

Electronic Thesis and Dissertation Repository

---

8-23-2011 12:00 AM

## Do I feel dissonance over you? Sex differences in the experience of dissonance for romantic partners

Sandra D. Lackenbauer, *The University of Western Ontario*

Supervisor: Dr. Lorne Campbell, *The University of Western Ontario*

A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Psychology

© Sandra D. Lackenbauer 2011

Follow this and additional works at: <https://ir.lib.uwo.ca/etd>



Part of the [Social Psychology Commons](#)

---

### Recommended Citation

Lackenbauer, Sandra D., "Do I feel dissonance over you? Sex differences in the experience of dissonance for romantic partners" (2011). *Electronic Thesis and Dissertation Repository*. 254.  
<https://ir.lib.uwo.ca/etd/254>

This Dissertation/Thesis is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Electronic Thesis and Dissertation Repository by an authorized administrator of Scholarship@Western. For more information, please contact [wlsadmin@uwo.ca](mailto:wlsadmin@uwo.ca).

DO I FEEL DISSONANCE OVER YOU?  
SEX DIFFERENCES IN THE EXPERIENCE OF DISSONANCE FOR ROMANTIC  
PARTNERS

(Spine title: The Experience of Dissonance for Romantic Partners)

(Thesis format: Monograph)

by

Sandra D. Lackenbauer

Graduate Program in Psychology

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy

The School of Graduate and Postdoctoral Studies  
The University of Western Ontario  
London, Ontario, Canada

© Sandra D. Lackenbauer 2011

THE UNIVERSITY OF WESTERN ONTARIO  
SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES

**CERTIFICATE OF EXAMINATION**

Supervisor

\_\_\_\_\_  
Dr. Lorne Campbell

Supervisory Committee

\_\_\_\_\_  
Dr. Clive Seligman

\_\_\_\_\_  
Dr. Richard Sorrentino

Examiners

\_\_\_\_\_  
Dr. Clive Seligman

\_\_\_\_\_  
Dr. Leslie Janes

\_\_\_\_\_  
Dr. L Graham Smith

\_\_\_\_\_  
Dr. John Holmes

The thesis by

**Sandra D. Lackenbauer**

entitled:

**Do I feel dissonance over you? Sex differences in the experience of  
dissonance for romantic partners**

is accepted in partial fulfilment of the  
requirements for the degree of  
Doctor of Philosophy

Date \_\_\_\_\_

\_\_\_\_\_  
Chair of the Thesis Examination Board

## **Abstract**

The present research investigated sex differences in the experience of cognitive dissonance after decisions made for oneself or for one's romantic partner. Guided by theory and research suggesting that women and men possess divergent self-construals, I predicted that women would experience more dissonance when making a difficult decision for their partner relative to men. Both men and women were predicted to experience dissonance after decisions made for themselves, although possibly to a lesser degree for women. In two studies, a modified free-choice dissonance paradigm was utilized to test sex differences in the experience of cognitive dissonance, as determined by the extent to which participants justified their decisions. In this paradigm, participants were asked to choose one of two closely rated items either for oneself or for one's partner. In Study 1, men justified their decision (i.e., enhanced their attitude toward the chosen item and/or derogated the rejected item) when it was made for themselves but not when made for their partner. Females justified decisions made for their romantic partner but not themselves. In Study 2 a self-affirmation manipulation was added to the paradigm such that participants received no self-affirmation (No SA), an independent-focused self-affirmation (independent SA), or a relationship-focused self-affirmation (relationship SA). As in Study 1, men in the No SA condition justified their decision for themselves but not their partner whereas women justified their decision for their partner but not themselves. Neither men nor women justified decisions in the independent SA condition, as predicted. Males justified their decision for themselves but not their partner in the relationship SA condition, as predicted. Females justified their decisions for their partner in the relationship SA condition, supporting an

alternative exacerbation interpretation, but also justified their decisions for themselves in this condition, which was not predicted. The pattern of results of both studies suggests a sex difference in the experience of dissonance when decisions are made for one's romantic partner and I argue this is due to divergent self-construals. I discuss the implications of these findings for relationship literature as well as the limitations of the current research.

Keywords: Cognitive dissonance, sex differences, gender differences, self-concept, self-construal, free-choice paradigm, self-affirmation, romantic relationships, interpersonal relationships

## Acknowledgements

I have been privileged to be supported by so many wonderful people during my graduate training and dissertation completion. I would like to thank my committee members, Dick, Clive, and Leslie, for their extremely constructive suggestions and recommendations. My dissertation was significantly improved by your contributions. I would also like to thank my advisor, Lorne Campbell, who always found the balance between support and encouragement to nurture my ability to create, implement, and complete my research aspirations. I could not have asked for a better mentor.

To my fellow dissertation boot-campers: we made it! The many hours spent bouncing ideas off each other and shared venting were an integral piece to the successful completion of this work. Paula: we toiled away together on the dissertation and ended up building an amazing friendship in addition to finishing our dissertations. I will miss you but pledge to keep our friendship going across the miles. Christopher Wilbur: it will take me some time to adjust to days without our talks and your input. The six years that we have shared an office together has built a friendship that I feel confident will stand the test of time. I miss you already!

I would also like to thank my dissertation coach and close friend, Bethany Butzer, who provided support and guidance in both roles of friend and coach. You are truly talented in everything you do and inspire me to embrace happiness and create my own path. I look forward to sharing our experiences with one another as we find our way.

I was fortunate to have the most supportive and loving parents a daughter could ask for. Pete and Barb Lackenbauer claim to be first-time parents but somehow have always known the perfect ways of providing guidance, support, and love that gave me the confidence and foundation to accomplish my goals. I love you, and am so happy to share my accomplishments with you.

Finally, but most importantly, I want to thank my partner, Ryan Crawford, for sharing his life with me and the sacrifices he has made to support my aspirations. It has been a long process but when I see how proud you are of me I know you would do it all over again. I love you and can't wait to start this next chapter of our adventure together.

## Table of Contents

Certificate of Examination.....	ii
Abstract.....	iii
Acknowledgements.....	v
Table of Contents.....	vi
List of Tables.....	ix
List of Figures.....	x
List of Appendices.....	xi
Introduction.....	1
The Effect of Cognitive Dissonance.....	2
The Self and Cognitive Dissonance.....	6
Self-consistency and Dissonance.....	7
Self-affirmation and Dissonance.....	9
Self-construal, Culture, and Dissonance.....	11
Gender and the Self.....	14
The Present Research.....	20
Study 1.....	25
Overview.....	25

Method .....	25
Participants.....	25
Procedure .....	26
Measures .....	27
Results.....	31
Data Analytic Strategy .....	32
Primary Analysis.....	34
Alternative Explanations.....	36
Alternative Motivations .....	39
Discussion .....	40
Study 2 .....	44
Overview .....	44
Method .....	46
Participants.....	46
Procedure .....	46
Measures .....	47
Results.....	49



Data Analytic Strategy .....	49
Primary Analyses .....	50
Alternative Explanations.....	56
Alternative Motivations .....	59
Discussion .....	60
General Discussion .....	64
Potential Ramifications.....	68
Limitations and Future Directions .....	71
Conclusion .....	73
References.....	74
Appendices.....	87
Curriculum Vitae .....	126

## **List of Tables**

Table 1. Zero-order Correlations of Study Variables Controlling for Condition, Study 1.....	33
Table 2. Predicted Pattern of Post-decision Rationalization as a Function of Sex and Condition, Study 2 .....	45
Table 3. Zero-order Correlations of Study Variables Controlling for Condition, Study 2.....	51

## List of Figures

Figure 1. Mean Spread of Alternatives as a Function of Sex and Decision Condition, Study 1 .....	35
Figure 2. Mean Spread of Alternatives as a Function of Sex and SA Condition within the Self Condition, Study 2.....	53
Figure 3. Mean Spread of Alternatives as a Function of Sex and SA Condition within the Self Condition, Study 2.....	54

## List of Appendices

Appendix A. Experimenter Script for Self Condition – Study 1 .....	87
Appendix B. Experimenter Script for Partner Condition – Study 2 .....	91
Appendix C. Preferences of Ten Entrees (Self Condition) given at Time 1 Rating.....	95
Appendix D. Example of Gift Coupon .....	96
Appendix E. Detailed Menu Given at Time 2 Rating.....	97
Appendix F. Relational-Interdependent Self-construal Scale.....	99
Appendix G. Independent/Interdependent Self-Construal Scale .....	100
Appendix H. Rosenberg Self-Esteem Inventory.....	101
Appendix I. Inclusion of Other in the Self Scale .....	102
Appendix J. Perceived Relationship Quality Components Inventory –Satisfaction Subscale .....	103
Appendix K. The Investment Model Scale - Commitment Level Items .....	104
Appendix L. Personal Attributes Questionnaire .....	105
Appendix M. Gender Role Egalitarian Attitudes Test.....	106
Appendix N. Sex-Role Ideology Scale .....	107
Appendix O. Experimenter Script for the Self Condition – Study 2 .....	108
Appendix P. Experimenter Script for the Partner Condition – Study 2.....	114

Appendix Q. Affiliative Tendency Scale.....	120
Appendix R. Sensitivity to Rejection Scale.....	122
Appendix S. Self-affirmation Value Surveys .....	123
Appendix T. Ethics Approval Form – Study 1 .....	124
Appendix U. Ethics Approval Form – Study 2.....	125

## **Do I feel dissonance over you?**

### **Sex differences in the experience of dissonance for romantic partners**

*“We've grown to be one soul - two parts; our lives so intertwined that when some passion stirs your heart, I feel the quake in mine.”*

- Gloria Gaither

A defining characteristic of romantic relationships is how the lives of each partner become interdependent, or intertwined, over time as Ms. Gaither describes. This sharing of life's experiences means that when one partner makes a decision (e.g., to stay late at work), the other often feels the impact (e.g., needs to prepare dinner alone; Rusbult & Arriaga, 1997). In relationships, decisions are also often made on behalf of one's partner (e.g., choosing which cereal to buy while grocery shopping or which watch to give for a birthday gift). According to Festinger (1957), if a decision is made between two similarly valued alternatives, a state of dissonance (i.e., psychological discomfort), is experienced that leads individuals to justify their decisions. Research has demonstrated this to be the case when individuals make decisions for themselves (e.g., Brehm, 1956; Heine & Lehman, 1997; Steele, Spencer, & Lynch, 1993) but whether or not people experience dissonance when decisions are made for their partner has yet to be examined.

