousy participants in the control prime rated the majority of attractive same targets positively (on average, rating over 50% of targets as “more pleasant than average”). Only high jealousy participants in the love priming condition dropped below the 50% mark—rating the majority of attractive same-sex targets negatively.

These negative evaluations were not only observer-specific, but also target-specific. Negative evaluations were directed toward only same-sex targets (not opposite-sex targets), and only those who were highly attractive. This is particularly interesting in light of previous research demonstrating that people generally see attractive individuals in a positive light (Eagly, Ashmore, Mahkijani, & Longo, 1991). The target- and observer-specificity of the current findings suggest that, for highly jealous individuals, strong feelings of love and commitment trigger negative responses to attractive same-sex targets.

An important limitation of Study 1 that may account for the nonsignificant results pertains to the control condition. One problem with the control condition was that, although the instructions asked participants to write about a friend or family member, some participants wrote instead about a romantic partner. This may have reduced the potential differences between the experimental and control conditions. A second limitation of Study 1 was that the priming procedure did not rule out the possibility that merely priming thoughts of the partner is enough to elicit negative evaluations of rivals among highly jealous individuals. That is, because the experimental priming condition asked participants to write about the partner, but the control condition did not, it is possible that thoughts of the partner—rather than feelings of love and commitment to that partner—were responsible for the trend found in Study 1. To remedy these issues and to further test whether feelings of love and commitment trigger negative rival evaluations among chronically jealous participants, I conducted a second study using a new control priming condition.

## CHAPTER THREE

### STUDY 2

Findings from Study 1 provided preliminary support for the hypothesis that commitment encourages individuals high in chronic jealousy to negatively evaluate attractive romantic rivals. To further test this hypothesis and to address several limitations in Study 1, I conducted a second experiment. For this second study, I compared love and commitment to another emotion involved in relationships—sexual desire.

Unlike romantic love, sexual desire for one's partner does not necessarily engender a long-term orientation toward the relationship, but rather the more short-term goal of sexual union (Gonzaga, Haselton, Smurda, Davies, & Poore, 2008). Consequently, whereas romantic love elicits strategies for maintaining the long-term success of the relationship, sexual desire does not have the same effect. Gonzaga and colleagues (2008) demonstrated this important distinction between love and desire in a recent study. After participants were primed with either love for their partner or sexual desire for their partner, they attempted to suppress thoughts of attractive opposite-sex individuals. Compared with participants in the sexual desire condition, those in the love condition were better able to suppress thoughts of the attractive alternatives and remembered fewer attractiveness related details about them. These results suggest that love, but not sexual desire, plays an important role in orienting romantically individuals toward the long-term survival of the relationship.

Based on this research, I expect that feelings of love and commitment (compared with sexual desire) will more strongly attune highly jealous individuals to the threat of romantic rivals, causing those individuals to implicitly perceive attractive same-sex targets more negatively. Thus, by priming feelings of sexual desire toward one's partner versus feelings of romantic love, I can examine whether love and commitment specifically, rather than just thoughts of the partner, are the driving force behind negative evaluations of romantic rivals.

In Study 2, I primed feelings of love and commitment or feelings of sexual desire for one's partner to see how those emotions affect evaluations of attractive same-sex targets among chronically jealousy participants. I hypothesized that participants high in chronic jealousy who are primed with commitment and love, as compared to sexual desire, would more negatively evaluate attractive same-sex targets.

## Method

### Participants

Participants for Study 2 consisted of 35 undergraduate students (10 males, 25 females), ranging in age from 18-25 years old. All participants were currently in a romantic relationship. Length of relationship ranged from 1-4 weeks to 6 years, with the average relationship being 12 – 18 months. Participants were compensated with course credit.

### Procedure

Study 2 was identical to Study 1, with the exception of the control priming essay. For the priming essay, participants either wrote about a time they felt strong feelings of love and commitment for their partner (love prime) as in Study 1, or they wrote about a time they felt strong feelings of sexual desire for their partner (desire prime). The control condition was equivalent to the experimental condition in that participants were able to discuss a positive emotional experience with their partner, differing only in the emotions involved in the experience. Following the priming essay, the procedure followed that of Study 1, using the same mood scale, evaluation task, and chronic jealousy measure outlined above.