The intersection of the dissonance and relationship literatures, which is the focus of the current research, is the involvement of the self-concept (i.e., the awareness of one's identity as physically separable from others; Neisser, 1988). The manner in which the self-concept is, or is not, involved in the process of cognitive dissonance has been extensively researched (e.g., for reviews see Harmon-Jones, Amodio, & Harmon-Jones, 2010; Harmon-Jones & Mills, 1999; Stone & Cooper, 2001). Most germane to the current

paper, recent cross-cultural dissonance research (Hoshino-Browne et al., 2005; also see Kitayama, Snibbe, Markus, & Suzuki, 2004; Sakai 1981; Sakai & Andow, 1980) suggests that one's type of self-construal (i.e., how one understands the self in relation to others and the type of qualities and characteristics that are therefore valued) moderates the experience of cognitive dissonance, and importantly, whether or not dissonance is experienced when decisions are made for close others. This focus on self-construal within dissonance research corresponds to the recent attention that sex differences in self-construal have been receiving within interpersonal relationships research (e.g., Gagné & Lydon, 2003; Leary, 2002). Thus, the present research seeks to integrate research investigating cognitive dissonance, the self-concept, and relationship processes in order to determine if intimates experience dissonance when making decisions for one another, and more specifically, if sex differences in such experiences occur.

### **The Effect of Cognitive Dissonance**

Leon Festinger (1957) proposed that people are psychologically uncomfortable when inconsistencies arise between their beliefs, attitudes, or behaviours, and this discomfort (i.e., cognitive dissonance) results in a motivational impetus to respond in some way to alleviate the discomfort. This motivation, hereafter referred to as dissonance motivation, leads individuals to make changes in their attitudes, values, or behaviours, so that the instigating inconsistencies are eliminated or avoided. For example, John smokes two packs of cigarettes a day and is also aware that smoking is bad for his health. John's behaviour is logically inconsistent with his belief about the dangers of smoking. Festinger argued that having such dissonant cognitions (i.e., the knowledge that one smokes and the belief that smoking is unhealthy) is an aversive experience that leads to dissonance

motivation. To reduce his dissonance, John could change his behaviour (i.e., quit smoking), change his beliefs or attitudes (i.e., discount the dangers of smoking), or reduce the importance of the inconsistency (e.g., decide he wants to live fast and die young). Given that behaviours in the past cannot be changed, and smoking is an especially difficult habit to quit, changing one's attitudes about smoking or the importance of such an inconsistency is the path of least resistance and therefore most likely to occur. Indeed, research (for a review see Harmon-Jones et al., 2010) has supported the propositions of cognitive dissonance theory and demonstrated that dissonance motivation has widespread, and often counter-intuitive, consequences for the areas of attitudes, commitment to behavioural choices, and other psychological phenomena (Harmon-Jones & Mills, 1999).

Early dissonance research focused on how dissonance motivation could lead to attitude change and self-persuasion. For example, Festinger and Carlsmith (1959) used an induced-compliance paradigm to determine if the experience of dissonance would lead to attitude change about the enjoyment of a boring task (i.e., sequentially turning knobs on a board). The induced-compliance paradigm involves subtly compelling participants to engage in a behaviour that is inconsistent with their attitudes with the goal of creating cognitive dissonance; in this case, Festinger and Carlsmith asked participants (except those in the control condition) if they would be willing to tell another student that the boring task was actually interesting. The researchers offered the participants either \$1 or \$20 as compensation for their effort. The participants' subsequent attitude about the task was then measured to determine if it conformed to the behaviour they had just performed (i.e., telling another participant that the task was interesting). Such an attitude shift is



argued to be evidence of attempted dissonance reduction. Participants who had been paid \$20 had adequate justification for their behaviour (i.e., the counter-attitudinal behaviour is consistent with the significant compensation offered) whereas those offered a paltry \$1 did not. The participants in the \$1 condition subsequently evaluated the tedious task far more positively than the other participants (i.e., those in the control condition and those paid \$20), presumably as a means to reduce their cognitive dissonance. This finding was quite surprising at the time because it contradicted the widely held belief in the reinforcement principle that the greater the reinforcement the more positively a task would be evaluated (Mills, 1999). It was also surprising that the researchers were able to induce a motivational drive that caused participants to “convince” themselves of something they originally held to be untrue.

Dissonance research has utilized many research paradigms, besides the induced-compliance paradigm described above, to investigate the motivation produced by holding inconsistent cognitions (e.g., effort justification, Aronson & Mills, 1959; hypocrisy, Aronson, Fried, & Stone, 1991; belief-disconfirmation, Festinger, Reicken, & Schacter, 1956). Another commonly used paradigm, and the paradigm used in the present research, is the free-choice paradigm (FCP) that was introduced in the seminal research by Brehm (1956). According to cognitive dissonance theory, making a decision between two (or more) items elicits dissonance. This is because any positive qualities of the rejected item(s) and any negative qualities of the chosen item are dissonant with the decision made. Therefore difficult decisions between closely valued items produce more dissonant cognitions compared to easy decisions between disparately valued items.

In Brehm's study, participants were asked to evaluate the desirability of eight household items (e.g., a sandwich grill or desk lamp) and then were offered a choice between two of the items. Some of the participants were given a choice between two similarly rated items (the difficult decision condition) while others were given a choice between two dissimilarly rated items (the easy decision condition). The participants then re-evaluated the items and it was found that those in the difficult decision condition increased their evaluation of the chosen item and decreased their evaluation of the rejected item (referred to as the spread of alternatives) to a greater degree than those in the easy decision condition. This attitude change, referred to as post-decision rationalization, is interpreted as evidence of dissonance reduction.

The two studies reviewed above focused on how dissonance can lead to attitude change on fairly trivial matters (i.e., the enjoyment of a boring task or the desirability of household items) but subsequent research has demonstrated that dissonance motivation can lead to attitude change on far more important attitudes and beliefs as well. For example, Zanna and Cooper (1974) found that students became more amenable to censoring free-speech (i.e., banning inflammatory speakers) after complying with a request to write a counterattitudinal essay supporting such censorship. Other research demonstrated that participants were more amenable to tuition increases (e.g., Elliot & Devine, 1994) or even to pardoning Richard Nixon (a sentiment generally abhorred by students at the time; Cooper, Zanna, & Taves, 1978) given sufficient dissonance motivation (i.e., complying to requests to write counterattitudinal essays). Dissonance motivation has also been shown to affect interpersonal perception (e.g., Davis & Jones,

1960), and behaviour (e.g., Aronson et al., 1991) when they are the elements of an inconsistency least resistant to change.

As reviewed above, dissonance motivation has ubiquitous effects on people's lives. These findings, in conjunction with the impact relationship functioning has on people's well-being (see Brehm, Miller, Perlman, & Campbell, 2002; Myers, 1999), suggests that understanding how dissonance motivation operates within romantic relationships is an important area to investigate. The present research focuses on how aspects of the self-concept moderate dissonance elicitation, as discussed below, and how such moderated dissonance processes operate within romantic relationships. The present research investigates how differences in the self-concept, specifically sex differences in self-construal, moderates the experience of dissonance within romantic relationships and therefore understanding how the self-concept is involved in the dissonance process is imperative.

### **The Self and Cognitive Dissonance**

Since its inception, the theory of cognitive dissonance has had numerous suggested revisions and modifications (e.g., Aronson & Carlsmith, 1962; Cooper & Fazio, 1984; Steele, 1988, etc.). One aspect of the theory of cognitive dissonance that has received extensive attention is the body of research investigating how the self-concept is involved in the dissonance process (e.g., for reviews see Harmon-Jones et al., 2010; Harmon-Jones & Mills, 1999; Stone & Cooper, 2001). The following section reviews some of the major theoretical contributions that speculate on how the self is involved in the dissonance process.

### **Self-consistency and Dissonance**

The first research to suggest that the self-concept was a necessary component of the dissonance process was conducted by Aronson and Carlsmith (1962) who argued that in order to experience cognitive dissonance the cognitive discrepancy must involve an inconsistency with one's self-concept or self-expectations. Aronson (1969; 1999) argued that implicit in many dissonance predictions was the idea that everyone held positive views or expectations of themselves. For example, in the original Festinger and Carlsmith (1959) study discussed above, lying to another participant is only a discrepant behaviour if a person considers him or herself to be a moral or decent person; otherwise, the knowledge that the task was boring and the behaviour of telling another person the task was enjoyable, are not necessarily discrepant from one another.

In the first published test of this self-consistency amendment to the cognitive dissonance theory, Aronson and Carlsmith (1962) manipulated participants' perceptions of their skill on a task supposedly testing their sensitivity to others. Participants were asked to judge which of three portrait photos was of a person with schizophrenia (the photos were taken from a yearbook and therefore the decisions most likely had no correct answers). Half of the participants were led to believe that they had scored quite well over four trials (each trial contained 20 decisions) whereas the other half were led to believe they had performed quite poorly. This created participants' self-expectancy for their ability on the task. Participants completed the task again, on a fifth trial, at which time they received feedback on their performance that was either consistent with their self-expectancies or inconsistent. Participants were then asked to re-do the fifth trial, under the guise of an experimenter mishap, and the number of changes participants made from

their original responses were used as a measure of dissonance reduction due to discomfort with their “performance” on the fifth trial. Obviously, those who received negative feedback would have the additional motivation of wanting to improve their score; the results revealed, however, that those who had received inconsistent feedback subsequently changed more of their responses than those who had received consistent feedback, even those who had received consistently negative feedback. The most surprising result was for the participants who had performed poorly all along but then received inconsistent positive feedback; these participants subsequently changed many of their responses even though this meant sabotaging an unexpected high score. Presumably, the inconsistent feedback contradicted the participants’ self-expectations and therefore created dissonance resulting in a motivation to change one’s behaviour to be in line with one’s expectations.

Although the above research demonstrated that inconsistencies related to the self (i.e., self-expectations) lead to dissonance, it does not provide evidence that the self-concept is an integral part of the dissonance process. That is, it doesn’t establish that inconsistencies *not* related to the self or self-expectancies *do not* result in dissonance. To provide support for this interpretation of dissonance, self-consistency researchers investigated how self-esteem impacts the experience of dissonance. Following the arguments of Aronson (for a review see Aronson, 1999), a person’s self-esteem (i.e., their chronic self-evaluation) should impact the type of inconsistencies that would be viewed as either discrepant or congruent with the self-concept therefore providing a more decisive test of the necessary involvement of the self-concept. Gibbons, Eggleston, and Benthin (1997) demonstrated support for these predictions with their research

investigating the effect a smoking relapse had on individuals' beliefs about the health risks of smoking. These researchers found that those who had relapsed in their attempt to quit smoking were more likely to reduce their belief in the dangers of smoking if they had higher self-esteem and this change in beliefs was shown to maintain their initial levels of self-esteem. Presumably, participants with high self-esteem found their failure to quit smoking to be dissonant with their positive perceptions of themselves, whereas those with lower self-esteem did not. This discrepancy, for those with high self-esteem, led to a motivation to reduce dissonance via attitude change regarding the risks of smoking and this change prevented a decline in self-esteem. Those with low self-esteem did not exhibit these changes to the same degree, presumably because their failure to quit smoking was not inconsistent with their self-views. Although both high and low self-esteem individuals held the inconsistent cognitions that they continue to smoke and that smoking is unhealthy, dissonance-related attitude change only occurred for those whom this inconsistency was incongruent with their positive self-concept.

### **Self-affirmation and Dissonance**

Adopting the perspective that individuals strive to maintain positive self-views, Steele and colleagues (Steele & Liu, 1983) proposed that dissonance-motivated attitude change occurred primarily as a way of affirming a threatened sense of self. According to self-affirmation theory (Steele, 1988), human beings have a strong motivation to maintain a sense of integrity that involves being moral and demonstrating adaptive adequacy (Steele, 1988). Although this theory was created as a broad theory pertaining to self-esteem maintenance in general, and not simply in dissonance-evoking situations, much self-affirmation research has focused on its alternative explanation for dissonance effects

(see Aronson, Cohen, & Nail, 1999 for a review). Unlike dissonance theory, and the self-consistency perspective, the self-affirmation perspective argues that dissonance results from a threat to one's self-worth rather than an inconsistency per se (most threats to the self, however, could be interpreted as an inconsistency but not all inconsistencies threaten one's self-worth). Self-affirmation theorists argue that dissonance-related attitude change is merely an attempt to repair perceptions of self-integrity rather than an attempt to reduce inconsistencies. From this perspective, dissonance motivation can be alleviated without addressing an inconsistency as long as perceptions of self-worth are maintained.

Steele and Liu (1983) demonstrated support for this assertion by offering participants in an induced compliance paradigm (i.e., writing a counterattitudinal essay in support of tuition increases) an opportunity to affirm a value. Half of the participants completed a value survey that reflected on values important to them that were self-relevant, whereas the other half of the participants completed a value survey that reflected on values not particularly important to them or self-relevant. As expected by the self-affirmation interpretation of dissonance, the participants who had the self-affirming opportunity (i.e., affirming an important, self-relevant value) did not exhibit the typical dissonance-related attitude change. That is, their attitudes about a tuition increase did not become more positive. Presumably, these participants were able to maintain their sense of integrity even though an inconsistency existed between their attitudes and behaviour.

The self-consistency and self-affirmation interpretations of dissonance offer opposing arguments regarding the involvement of the self-concept in cognitive dissonance but they both argue that the self-concept is a necessary component. The most recent theorizing on the matter, however, has reverted back to Festinger's (1957) original

postulation that any inconsistency between two cognitive elements may produce dissonance and the self-concept is not a necessary component of the process (e.g., Gawronski, Peters, & Strack, 2008; Harmon-Jones, et al., 2010; Wicklund & Brehm, 1976). For example, Gawronski and colleagues (2008) argue that the *process* of cognitive dissonance (i.e., the perception of cognitive inconsistency resulting in dissonance) is universal but differences in the self-concept may affect the perception of inconsistencies, the subjective importance of perceived inconsistencies, or the dissonance-reduction strategies used. Therefore, the dissonance process does not necessitate the involvement of the self-concept but rather the self-concept may moderate when dissonance-related phenomena (e.g., attitude change) will occur. The current research is guided by this interpretation of the self and dissonance; although the self-concept does not necessarily need to be involved in the dissonance process, differences in the self (e.g., self-construals) and other processes involving the self-concept (e.g., self-affirmation) should moderate dissonance elicitation.

### **Self-construal, Culture, and Dissonance.**

Of particular importance to the current research, cross-cultural research has investigated differences in the experience of cognitive dissonance due to differences in self-construal. The Western perspective on the self-concept has been described as an independent self-construal such that the focus is centered on the unique and differentiating aspects of the individual. These attributes and characteristics are considered stable and thought to direct behaviour regardless of context. In contrast, many Asian, African, and South American cultures have been described as having an interdependent self-construal such that the focus is centered on the self-in-relation-to-



others (for review see Markus & Kitayama, 1991). Individual characteristics and attributes are considered malleable and dependent on the context and the other people present and therefore Markus and Kitayama have suggested that self-consistency may not be salient for those with an interdependent self (i.e., they are not bothered by contradiction and inconsistencies; Peng & Nisbett, 1999; Suh, 2002). In fact, Markus and Kitayama argue that because a cultural goal for interdependent cultures is to control or regulate one's inner self to better adapt to the context, these inconsistencies should be experienced frequently and not interpreted as aversive, but rather appropriate and commendable. As a result, Markus and Kitayama argued that individuals with an interdependent self-construal may not experience cognitive dissonance and therefore do not feel the need to engage in dissonance reduction behaviours or attitude change.

In support of this prediction, Heine and Lehman (1997) conducted research investigating the experience of dissonance for both Japanese and Canadian participants. These researchers used the FCP and participants had to choose between two similarly evaluated music CDs. Heine and Lehman discovered that, in line with previous research, the Canadian participants engaged in dissonance-reducing attitude change, whereas the Japanese participants did not. The researchers argued that these results demonstrate that cognitive dissonance is not a universal psychological phenomenon but rather is limited to those with an independent self-construal.

Both Markus and Kitayama (1991) and Heine and Lehman (1997) argued that dissonance should not be experienced by those with an interdependent self-construal because the self is not threatened by inconsistencies between internal attributes and outward behaviours, and therefore the motivation to avoid dissonance should also not be

experienced. However, if one defines the experience of dissonance from the perspective of Steele's (1988) theory of self-affirmation, dissonance threatens one's sense of self-integrity or one's sense of worth. The typical dissonance paradigms threaten the independent self because of the importance placed on knowing one's internal attributes, thoughts, and feelings and the importance placed on being rational or consistent. What if an inconsistency threatened an aspect considered important to the interdependent self-construal? Hoshino-Browne and colleagues (Hoshino-Browne et al., 2005) tested this hypothesis by modifying the FCP. Instead of having participants evaluate objects based on their own preferences they were asked to make these decisions for a close friend. Using this modified FCP, Hoshino-Browne et al. found that their Asian participants engaged in dissonance reduction behaviours parallel to those found with Western participants using the typical paradigm. These researchers argued that because the interdependent self is predominantly concerned with maintaining harmonious interpersonal relationships, part of which involves a focus on others' needs and preferences, researchers need to threaten this aspect of the self in order to create dissonance (also see Kitayama, Snibbe, Markus, & Suzuki, 2004; Sakai 1981; Sakai & Andow, 1980). Therefore, dissonance may be a universal psychological process, but the circumstances in which it is experienced may differ depending on one's self-construal.