## Results

### Preliminary Analyses

To ensure that any differences between priming condition were not due simply to current mood valence and arousal, preliminary analyses assessed scores on those measures. No significant differences were found for current mood valence ( $\beta = .25, p = .14$ ) or current arousal ( $\beta = .147, p = .40$ ).

### Implicit Evaluation Effects

Descriptive statistics are provided in Table 2. To test the hypothesis, regression analyses were performed testing the effect of priming condition, level of jealousy, and their centered interaction on the evaluations of attractive same-sex individuals. There was a significant gender difference in implicit evaluations of attractive same-sex individuals,  $b = .359, p = .03$ , such that men evaluated attractive same-sex individuals more negatively than women. Gender did not interact with any other predictor, including priming condition ( $b = .07, p = .72$ ), level of chronic jealousy ( $b = .21, p = .43$ ), or their interaction ( $b = .29, p = .24$ ). Thus for all following regression analyses, gender was included in the model only as a covariate to control for gender differences.

Table 2. Mean (SD) Number of “More Pleasant” Responses by Priming Condition and Target Category (Study 2)

Variable	Control (Happy) Prime (n = 19)	Love Prime (n = 16)
Attractive same-sex targets	5.80 (2.74)	5.31 (2.96)
Average same-sex targets	4.56 (3.16)	3.00 (2.26)
Attractive opposite-sex targets	7.00 (2.23)	6.75 (2.64)
Average opposite-sex targets	5.31 (2.65)	4.12 (2.61)

*Note.* Higher numbers indicate greater positive evaluations.

Analyses revealed a significant interaction between chronic jealousy and priming condition on evaluations of attractive same-sex targets,  $b = -.132$ ,  $p = .02$ , *semipartial*  $r = -.36$  (see Figure 2). To interpret this interaction, I probed the simple effect of priming condition at high and low levels of jealousy (one standard deviation above and below the mean, respectively). For participants low in chronic jealousy, priming condition did not significantly predict evaluations of attractive same-sex targets,  $b = 1.18$ ,  $p = .31$ . However, for participants high in chronic jealousy, priming condition predicted evaluations of attractive same-sex targets,  $b = -3.29$ ,  $p = .01$ , *semipartial*  $r = -.38$ , such that highly jealous individuals primed with love rated attractive same targets more negatively than those primed with sexual desire. That is, among people who are high in chronic jealousy, love and commitment (as compared to sexual desire) elicited greater negative implicit evaluations of attractive romantic rivals.

I conducted additional analyses to examine potential effects of the priming manipulation on the other three target types. There was no main effect of priming condition on average-looking same-sex individuals, ( $b = -1.3$ ,  $p = .17$ ), attractive opposite-sex individuals ( $b = -.14$ ,  $p = .87$ ), or average-looking opposite-sex individuals ( $b = 1.3$ ,  $p = .13$ ). Nor was there any interaction between priming condition and jealousy for the other three target type (average-looking same-sex targets,  $b = -.06$ ,  $p = .31$ ; attractive opposite-sex targets,  $b = -.03$ ,  $p = .54$ ; average-looking opposite-sex targets,  $b = -.05$ ,  $p = .36$ ).