Along a somewhat similar vein, research investigating vicarious dissonance (Norton, Monin, Cooper, & Hogg, 2003) has investigated attitude change that results from witnessing the counter-attitudinal behaviour of an individual belonging to an important in-group. Guided by principles of social identity theory (Tajfel, 1981; Tajfel & Turner, 1979), Norton and colleagues hypothesized that the more important and central a

group is to one's self-concept the more dissonant behaviours conducted by other in-group members would result in dissonance-related attitude change. In this research, participants who witnessed an in-group member behaving counter-attitudinally subsequently changed their attitudes to be more in line with the dissonant behaviour. Importantly, these researchers found that attitude change only occurred for those more strongly identified with the group (in this case university affiliation). Norton and colleagues demonstrated that the motivation to change one's attitude appeared to hinge on the experience of vicarious discomfort (i.e., the imagined discomfort one would experience if in the same situation) rather than personal discomfort thus delineating vicarious dissonance from what they called personal dissonance. Although these researchers used participants from independent cultures, they speculated that cultures that emphasize a focus on others (i.e., interdependent cultures) may experience vicarious dissonance more frequently and to a greater degree.

### **Gender and the Self**

Due, at least in part, to socialization pressures, men are more likely to form a sense of self centered on autonomy or independence whereas women are more likely to form a sense of self centered on relatedness or interdependence (Maccoby, 1990; Oyserman & Markus, 1993). These sex differences in self-construal are somewhat analogous to the cross-cultural differences between Easterners and Westerners discussed above. A more recent, and perhaps more accurate, distinction between men's and women's self-construal, however, is the *type* of interdependence they are more likely to exhibit rather than focusing on the differences between independent and interdependent self-construals (e.g., Gabriel & Gardner, 1999; Eagly, 2009; Foels & Tomcho, 2009).

Men hold a more agentic interdependence that focuses on collective membership as opposed to dyadic bonds (Gabriel & Gardner, 1999; Eagly, 2009). Women, on the other hand, have a more relational interdependence that focuses more on the nurturance and maintenance of bonds with specific others rather than collective memberships (Gabriel & Gardner, 1999; Eagly, 2009). For the sake of simplicity, however, the current paper refers to men's self-construal as typically more independent and women's self-construal as typically more relational. Such differences in how important others are referenced in one's self-construal have been shown to affect cognition (e.g., Cross, Morris, & Gore, 2002), emotion (e.g., Showers, 1992), and motivation (e.g., Cross & Madson, 1997; Heine, Kitayama, & Lehman, 2001; Heine & Lehman, 1997; Markus & Kitayama, 1991).

With regards to cognition, research investigating sex and self-construal differences has revealed that how the self is construed may influence what people pay attention to, how they process information, and what they remember. For example, Cross and colleagues (Cross, Morris, & Gore, 2002) used various implicit measures (e.g., the Implicit Association Test) to demonstrate that individuals with a more relational-interdependent self-construal linked relational terms (e.g., together, us, etc.) with positive terms, perceived associations between relational terms, and had condensed and elaborated knowledge structures of relational terms to a greater extent than those with a less relational self-construal. Important to the current paper, Cross et al. found that in general, the women in their samples had a more relational-interdependent self-construal than the men.

The argument that selective memory is indicative of self-relevant processing (Higgins & Tykocinski, 1992) has also been explored in the realm of sex research and

how that relates to self-construal. Indeed, the common cliché that women remember more socially relevant information than men may not be completely inaccurate (e.g., see Ross & Holmberg, 1992). For example, Josephs, Markus, and Tafarodi (1992) found that women with high self-esteem remembered more words that had been associated with a close friend than did men or women with low self-esteem. The typical self-reference effect was demonstrated for men with high self-esteem. Josephs et al. argued that because one's self-esteem is derived from accomplishing or succeeding in domains relevant to one's social and cultural group, high self-esteem should be related to an interdependent self-construal for women and to an independent self-construal for men. The finding that self-esteem interacted with sex to predict memory for words associated with a close other or the self provided support for these assertions. Additional research by Cross et al. (2002) demonstrated that participants with a more relational-interdependent self-construal were able to recall more relational information about a fictional student and more successfully use a relational heuristic to organize and recall information about fictional characters than those with a less relational self-construal. The cognitive research discussed highlights how differences in self-construal can influence the type of information attended to and even how it is organized or stored within memory. Presumably, such differences in how information and experiences are interpreted and understood could influence how inconsistencies are perceived or appraised and therefore affect motivation.

Research has suggested that differences in self-construals influence the types of motivations that are particularly salient to individuals (e.g., Cross & Madson, 1997; Heine, Kitayama, & Lehman, 2001; Heine & Lehman, 1997; Markus & Kitayama, 1991).

For example, research has shown sex differences in the motivation to self-enhance. In North America, men are more likely to boast or express superior qualities in front of others than women (Heatherington et al., 1993; Maccoby & Jacklin, 1974). Presumably this serves men's independent goals of establishing autonomy and uniqueness whereas such acts may alienate or otherwise stress relationships with others and therefore are contradictory to women's interdependent or relational goals. Women, however, are just as likely to self-enhance in anonymous situations or in public situations in which no direct comparisons are being made (Heatherington et al.). Related to the goal of autonomy or self-aggrandizement, men also tend to exhibit the "false uniqueness bias" and overestimate their abilities more than women (Goethals, Messick, & Allison, 1991; Beyer, 1990). Women (at least in North America) appear unmotivated by these drives when others are involved and relationships may be stressed.

To my knowledge, sex differences in dissonance motivation have not been directly investigated. With that being said, however, studies utilizing the typical dissonance paradigms (e.g., induced-compliance, free-choice, etc) either do not comment on sex differences or report that no such differences emerged. Given that dissonance research has shown that people of an interdependent culture do not experience cognitive dissonance in the typical free-choice paradigm (i.e., when a possibly inconsistent decision is made for oneself), one might argue that, based on self-construal research, women should not experience dissonance under such circumstances either. Obviously, this is not what is typically found. The perspective of the current research is that this apparent discrepancy is resolved if one considers Western women to have both independent and relational self-construals in line with findings investigating bicultural individuals (e.g.,

study 4 of Hoshino-Browne et al., 2005; Yamada & Singelis, 1999). Women are socialized to be more relational; women in Western society, however, should presumably still be influenced by the independent focus of their culture. Cross-cultural researchers (e.g., Yamada & Singelis, 1999; Yum, 2004) speculate that biculturalism (i.e., having dual self-construals) may “facilitate communication and adaptive behaviours for persons interacting in multiple cultures” (Yamada & Singelis, p. 697). Possessing dual self-construals would promote Western women’s adaptations to their culture and to their gender “culture”.

In the past century, women in Western cultures have taken on more diversified roles that may require the ability to toggle between a more relational or interdependent self-construal (e.g., the role of mother) and perhaps a more independent self-construal (e.g., the role of career person). In this case, one might expect that dissonance would be elicited under independent-focused and interdependent-focused contexts. Although not a direct test of these assumptions, a somewhat related postulation was investigated by Hoshino-Browne et al. (2005) who demonstrated that bi-culturalists (i.e., Asian Canadians who identify strongly with both their Asian and Canadian culture) could be affirmed, and therefore not engage in post-decision rationalization, if their independent or interdependent self-construal was affirmed whereas monoculturalists (those who did not strongly identify with the Canadian culture) were only affirmed using an interdependent self-affirmation. These authors argued that biculturalists could use either type of affirmation to alleviate the need to engage in post-decision rationalization because these individuals construed their sense of self in both ways. This is not to say that Western women have a self-construal that is equally independent and relational (as this would contradict the

research demonstrating sex-differences in self-construal) but rather that their self-construal may have an independent component consistent with their culture. Indeed, the different forms of self-construal (i.e., independent and interdependent) are considered to be orthogonal and therefore it is possible for individuals to have a self-construal that is high in both dimensions (e.g., Singelis, 1994).

Although research consistently supports the assertion that women have a more relational or interdependent sense of self compared to men, it has been suggested that the romantic realm may represent an exception to this finding (e.g., Aron, Aron, Tudor, & Nelson, 1991; Cross & Madson, 1997). Indeed, although not testing differences in types of self-construals, Aron and Aron's (1986) Self-Expansion model argues that as individuals become closer to one another in a romantic context, they incorporate their partner into their self-concept. The research investigating this model has not reported sex differences (e.g., see Aron & Aron, 1986; Aron, Aron, & Smollan, 1992; Aron, Paris, & Aron, 1995) in the tendency to incorporate a partner into the self. The perspective of the current research is that the self-expansion research is measuring interpersonal closeness and the association of the partner to oneself rather than tapping whether individuals' sense of self is predominantly defined by the relationship with the partner.

Gagné and Lydon (2003) have also argued that although men tend to have a less relational self-construal in general, commitment to (and identification with) a romantic relationship produces a shift in the focus of the self. In their research, they found that women engaged in pro-relationship behaviours (i.e., idealizing their partners) regardless of commitment level whereas men only engaged in such behaviours once a higher level of commitment and identification was reached. These researchers argue that because



women generally have a relational self-construal they automatically incorporate their relationship as part of their self-concept, whereas men typically have a more agentic or independent self-construal and therefore require high levels of commitment before they “shift” to a more relational self-construal. These notions are inconsistent with the arguments of current research that men do not incorporate romantic relationships and partners into the self to the same extent as women. Therefore, the potentially moderating influence of relationship commitment will be explored.

Most important to the current research, interpersonal researchers have begun to speculate about how sex differences in self-construal may be linked to relational difficulties because of the ways it affects cognition, emotions, and motivation (Leary, 2002). Although I wouldn't go so far as to say that women are from Venus and men are from Mars, differences in self-construal affecting motivational processes such as cognitive dissonance may have ramifications for relational functioning, and therefore are important to investigate.