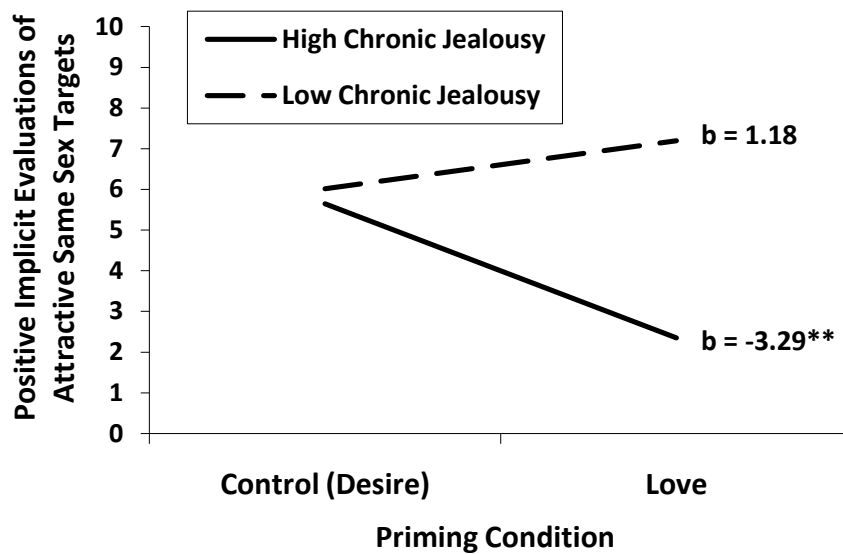


Figure 2. Evaluations of Same-Sex Attractive Targets by Priming Condition (Study 2)  
 Love prime led participants high in chronic jealousy (but not low) to form less positive implicit evaluations of attractive same sex targets. Unstandardized regression coefficients are reported.  
 \*\* $p < .001$ .

### Meta-Analysis of Study 1 and 2

I performed a meta-analysis to assess the significance and effect size of the interaction and relevant simple effects across the two studies. Using the procedure outlined by Rosenthal and Rosnow (1991), I calculated the overall significance for the effect of the interaction between commitment and jealousy on attractive same-sex target evaluations across both studies, weighting each study by its degrees of freedom. The interaction of commitment and chronic jealousy on evaluations of attractive same-sex targets was significant across the studies,  $z = 2.33$ ,  $p = .01$ . The overall effect size for the interaction across the studies was *semipartial*  $r = -.28$  (a medium effect size). I also tested the significance and effect size of the simple effect of commitment at high levels of chronic jealousy on evaluations of attractive same-sex targets. The simple effect was significant across both studies,  $z = 2.09$ ,  $p = .02$  and the overall effect size was *semipartial*  $r = -.28$ .

## Discussion

The results of Study 2 strengthen the conclusions from Study 1, again suggesting that commitment and love led highly jealous individuals to negatively evaluate attractive same-sex targets. Consistent with Study 1, findings of study 2 demonstrate that intrasexual vigilance is observer-specific. Commitment and love elicited negative evaluations only among highly jealous individuals; there was no effect of priming condition among those low in jealousy. Furthermore, as in Study 1, intrasexual vigilance was target-specific, such that it was directly only at highly attractive same-sex individuals—those who would be most threatening to the relationship.

Study 2 improved upon Study 1 by comparing the effects of different relationship emotions on evaluations of romantic rivals. Whereas in Study 1, love and commitment were compared to general feelings of happiness, Study 2 compared love and commitment to sexual desire. That commitment elicited more negative evaluations than sexual desire suggests that intrasexual vigilance is not simply the product of thinking about the relationship or partner in general, but rather feeling committed to the relationship, in particular. These findings fit with previous evidence that commitment, but not sexual desire, elicits a long-term orientation towards the relationship and triggers displays of relationship maintenance intended to protect the relationship from threat (Gonzaga, et al., 2008). Thus, the results of Study 2 suggest that commitment leads highly jealous people to implicitly perceive attractive same-sex individuals as sources of threat.



## CHAPTER FOUR

### GENERAL DISCUSSION

Decades of relationship research demonstrate that commitment and love play an integral role in maintaining long-term romantic relationships. By encouraging relationship maintenance strategies, commitment and love help people keep their relationships intact. The current studies extend this literature by demonstrating that, when paired with high levels of jealousy, commitment attunes people to sources of relationship threat. The current work is the first research to demonstrate the role of commitment in attuning highly jealous individuals to the threat of romantic rivals. Findings from the current research demonstrate that feelings of love and commitment activate implicit negative evaluations of attractive same-sex targets among those who are chronically jealous. Previous work has shown that priming fears of infidelity promotes intrasexual vigilance among those who are highly jealous (Maner, Gailliot, Rouby, & Miller, 2007; Maner, Miller, Rouby, & Gailliot, 2009). The current research goes beyond previous work by demonstrating that commitment and love—without any mention of infidelity—enhance people’s vigilance to potential rivals. Indeed, among chronically jealousy individuals, feeling committed to a relationship appears to elicit the same type of intrasexual vigilance as salient concerns about infidelity do.