### **The Present Research**

The present research focuses specifically on sex differences in the experience of dissonance in response to decisions made for one's partner. This, on its own, is a substantial issue to investigate as we know that dissonance avoidance and reduction can influence our attitudes, values, and behaviours and therefore sex differences in such experiences may have wide-ranging consequences for heterosexual romantic relationships. A more distal or broad goal of the current research, however, is to investigate sex differences in self-construal with reference to one's romantic partner and relationship and to begin to identify the ramifications of such differences.

The present research utilizes the cognitive dissonance paradigm created by Hoshino-Browne et al. (2005) to investigate sex differences in the experience of dissonance after decisions made for one's romantic partner. The rationale follows from the cross-cultural research demonstrating that different contexts are more likely to elicit dissonance reduction behaviours from individuals with different self-construals. As discussed, although a threat to one's sense of self may not be a *necessary* factor in the elicitation of dissonance it has been shown to moderate dissonance-related responses (e.g., Heine & Lehman, 1997; Hoshino-Browne et al., 2005; Steele & Liu, 1983) and has been postulated to determine the contexts in which dissonance will be more or less likely to occur (e.g., Gawronski et al.; Stone & Cooper, 2001). Based on the extant literature on sex differences in self-construal, the predictions of the current research are that women will experience dissonance when inconsistencies pertain to their romantic partners and, possibly to a lesser degree, themselves. As suggested, women in an independent culture may have dual self-construals primarily reflecting their gender socialization but also incorporating the culturally mandated self-construal. This should mean that decisions for one's partner should be particularly dissonance-provoking. Decisions for one self should be dissonance-provoking as well, although such dissonance may be less intense.

Men, on the other hand, are predicted to experience dissonance when inconsistencies pertain to themselves but less so when making a decision for their partner. Given the research reviewed by Aron and colleagues (e.g., Aron & Aron, 1986; Aron, Aron, & Smollan, 1992; Aron, Paris, & Aron, 1995) and Gagné and Lydon (2003), however, the opposing prediction could be made. If romantic relationships produce a context in which both men and women possess a relational self-construal, then no sex

differences in dissonance-related attitude change would be expected. Although either outcome provides an interesting addition to both cognitive dissonance and interpersonal research, the perspective of the current research is that sex differences in self-construals remain even within romantic relationship contexts.

In Study 1, participants took part in a FCP making decisions either for oneself (typical FCP, hereafter referred to as the self condition) or for their partner (relational FCP, hereafter referred to as the partner condition). It was predicted that men would engage in post-decision rationalization primarily in the self condition whereas women would engage in post-decision rationalization in the partner condition, and to a lesser extent in the self condition. If sex differences in self-construal do not apply to the romantic relationship realm, however, then both men and women should engage in similar amounts of post-decision rationalization in the self and partner conditions.

Study 2 was similar to Study 1 but with the addition of a self-affirmation manipulation in which participants received no self-affirmation (no SA), an independent self-affirmation (independent SA), or a relationship affirmation (relational SA). The inclusion of two types of affirmation (e.g., independent vs. relational), provides another means of investigating sex differences in self-construal. It was predicted that: 1) Men would experience dissonance primarily in the self condition, 2) Men would be affirmed by an independent SA 3) Women would experience dissonance in the partner condition and to a lesser degree the self condition and 4) Women would be affirmed by the relational SA and (to a lesser extent) the independent SA in both the self and partner conditions. In the partner condition, however, it was also possible that the relationship SA would exacerbate the experience of dissonance for women (rather than act as an

affirmation) because it may make relationship maintenance motives salient thereby heightening the importance of making an optimal decision for one's partner (e.g., Aronson, Fried, & Stone, 1991; Stone & Cooper, 2001). That is, following the self-consistency perspective of dissonance (Aronson, 1969; 1999), a woman reminded of how important maintaining and nurturing her relationships is to her may find an inconsistency regarding a decision for her partner particularly dissonant-provoking.

It has been suggested that psychological processes other than dissonance reduction may account for the spread of alternatives in the FCP. For example, although the spread of alternatives is calculated by combining the amount of enhancement of the chosen item with the amount of derogation of the rejected item, some have argued that the observed spread may be caused primarily by enhancement effects. Such enhancement effects may be due to other processes such as mere ownership (Beggan, 1992), an endowment effect (Kahneman, Knetsch, & Thaler, 1990), or from associative self-anchoring (Gawronski, Bodenhausen, & Becker, 2007). Analyses investigating just derogation effects were conducted to explore this alternative interpretation. Additionally, the investigation of self-affirmation in Study 2 helps to address these alternative interpretations because any effects of self-affirmation on post-decision rationalization supports a dissonance-reduction interpretation. That is, if the spread of alternatives observed in the current research was due to mere ownership, an endowment effect, or associative self-anchoring, one would not expect self-affirmation to modify this process.

In addition, Chen and Risen (2010) have argued that a preference-driven model would produce the same predictions as dissonance theory regarding the spread of alternatives in the typical FCP. These researchers argue that because ranking and rating

items is an imperfect system, and choice reveals additional preference information that is then used to evaluate the spread of alternatives in a non-biased fashion (i.e., how the spread is calculated depends on which item, the higher or lower ranked item, is chosen), the predictions of the FCP made based on dissonance principles are equivalent to those made by their preference-driven model. According to their model, when you add together the imperfect preference information gleaned from the ranking and rating procedure and the choice of item, a spread of alternatives would be predicted even if the attitudes toward the alternatives remained stable. Therefore, definitive arguments about dissonance reduction cannot be made. The authors concede, however, that their preference-driven model does not have specific predictions as to how moderators such as culture (representing different self-construals) or self-affirmations would predict post-decision rationalization under certain circumstances but not others. Chen and Risen have argued, however, that such moderators may act to somehow alter how closely the ranking and rating of items truly matches preference and therefore argue that further analyses are needed to support a dissonance explanation. The suggested additional analyses were conducted to counter this alternative interpretation of any significant sex differences.

In addition to the main measures, other individual difference variables were measured in Study 1 and Study 2 to investigate possible alternative explanations. For example, if sex differences are observed, the underlying mechanism driving such differences may be another factor that covaries with sex (e.g., traditionalism, gender roles, rejection sensitivity, etc.) rather than differences in self-construal. In both studies, such individual difference measures were investigated for their possible mediating and moderating effects.

## Study 1

### Overview

Study 1 aimed to provide initial experimental support for the argument that sex differences exist in the experience of dissonance for decisions made for one's partner. To test this prediction, the modified FCP, as described above, was used. It was predicted that: 1) Men would justify (i.e., engage in post-decision rationalization) decisions made for themselves more than decisions made for their partner and 2) Women would justify decisions made for their partner and, to a lesser extent, for themselves. Therefore, it is expected that the difference in post-decisional rationalization between men and women in the self condition would not be significant, and the difference in post-decisional rationalization between men and women in the partner condition would be significant. Study 1 also included a number of scales measuring individual difference variables (e.g., gender role ideology) to test for competing explanations of the mechanisms driving any observed findings.

### Method

**Participants.** One hundred and forty-four individuals (71 men,  $M$  age = 19.49  $SD$  = 2.61, and 73 women,  $M$  age = 19.93  $SD$  = 3.49) from the University of Western Ontario involved in a romantic relationship for a minimum of five months ( $M$  = 24.56  $SD$  = 24.29) participated in this research. Participants recruited from the introductory psychology course at the University of Western Ontario received one participation credit towards their course grade. Additional participants recruited through advertising in the university newspaper received \$10 for their participation (although the recruitment advertised \$5 plus a gift coupon for a local restaurant). We randomly assigned

participants to the self decision condition (71 participants) or to the partner decision condition (73 participants).

**Procedure.**

*The Self Decision Condition (Self).* The procedure used in the current study is based on the procedure used by Hoshino-Browne et al. (2005). Participants were told that the study investigated decision making styles and qualities of romantic relationships. As part of the decision making component, participants were told that they would make decisions regarding their preference for entrées for a local Vietnamese restaurant and would subsequently be given a gift certificate for an entrée based on their preferences and availability. Participants chose their ten most preferred entrées from a list of 22 and then ranked and rated the ten they chose, in terms of how much they would like to order each entrée (Time 1 rating). Participants then completed a battery of questionnaires. Next, participants were presented with coupons representing their fifth and sixth ranked entrées (participants were not told or reminded of how they had ranked the entrées) and asked to choose the one they preferred and then fill in their name on the coupon. Participants were told that the restaurant only provided the experimenters with coupons for certain entrées and based on their chosen 10 dishes, these were two that they indicated they might like. Participants were then left for 5-10 minutes under the guise that the experimenter had to tend to another participant. Upon the experimenter's return, the participants were asked to rate the 10 entrées they originally selected again, this time from a more detailed menu with the entrées presented in a different order (Time 2 rating). The added detail to the Time 2 menu was intended to provide a rationale for why participants were asked to re-evaluate the items. Following this task, participants

completed a series of probing questions on the computer and were then debriefed and paid \$5 to replace the bogus coupon (see Appendix A for the experimenter script for the self condition).

***The Partner Decision Condition (Partner).*** The procedure for the partner condition mirrored the self condition except that participants made all entrée selections and evaluations based on what they thought their romantic partner would prefer. Participants were told the study was investigating the decision making styles people use when making decisions for their romantic partner. The coupon was also chosen for the participants' partner (see Appendix B for the experimenter script for the partner condition).

### **Measures.**

***Time 1 Entrée Rating.*** Following the procedure of Hoshino-Browne et al. (2005), participants were presented with a list of 22 Vietnamese entrées (vegetarian entrées and English translations were included; see appendix C). Participants rank ordered their top ten preferred entrées and then rated each entrée on a seven-point scale indicating how much they (or their partner) would like to order it (anchored 1 = *not at all*, 7 = *very much*).

***Gift Coupons.*** Participants were offered a choice between two bogus gift coupons (either for themselves or their partner). Each coupon represented a specific free entrée, which was named on the coupon (the two coupons were always the 5<sup>th</sup> and 6<sup>th</sup> ranked entrées). Participants were told that out of the 10 entrées they had selected, the restaurant had provided the experimenters with two of the entrées and the participant could choose the preferred one. Participants were asked to write their name (or their



partner's name) on the coupon. Each coupon had a unique serial number and was stamped to enhance the appearance of authenticity (see appendix D).

***Time 2 Entrée Rating.*** Participants were provided with a menu containing a more detailed description of the 22 Vietnamese entrées (see appendix E). The ten entrées chosen at Time 1 were highlighted on the menu and participants were asked to rate the entrées once again (they were not asked to rank order the entrées) using a 9-point scale indicating how much they (or their partner) would like the dish (anchored 1 = *Not like it at all*, 3 = *slightly like it*, 5 = *like it*, 7 = *quite like it*, 9 = *extremely like it*).

***Relational-Interdependent Self-Construal scale (RISC; Cross, Bacon, & Morris, 2000).*** This eleven item scale (see Appendix F) was used to measure individual differences in the level of relational self-construal. Participants indicated how much they agreed with each statement on a 7-point scale (anchored 1 = *strongly disagree*, 7 = *strongly agree*). Aggregated scores on this scale may be used to determine if individual differences in relational self-construal mediate the relationships between sex and post-decision rationalization in each condition (see Uskul, Hynie, & Lalonde, 2004). Scores on each item were averaged with higher scores indicating a stronger relational self-construal (men's  $\alpha = .87$ , women's  $\alpha = .87$ ).

***Independent/Interdependent Self-Construal Scale (SCS; Singelis, 1994).*** This 24 item measure (see Appendix G) was used to assess the strength of participants' independent and interdependent self-construals. Participants indicated how much they agreed with each item using a 7-point scale (anchored 1 = *strongly disagree*, 7 = *strongly agree*). The scale is divided into two subscales: the independent self-construal subscale (12 items – SCS-IND), and the interdependent subscale (12 items – SCS-INT). Scores on

each item of each subscale were averaged with higher scores representing a stronger independent or interdependent self-construal (the two subscales are orthogonal; Singelis, 1994; men's  $\alpha = .67$ , women's  $\alpha = .64$ , for the independent subscale, men's  $\alpha = .55$ , women's  $\alpha = .70$ , for the interdependent subscale).

***Additional Measures.*** The following scales were administered to participants for the purpose of testing alternative explanations for the sex differences predicted to emerge. Aspects such as self and relationship evaluations, sex-role attitudes, and sex-role attributes, could be argued to be the mechanism driving any results observed.

***Self-esteem Scale (SE; Rosenberg, 1965).*** This 10 item measure (see Appendix H) was used to assess global levels of self-esteem. Participants indicated how much they agreed with each statement on a 7-point scale (anchored 1 = *strongly disagree*, 7 = *strongly agree*). Scores on each item were averaged with higher scores indicating more positive self-esteem (men's  $\alpha = .87$ , women's  $\alpha = .85$ ).

***Inclusion of Other in the Self Scale (IOS).*** The single-item, pictorial IOS scale (Aron, Aron, & Smollan, 1992; see Appendix I) was used to measure relationship quality. Responses to this scale have been shown to be related to relationship closeness, satisfaction and commitment (Aron et al., 1992). Participants were asked to indicate which set of increasingly overlapping circles (representing the self and partner) best “describes you and your current dating partner”. In each set, the word ‘self’ appeared in one circle and the word ‘partner’ appeared in the other.

***Perceived Relationship Quality Components Scale – satisfaction subscale (PRQC - SAT; Fletcher, Simpson, & Thomas, 2000).*** This 3-item scale (see Appendix J) was used to assess participants' relationship satisfaction (e.g., “How

satisfied are you with your relationship?”). Participants responded to each item using a seven-point scale (anchored 1 = *not at all*, 7 = *extremely*). Scores on each item were averaged with higher scores indicating greater perceived relationship satisfaction (men’s  $\alpha = .96$ , women’s  $\alpha = .90$ ).

***The Investment Model Scale – Commitment Level Items (COMM; Rusbult, Martz, & Agnew, 1998)***. This 7-item scale (see Appendix K) was used to measure participants’ commitment to their partner and romantic relationship. Participants responded to each item using a seven-point scale (anchored 1 = *do not agree at all*, 4 = *agree somewhat*, 7 = *agree completely*). Scores on each item were averaged with higher scores indicating greater levels of commitment (men’s  $\alpha = .91$ , women’s  $\alpha = .81$ ).

***Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1975)***. This 16-item scale (see Appendix L) was used to assess masculine and feminine sex-role attributes. Each sex-role attribute was described in its’ polar opposite forms with the letters A, B, C, D, and E separating the two (e.g., “Very submissive A B C D E Very dominant”). Participants chose the letter that was the most self-descriptive. The scale was divided into two subscales with eight items in each, the masculine subscale (PAQ – MASC), and the feminine subscale (PAQ – FEM) (men’s  $\alpha = .57$ , women’s  $\alpha = .78$  for the PAQ-MASC, men’s  $\alpha = .72$ , women’s  $\alpha = .80$  for the PAQ-FEM).

***Gender Role Egalitarian Attitudes Test (GREAT; Chang, 1999)***. This 10-item scale (see Appendix M) was used to measure participants’ gender role attitudes in two domains: at work and in the home. For each item, participants indicated to what extent they feel it is more important or appropriate for men or women, or if they feel it is equally important and appropriate (e.g., “In the work domain: Be a leader”). Participants

respond to each item using a nine-point scale (anchored -4 = *more for men*, 0 = same, 4 = *more for women*). Scores on the first five items were reverse scored and averaged to get a measure of gender role attitudes in the work place with higher scores representing more stereotypic beliefs (i.e., work domain items were rated as more appropriate for men, GREAT – WORK). Scores on the second five items were aggregated to get a measure of gender role attitudes in the home domain with higher scores representing more stereotypic beliefs (i.e., home domain items were rated as more appropriate for women, GREAT – HOME)(men's  $\alpha = .73$ , women's  $\alpha = .65$  for GREAT-WORK, men's  $\alpha = .85$ , women's  $\alpha = .85$  for GREAT-HOME).

***Sex-Role Ideology Scale – short version (SRIS-R; Cota & Xinaris, 1993).*** This 18-item scale (see Appendix N) was used to measure to what extent participants endorsed a traditional versus feminine ideology. Participants indicated how much they agreed with each statement on a 5-point scale (anchored 1 = *strongly disagree*, 5 = *strongly agree*). Scores on each item were averaged with higher scores indicating a more traditional ideology (men's  $\alpha = .89$ , women's  $\alpha = .75$ ).

## **Results**

For descriptive purposes, means, standard deviations, and correlations (partialling out the effects of experimental condition) between all study variables for men and women are presented in Table 1. Providing such descriptive data has been recommended by Kashy, Donnellan, Ackerman, and Russell (2009) in order to provide transparency in quantitative data reporting. Also, as shown in Table 1, there were sex differences for some of the study variables (e.g., relationship satisfaction and commitment) that will be explored as alternative explanations for the findings of the current study.

*Data Analytic Strategy.* Prior to analyses, 6 participants were removed due to failure to follow instructions properly, 7 participants were removed who, prior to debriefing, indicated their intentions regarding the coupon did not match their condition (e.g., in the self condition they planned to give the coupon to their partner or a friend), 4 participants were removed due to food restrictions that affected their preferences or ability to use the gift coupon (e.g., peanut allergies), 3 participants were removed who had rated their 5<sup>th</sup> and 6<sup>th</sup> ranked items 3 or more scale points apart (thereby making their decision easier than others), and 1 participant was removed because his response to the main dependent variable was over 4 standard deviations away from the mean, and therefore regarded as an extreme outlier. Four men and 5 women were removed from the self condition and 8 men and 4 women were removed from the partner condition. Thus, 123 participants remained in the sample to be analysed and these participants were evenly distributed across conditions (29 men and 33 women in the self condition, 30 men and 31 women in the partner condition).<sup>1</sup>

The dependent variable was the amount of post-decisional rationalization that was expressed by participants as measured by the spread of alternatives. The spread of alternatives is the amount of enhanced preference for the chosen item plus the amount of derogation of the non-chosen item. To calculate the spread of alternatives the Time 2 ratings were converted from a 9-point scale to a 7-point scale (Time 1 ratings were based on a 7-point scale but the Time 2 ratings were based on a 9-point scale to prevent

---

<sup>1</sup> Participant removal is not uncommon in FCP research (or other dissonance research for that matter, see Elliott & Devine, 1994; Festinger & Carlsmith, 1959). For example, in Brehm's (1956) original FCP study, approximately 35% of the original sample was excluded. Steele, Spencer, & Lynch (1993) excluded 24% of their sample. Therefore, the exclusion of approximately 15% of the current sample is not unusual. As well, when analyses are re-run with these participants included the pattern of results remains the same.