The evaluation task used in these studies provides evidence for evaluative biases that occur at relatively implicit and automatic stages of cognition. Implicit evaluations provide early-stage affective judgments designed to signal a threat to the perceiver. Such affective judgments can feed into higher order cognitive processes and elicit conscious behaviors intended to mitigate the threat. Thus, negative implicit evaluations of attractive same-sex individuals could signal a relationship threat to the chronically jealous, potentially activating relationship maintenance strategies intended to protect the long-term survival of the relationship.

If negative evaluations signal the presence of relationship threat, then it would be important that such evaluations be selective. Seeing all same-sex individuals as a possible relationship threat would not be particularly functional. Rather one should focus only on those who are the most likely to succeed at infiltrating the relationship. Indeed, across both studies, negative evaluations were directed only at same-sex individuals who were highly attractive—individuals shown in previous research to pose particularly dire threats to one’s relationship

(Gangestad & Thornhill, 1997; Haselton & Gangestad, 2006). Thus, the target-specificity of the current findings provide further evidence that implicit rival evaluations serve to attune jealous individuals to potent sources of relationship threat.

Beyond target-specificity, the results also demonstrate that vigilance to intrasexual rivals is observer-specific. The effect of commitment on negative evaluations was moderated by levels of chronic jealousy, such that only highly jealous individuals displayed implicit negative reactions to romantic rivals. That is, only for individuals in whom infidelity is most salient does commitment appear to trigger intrasexual vigilance.

The moderating effect of jealousy can be interpreted in several ways. One interpretation is that high levels of commitment trigger intrasexual vigilance among people in general, but that chronically jealous individuals have a lower threshold for perceiving a same-sex target as threatening. That is, for highly jealous individuals, negative evaluations of same-sex individuals may be more automatic and more easily activated. Conversely, for individuals low in jealousy the potential relationship threat of romantic rivals may have to be more explicit. If it was made clear that a same-sex target were single and looking for a partner, for example, perhaps even individuals low in jealousy would become more cognizant of the threat that rival could pose to their relationship. That is, the threat posed by an attractive rival may need to be greater before commitment would trigger intrasexual vigilance among individuals who tend not to be chronically jealous.

Another interpretation is that commitment elicits intrasexual vigilance only among highly jealous individuals because commitment heightens their pre-existing chronic concerns of infidelity. Based on this interpretation, commitment would not have the same effect on individuals low in jealousy, as they tend not to display chronic or pervasive concerns over infidelity. As previous work shows, higher levels of commitment typically engender greater trust and positive regard towards the partner (Wieselquist, et al., 1999). Thus, among individuals low in jealousy, commitment might translate into higher trust and regard for the partner's loyalty, rather than into intrasexual vigilance. Thus for low jealousy individuals, greater commitment may have no effect on evaluations of attractive same-sex individuals, or even make such evaluations less negative. For highly jealous individuals however, pervasive concerns about infidelity may prevent commitment from engendering the same level of trust and positive regard

for the partner. Any threats to the relationship, particularly the partner's loyalty, would then be particularly salient and worrisome.

Notably, these two models imply different response patterns among individuals high versus low in chronic jealousy. The first model implies that increasing the threat level of romantic rivals will lead those low in jealousy to respond like those high in jealousy – responding to feelings of commitment by appraising attractive members of the same sex as potential threats to be avoided. The second model implies that, whereas those high in jealousy would respond to feelings of commitment with heightened vigilance to same-sex rivals, those low in jealousy would instead respond with greater trust, rather than greater concerns over possible infidelity. Thus, an important next step in this line of work will be to differentiate between and test these models.

### **Implications of Current Research**

The current research has implications for several areas of research in psychology. First, this work adds to research in both evolutionary psychology and social cognition. A growing literature has examined the intersection of these two theoretical perspectives in understanding how specific motives intended to solve evolutionarily important challenges can influence the way people perceive and think about others. Relationship maintenance has played a key role in human reproductive success, in part by ensuring children's survival via bi-parental investment. The current work demonstrates that commitment, a key to successful relationship maintenance, motivates highly jealous individuals to perceive attractive same-sex individuals as threats to the long-term survival of the relationship. Such intrasexual vigilance may be adaptive by attuning people to threats of infidelity. Thus, the current work adds to a growing literature that bridges evolutionary and social cognitive perspectives by examining how relationship maintenance motives can influence perceptions of other individuals in the social environment.

This work also has implications for relationship research by providing a new perspective on the role of commitment. The primary focus of previous relationship research has been on the positive effects of relationship commitment. The current work is one of the first studies to show that commitment can have negative psychological consequences, insofar as negative evaluations of same-sex targets reflect perceptions of threat, vigilant dislike, and mistrust.

Moreover, this work may provide an important stepping stone for future research to examine how negative rival evaluations may translate into aggressive behavior. Jealousy and concerns about infidelity are linked with a variety of mate-guarding behaviors (Buss & Shackelford, 1997), as well as aggression and violence toward both partners and rivals (Wilson & Daly, 1996). If highly jealous individuals involved in committed relationships perceive same-sex individuals as threats, those perceptions could lead to aggression toward those rivals. Furthermore, this work may have implications for intimate partner violence. If the driving force behind intrasexual vigilance is concern over partner infidelity, it is possible that negative attitudes and aggressive behavior may be directed toward the partner, in addition to potential rivals. Indeed, this line of research may have important implications for identifying risk factors for partner abuse. While research has long identified high levels of jealousy as an antecedent for abuse, the combination of jealousy and commitment may be a particularly potent risk for intimate partner violence. Though the current work did not measure partner violence or negative views of the partner, future research along these lines would be an important next step in understanding how the interaction of jealousy and commitment could be a toxic combination for relationships. Thus, this work provides a new avenue for understanding the circumstances under which commitment may be harmful for a relationship.

### **Limitations and Future Directions**

Several limitations of the current studies provide useful avenues for future research. One potential limitation is the reliance on college samples and the generalizability of findings to other long-term relationships. When examining commitment in long-term relationships, a college sample is likely to consist primarily of fledgling relationships, characterized by relatively short relationships and low levels of commitment. In fact, across both studies reported, only one participant was married. Thus, it is possible that these samples may only tap into relationships characterized by low to moderate commitment.

Notably, many relationship maintenance strategies are most common among those who are only moderately committed (Lydon, Fitzsimmons, & Naidoo, 2003; Lydon, et al., 1999). Those who are very low in commitment are not especially inclined to work hard toward maintaining their relationship because they are not necessarily oriented to the long-term survival of the relationship. On the other hand, those who are very high in commitment may not display

relationship maintenance strategies because, over time, trust and substantial psychological investment have rendered such strategies unnecessary. Thus, it makes sense that relationship maintenance strategies would be most pronounced among those who are moderately committed. Consequently, college samples made up primarily of moderately committed individuals provide a useful opportunity for studying relationship maintenance. Nevertheless, future work should examine a wider range of relationships, particularly individuals who are cohabitating and married, to examine how current levels of relationship commitment might influence jealousy and intrasexual vigilance.

A second limitation is that the current research does not examine what makes some individuals more chronically jealous than others. One important factor in chronic jealousy may be the individual's level of attractiveness, as studies show that, compared with those low in jealousy, those high in jealousy tend to be less attractive (Brown & Moore, 2003). Less attractive individuals are often romantically jealous of those who are more attractive (Pillsworth & Haselton, 2006) and display negative biases against attractive same-sex individuals (Agthe, Spörrle, & Maner, in press). Moreover, those who are less attractive are more likely to have suffered from infidelity in the past (Haselton & Gangestad, 2006). Thus, for less attractive individuals, jealousy and intrasexual vigilance may in fact be an adaptive strategy for attuning people to very real threats posed by potential rivals. Although the current research did not measure participant attractiveness, future work should examine the role that observer attractiveness (and other individual differences) plays in jealousy and intrasexual vigilance within committed relationships.