Table 1  
Zero-order Correlations of Study Variables Controlling for Condition: Study 1

	Mean (SD)												t		
	1	2	3	4	5	6	7	8	9	10	11	12		Men	Women
1. RISC	—	-.14	.22†	-.09	.33*	.37*	.35*	.26*	-.12	-.07	-.03	-.08	5.30 (0.95)	5.28 (0.85)	0.13
2. SCS – IND	.18	—	.17	.33*	.05	-.10	-.18	.07	.48*	.12	.06	-.04	4.92 (0.74)	4.93 (0.66)	-0.05
3. SCS – INT	.39*	-.04	—	-.08	-.08	.15	.06	.55*	-.04	.33*	.11	.25*	4.90 (0.62)	4.76 (0.68)	1.17
4. SE	.39*	.17	.07	—	.25*	.10	-.03	.03	.61*	.01	.02	-.04	5.64 (0.96)	5.55 (0.87)	0.60
5. IOS	.18	-.08	-.06	-.09	—	.39*	.41*	-.09	.14	.04	.06	-.01	5.39 (1.17)	5.22 (1.16)	0.81
6. PRQC-SAT	.42*	.09	.05	.47*	.25†	—	.47*	.05	-.06	-.09	.10	-.15	5.86 (1.10)	6.16 (0.68)	-1.82†
7. COMM	.36*	.23†	.07	.16	.51*	.61*	—	.13	-.23†	-.02	-.10	-.24†	5.65 (1.31)	6.27 (0.83)	-3.16*
8. PAQ – FEM	.43*	.19	.29*	.22	.26†	.34*	.31*	—	.01	.14	-.14	-.14	3.85 (0.52)	4.11 (0.51)	-2.92*
9. PAQ – MASC	.17	.50*	-.03	.42*	-.11	.16	.08	.26*	—	.14	.11	.06	3.79 (0.48)	3.59 (0.57)	2.13*
10. GREAT – HOME	-.10	-.29*	-.06	-.02	-.10	-.01	-.17	-.09	-.02	—	.39*	.45*	5.72 (0.80)	5.69 (0.83)	0.22
11. GREAT – WORK	-.04	-.41*	.08	.01	.07	.22	.11	-.02	-.27*	.56*	—	.37*	5.59 (0.79)	5.17 (0.54)	3.49*
12. SRIS	-.04	-.28*	.12	-.11	.04	.09	-.08	.05	-.07	.59*	.66*	—	2.36 (0.68)	1.96 (0.41)	3.95*

Note. Correlations for women appear above the diagonal, whereas correlations for men appear below the diagonal. †  $p < .10$  \*  $p < .05$

participants from attempting to replicate their earlier ratings). Then, the increase in preferences for the chosen entrée from Time 1 to Time 2 was added with the decrease in preferences for the non-chosen entrée from Time 1 to Time 2.

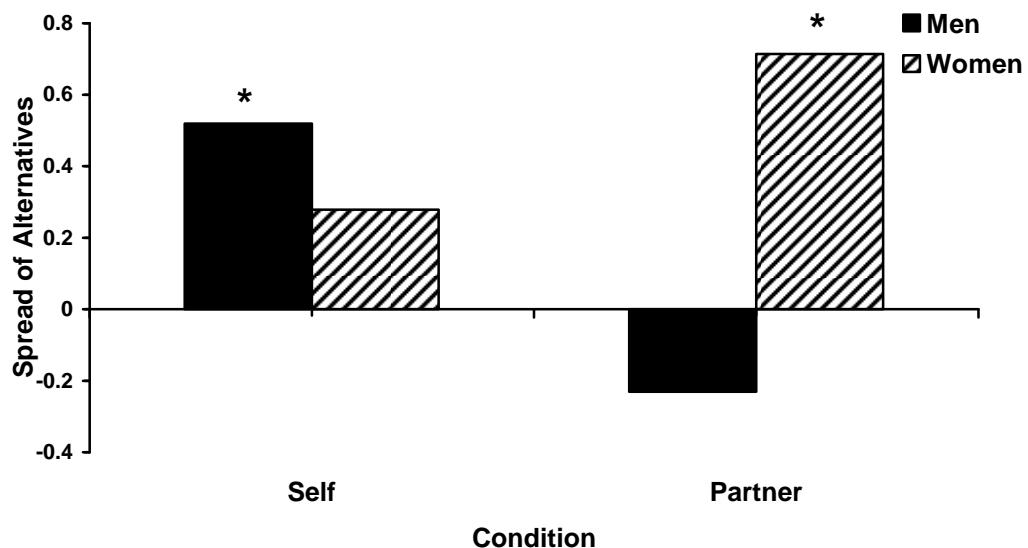
**Primary Analysis.** A 2 (sex: men vs. women) X 2 (condition: self vs. partner) analysis of covariance (ANCOVA) was conducted to test the primary hypothesis that sex and condition will interact in the prediction of spread of alternatives. Participants' level of global self-esteem was added as a covariate following the procedures of Cross et al. (2002). Also, the self-esteem scale was completed before the coupon decision was made and therefore, via self-affirmation principles, may have reminded participants of their either high or low self-esteem thereby influencing dissonance reduction.<sup>2</sup> The main effects of condition and sex were not significant,  $F(1, 118) = 0.29, n.s.$ ,  $F(1, 118) = 1.47, n.s.$ , respectively. As predicted, however, the interaction of sex and condition was significant,  $F(1, 118) = 4.12, p = .045$  (see Figure 1), demonstrating the anticipated pattern of results. That is, within the self condition, men's post-decisional rationalization ( $M = 0.52, SD = 1.59$ ) did not differ from women's ( $M = 0.28, SD = 1.59$ ),  $t(118) = 0.58, n.s.$  Within the partner condition, however, men's post-decisional rationalization ( $M = -0.23, SD = 1.58$ ) was less than women's ( $M = 0.71, SD = 1.58$ ),  $t(118) = -2.29, p = .02$ . Men's spread of alternatives was greater in the self condition than in the partner condition,  $t(118) = 1.78, p = .08$ . Women's spread of alternatives was greater in the partner condition than in the self condition, but this comparison was not statistically significant,  $t(118) = -1.08, n.s.$

---

<sup>2</sup> The self-esteem variable did significantly account for some of the variation in the spread of alternatives,  $F(1, 118) = 4.27, p = .04$ , however, when removed from the analysis the pattern of results for the omnibus test remained the same.

In addition, one-sample t-tests were conducted for each group to determine if the spread of alternatives was significantly different from zero (suggesting the experience of dissonance and subsequent reduction). Due to the a-priori predictions, each test was conducted using one-tailed tests (Maxwell, 2004). As expected, the mean of the women in the partner condition ( $M = 0.71$ ,  $SD = 1.58$ ) was significantly different from zero,  $t(29) = 2.47$ ,  $p = .01$ . The mean for men in the self condition ( $M = 0.52$ ,  $SD = 1.59$ ) was also significantly different from zero,  $t(27) = 1.73$ ,  $p = .05$ . Also as expected, the mean of the men in the partner condition ( $M = -0.23$ ,  $SD = 1.58$ ), was not significantly different from zero,  $t(28) = -0.79$ , *n.s.* Unexpectedly, the mean of women in the self condition ( $M = 0.28$ ,  $SD = 1.59$ ), was not significantly different from zero,  $t(31) = 0.99$ , *n.s.* (see Figure 1).

Figure 1  
*Mean Spread of Alternatives as a Function of Sex and Decision Condition*



*Note:* An asterisk indicates that the mean spread of alternatives of the condition is significantly different from zero ( $p < .05$ , one-tailed).



*Alternative Explanations.* The following analyses were conducted to test potential alternative explanations for the findings of Study 1. Where regression models were used to conduct the analyses, both sex and condition were effect coded (men = 1, women = -1; self = 1, partner = -1) and all continuous predictor variables were centered.

*Relationship Quality.* An argument could be made that relationship satisfaction may impact the extent to which a partner and relationship become a defining aspect of the self structure. Given that there was a moderately significant sex difference in relationship satisfaction (such that women reported greater satisfaction than men as measured by the PRQC-SAT; see Table 1), it could be argued that this difference, rather than sex, affected the experience of dissonance in the partner condition. To rule out this alternative explanation, the ANCOVA was run again controlling for relationship satisfaction (as measured by the PRQC-SAT). The results of this analysis did not change the pattern or significance of the findings reported above suggesting that relationship satisfaction does not account for the interaction.

As with relationship satisfaction, there was a sex difference in relationship commitment (see Table 1) such that women were more committed to their relationship than men. Recall that research by Gagné and Lydon (2003) suggests that relationship commitment may moderate sex differences in self-construal. For these reasons, a regression model was conducted with target condition, sex, and relationship commitment included as predictors along with the two-way and three-way interactions controlling for self-esteem. The results of this analysis revealed that only the predicted sex by target condition interaction was significant suggesting that commitment does not account for this interaction and it also does not moderate it.

*Scales Measuring the Self.* Two scales (the RISC and the SCS) included in the current study are argued to measure individuals' general self-construal. Stated differently, the RISC and the interdependent subscale of the SCS are purported to measure the extent to which individuals' identity is defined by their relationships with others (the RISC describes a relational self-construal whereas the interdependent subscale of the SCS focuses on a more collective self-construal). As discussed in the introduction, research does suggest that sex differences exist for the RISC. As shown in Table 1, the RISC and the interdependent subscale of the SCS positively correlate with measures of femininity and the independent subscale of the SCS positively correlates with masculinity (although only for women), congruent with research arguing for such sex differences (interestingly, sex differences on such scales were not observed in the current study). If these measures accurately capture differences in self-construal, and such differences are the mechanism driving the experience of dissonance for one's partner, then these scales should account for differences in the spread of alternatives in the partner condition. The primary analysis was run again controlling for scores on the RISC, SCS-INT, and SCS-IND individually and the results remained as reported above. As well, regression models were conducted to test for moderating effects of the RISC and subscales of the SCS but none were found.