A third limitation pertains to the fact that the current research manipulated only the physical attractiveness of targets. Another important cue of rival threat for men would be masculinity and social dominance. Evolutionary studies have demonstrated that women tend to prefer men high in masculinity and social dominance, particularly during ovulation (Gangestad, Thornhill, & Garver-Apgar, 2005; Maner, Dewart, & Gailliot, 2008). Consequently, jealous men should selectively process highly masculine and dominant rivals, as they may pose particularly immediate sources of relationship threat. Future work should examine these and other social cues to further identify the target characteristics that activate intrasexual vigilance in committed relationships.

## **Conclusion**

Love and commitment have long been upheld as hallmarks of healthy, long-lasting relationships. But, for individuals who are chronically jealous, love and commitment may actually provide a very threatening view of the world. The more committed one is to a long-term partner, the more one has to lose if the relationship were to end. Combined with chronic concerns about the possibility of losing one's partner to a rival, commitment may fundamentally change the way people think about and perceive members of their own sex, leading people to see such individuals as potential threats to be disliked and avoided. Thus, the current work provides a new perspective on commitment, examining the potentially negative consequences of feeling highly committed to a long-term relationship. Rather than promoting trust and satisfaction, high levels of commitment, when paired with high levels of jealousy, may undermine positive relationship outcomes. Thus, the current work has important implications for the future of relationship research by beginning to illuminate the dark side of commitment.

## APPENDIX A

### BRIEF MOOD INTROSPECTION SCALE

For each of the following words, decide to what extent you feel that way **right now** (at the present moment). Using the following scale, write your response on the line beside each word.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a lot	extremely

\_\_\_\_\_ grouchy

\_\_\_\_\_ tired

\_\_\_\_\_ gloomy

\_\_\_\_\_ happy

\_\_\_\_\_ loving

\_\_\_\_\_ calm

\_\_\_\_\_ active

\_\_\_\_\_ jittery

\_\_\_\_\_ fed up

\_\_\_\_\_ drowsy

\_\_\_\_\_ sad

\_\_\_\_\_ lively

\_\_\_\_\_ caring

\_\_\_\_\_ content

\_\_\_\_\_ peppy

\_\_\_\_\_ nervous

## APPENDIX B

### MULTIDIMENSIONAL JEALOUSY SCALE

The following questions are investigating factors in personality. Please answer them honestly and accurately.

Please think about a person with whom you are having a strong romantic relationship. This person will be referred to as X in the questions below. Please answer the questions using the scales below.

#### How often do you have the following thoughts about X?

1	2	3	4	5	6	7
Never						All the time

- \_\_\_ 1. I suspect that X is secretly seeing someone of the opposite sex.
- \_\_\_ 2. I am worried that some member of the opposite sex may be chasing after X.
- \_\_\_ 3. I suspect that X may be attracted to someone else.
- \_\_\_ 4. I suspect that X may be physically intimate with someone else.
- \_\_\_ 5. I think that some members of the opposite sex may be romantically interested in X.
- \_\_\_ 6. I am worried that someone of the opposite sex is trying to seduce X.
- \_\_\_ 7. I think that X is secretly developing an intimate relationship with someone of the opposite sex.
- \_\_\_ 8. I suspect that X is crazy about members of the opposite sex.

#### How would you emotionally react to the following situations?

1	2	3	4	5	6	7
Very pleased						Very upset

- \_\_\_ 1. X comments to you on how great looking a particular member of the opposite sex is.
- \_\_\_ 2. X shows a great deal of interest or excitement in talking to someone of the opposite sex.
- \_\_\_ 3. X smiles in a very friendly manner to someone of the opposite sex.
- \_\_\_ 4. A member of the opposite sex is trying to get close to X all the time.



- \_\_\_ 5. X is flirting with someone of the opposite sex.
- \_\_\_ 6. Someone of the opposite sex is dating X.
- \_\_\_ 7. X hugs and kisses someone of the opposite sex.
- \_\_\_ 8. X works very closely with a member of the opposite sex (in school or office).

**How often do you engage in the following behaviors?**

1	2	3	4	5	6	7
Never						All the time

- \_\_\_ 1. I look through X's drawers, handbag, or pockets.
- \_\_\_ 2. I call X unexpectedly, just to see if he or she is there.
- \_\_\_ 3. I question X about previous or present romantic relationships.
- \_\_\_ 4. I say something nasty about someone of the opposite sex if X shows an interest in that person.
- \_\_\_ 5. I question X about his or her telephone calls.
- \_\_\_ 6. I question X about his or her whereabouts.
- \_\_\_ 7. I join in whenever I see X talking to a member of the opposite sex.
- \_\_\_ 8. I pay a surprise visit just to see who is with him or her.

## APPENDIX C

### HUMAN SUBJECTS COMMITTEE APPROVAL LETTER

Office of the Vice President For Research  
Human Subjects Committee  
Tallahassee, Florida 32306-2742  
(850) 644-8673 · FAX (850) 644-4392

#### RE-APPROVAL MEMORANDUM

Date: 10/16/2009

To: Jennifer Leo

Address: 1107 W Call St Tallahassee FL 32306-4301  
Dept.: PSYCHOLOGY DEPARTMENT

From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research  
Memory and Implicit Evaluation for Attractive Relationship Alternatives

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 10/13/2010, you must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: Jon Maner, Advisor  
HSC No. 2009.3283

## APPENDIX D

### INFORMED CONSENT

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled “Methods of Memory.” This research is being conducted by Jennifer Leo, a graduate student in the Department of Psychology at Florida State University working with Dr. Jon Maner, Professor in the Department of Psychology at Florida State University. I understand that the purpose of this research project is to better understand how memory works. I understand that if I participate in this project, I may be asked to recall a real emotional event from my life. I understand that I may be asked to view and remember pictures or text involving various people, words, events, and objects. I also understand that I will be asked to answer questions about my personality, romantic relationships, and my past sexual history. I understand that some of these questions may pertain to topics that are sensitive in their nature.

I understand that I must be at least 18 years of age in order to participate. The total time commitment would be about 30 minutes and I will be compensated by receiving half of a credit point toward my Introductory Psychology class or extra credit toward another psychology class (as determined by the instructor). I understand that my participation is totally voluntary and I may stop participation at anytime. If I decide to stop participation, I will still be entitled to the half credit point. All my answers to the questions will be confidential to the extent allowed by law and will not be connected to me by name or other identifying information. In addition, my name will not appear on any of the results. No individual responses will be reported. Only group findings will be reported. I understand that all data relevant to the study will be kept in a locked file cabinet in the researcher’s laboratory space for 10 years.

I understand that there is a possibility of a minimal level of risk involved if I agree to participate in this study. I might experience anxiety or frustration when completing some of the questionnaires and tasks. The research assistant will be available to talk with me about any emotional discomfort I may experience while participating. I am also able to stop my participation at any time I wish.

I understand that there are benefits for participating in this research project. First, I may gain insight into how memory affects decisions and behaviors. Also, I will be providing researchers with valuable insight into this issue.

I understand that this consent may be withdrawn at any time without prejudice, penalty, or loss of benefits to which I am otherwise entitled. I have been given the right to ask and have answered any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that I may contact Jennifer Leo, Florida State University, Department of Psychology, Psychology building room A303, 645 – 7412 or Dr. Jon Maner, Florida State University, Department of Psychology Room A323, 645 – 1409, for answers to questions about this research or my rights. Group results will be sent to me upon my request. If I have questions about my rights as a subject/participant in this research, or if I feel I have been placed at risk, I can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President

for Research, at (850) 644-8633.

I have read and understand this consent form.

FSU Human Subjects Committee approved on 10/16/09 VOID after 10/13/2010 HSC#  
2009.3283

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## **BIOGRAPHICAL SKETCH**

Jennifer Leo graduated with a B.S. from Lebanon Valley College in 2007. In 2008, she enrolled in the Social Psychology doctoral program at Florida State University. She currently works with Dr. Jon Maner as her main advisor. Her current research interests include the role of motivation and cognition in relationship maintenance processes within a variety of relationships (including romantic relationships, kin relations, and friendships). Jennifer also hopes to pursue an unrelated area of research examining the fundamental differences between individuals who do and do not have zombie survival plans.