*Self-Other Overlap.* The IOS has been argued to measure closeness to a significant other and the extent to which a specific other is incorporated into the self-concept thereby affecting the content of the self (i.e., the content of the self contains attributes of the close other). It is possible that IOS measured closeness, and therefore self-other overlap, may predict the experience of dissonance in the partner condition (i.e.,

the partner's preferences have been incorporated into the self and therefore the choice of coupon for the partner is potentially self-threatening). The primary analysis was run again controlling for scores on the IOS and the results remained as reported above. As well, regression models were conducted to test for possible moderating effects of the IOS but none were found.

***Sex versus Gender.*** It is possible that sex-role attributes (i.e., attributes comprised in femininity and masculinity), rather than actual sex, may predict under what circumstances dissonance is aroused. Sex differences were found in the current study such that women endorsed greater levels of femininity and men endorsed greater levels of masculinity (see Table 1). The primary analysis was run again controlling for scores on the femininity and masculinity subscales of the PAQ (both individually and simultaneously) and the results remained as reported above. As well, regression models were conducted to test for possible moderating effects of the femininity and masculinity subscales of the PAQ (again, individually and simultaneously) but none were found.

***Sex-Role Ideologies.*** Sex-role attitudes, rather than actual sex, may be the mechanism driving the experience of dissonance in the partner condition. Indeed, as shown in Table 1, the male participants in this study reported more stereotypic sex-role attitudes as compared to female participants. To test if stereotypic or traditional sex-role attitudes could account for the findings of the current study, the primary analysis was run again controlling for scores on the GREAT subscales and the SRIS (individually) and the results remained as reported above. As well, regression models were conducted to test for possible moderating effects of these scales (again, individually) but none were found.

**Alternative Motivations.** As discussed in the introduction, the motivation to enhance the chosen coupon may have resulted from driving forces other than dissonance reduction. That is, because the study did not include a control condition (a no-choice condition) an argument could be made that the enhancement component of the spread of alternatives resulted from a mere ownership effect (Beggan, 1992), from an endowment effect (Kahneman, Knetsch, & Thaler, 1990), or from associative self-anchoring (Gawronski, Bodenhausen, & Becker, 2007). Dissonance research argues that dissonance reduction is a combination of enhancing characteristics of a chosen item and derogating characteristics of a non-chosen item (i.e., the “I wouldn’t want that one anyway” effect) (e.g., Brehm, 1956; Frey, 1986). These alternative explanations do not predict the sex differences observed but would suggest a psychological process other than dissonance reduction was responsible for these differences. To address this alternative explanation, the primary analysis was run again but with derogation of the non-chosen coupon as the dependent variable rather than the spread of alternatives. The pattern and significance of the results remained the same (and actually became stronger) as when the spread of alternatives was tested thus providing some indication that the findings were due to dissonance reduction strategies. The fact that the derogation effects were so prominent is consistent with research by Shultz, Leveille, and Lepper (1999), which demonstrated that derogation of the rejected items is more likely to occur when making a difficult decision between desired items, whereas enhancement of the chosen item is more likely to occur when making a difficult decision between less desirable items.

Along the same vein, Chen and Risen (2010) have argued that the spread of alternatives in the free-choice paradigm (FCP) may be due to principles of their

preference-driven model rather than dissonance. Although not an explicit part of their model, Chen and Risen argue that moderation effects, such as the interaction of condition and sex found in the current study, could be explained by a preference interpretation if the moderator somehow affected the correspondence of rankings with coupon choice (i.e., completing the FCP for one's romantic partner affects this correspondence). As per the recommendations of these authors, chi-squared tests were conducted to determine if differences in the correspondence of rankings with coupon choice occurred across conditions. That is, if significant differences in the number of participants who chose their 5th ranked item over their 6<sup>th</sup> ranked item were found across conditions, the argument that any post-decision rationalization was due to dissonance reduction motives could not be distinguished from a preference-driven model. The analyses revealed no such differences across conditions,  $\chi^2(3) < 1$ , *n.s.*, therefore supporting the dissonance reduction interpretations of the current research.

## **Discussion**

The present study sought to provide initial experimental evidence for sex differences in experience of dissonance when making a decision on behalf of one's partner. As predicted, men justified (as suggested by the spread of alternatives) their decisions for themselves more than decisions for their romantic partner. The opposite pattern of results was found for women. Although little post-decisional rationalization was produced by women in the self condition, the comparison between men and women in this condition was not significant, as predicted and consistent with previous free-choice dissonance studies (e.g., Hoshino-Browne et al., 2005). Also as predicted, the

comparison of post-decisional rationalization between men and women in the partner condition was significant.

It was predicted that women would justify their decisions in both the self and the partner conditions suggesting a partitioned or “bi-cultural” form of self-concept.

Although the comparison of post-decisional rationalization between the self and partner condition for women was not significant, the amount of spread of alternatives in the self condition was not distinguishable from zero suggesting that dissonance may not have been experienced in this condition. A possible explanation for this finding may be that the context made the relational-interdependent aspect of female participants’ self-concept more salient. The study was advertised as investigating romantic relationships and most of the questionnaires in the study pertained to participants’ partner or relationship (completed prior to coupon choice).

Numerous alternative explanations for the present findings were explored such as the possible influence of relationship quality factors, sex-role attitudes, gender attributes, and the IOS measure of closeness. As predicted, none of these competing alternatives appeared to be mediating or moderating the sex differences observed in the current study. Surprisingly, however, measures of self-construal (the RISC and SCS) did not predict the experience of dissonance in the current study. The SCS is used to tap differences in independent and interdependent self-construals and therefore may be more relevant to cross-cultural differences than to sex differences. As well, the SCS has recently been criticised for having poor psychometric properties when completed by Westerners (Paquet & Kline, 2009).

Sex differences are typically found on the RISC (e.g., Cross et al., 2000) but were not found in this study although other results (e.g., the correlations of the RISC with the interdependent SCS and the femininity subscale of the PAQ) were replicated (see Table 1). Therefore, sex differences in relational self-construal as measured by this scale could not account for the findings of the current research. One possible explanation for this could be the sample of the current study. In the research examining sex differences on the RISC, populations are not typically restricted to those involved in romantic relationships (e.g., Cross et al., 2000). The participants in the current study volunteered to participate in research about their romantic relationships and also completed a battery of questionnaires related to the qualities of their relationship. This may have affected how they responded to items on the RISC (i.e., they associated scale items more with their romantic relationship than close relationships in general) or restricted the sample to a subpopulation in which sex differences in relational self-construal are not captured by this scale. Also, Cross and colleagues' research demonstrating sex differences in self-construal sometimes only found small differences (e.g., 0.17 difference on a 7-point scale) even with large samples of over 250 participants.

***Possible Limitations.*** The purpose of using the modified free-choice paradigm was to demonstrate the different circumstances in which men and women experience cognitive dissonance due to sex differences in self-construal. This interpretation rests on the assumption that the spread of alternatives observed resulted from dissonance-reducing motives. As discussed in the results section, it may be possible that other forces lead to the spread of alternatives (e.g., a mere ownership effect, an endowment effect, or by means of associative self-anchoring), or at least the increase in ratings of the chosen item.

The additional analysis conducted using the derogation component of the spread of alternatives as the dependent variable provided some support that dissonance was the driving force. To provide further support for the dissonance interpretation, however, Study 2 included a self-affirmation manipulation. Affirming one's sense of self has been shown to alleviate the need to engage in dissonance reduction (Hoshino-Browne et al., 2005; Steele, 1988). If, in Study 2, participants demonstrate a significant reduction in spread of alternatives when offered an opportunity to affirm the self, then the dissonance interpretation will be bolstered.

Although Study 1 did investigate many possible alternative explanations for the mechanism driving the observed sex difference in post-decisional rationalization, other possibilities were not explored. It is possible that individual differences in need for affiliation or rejection sensitivity (Mehrabian, 1976) may moderate the observed sex differences. Study 2 included scales measuring these concepts to explore these possibilities.

Finally, Study 1 included the battery of questionnaires, which included scales assessing participants' romantic relationship and self-esteem, prior to making the choice of coupon. Based on the self-affirmation literature, this may have influenced the need to engage in dissonance reduction. Therefore, in Study 2, the completion of these scales was moved to after the free-choice tasks had been completed.



## Study 2

### Overview

Study 2 was designed to provide additional support for the arguments of the present research by incorporating a self-affirmation manipulation as well as provide replication and address the limitations of Study 1. In Study 2, the modified free-choice dissonance paradigm of Study 1 was used once again but with the addition of a self-affirmation condition. Participants received no affirmation (no SA condition), an independent- or individual-focused self-affirmation (independent SA), or an interdependent/relationship-focused affirmation (relationship SA). The self-affirmation condition simultaneously provides a method to confirm dissonance reduction motives and an additional test of the assertions of the current research using a different theoretical approach (self-affirmation theory). That is, if participants no longer engage in post-decisional rationalization when given the opportunity to affirm the self then the dissonance reduction motive is supported whereas other competing explanations (e.g., self-anchoring, mere ownership) are not. If men and women are affirmed by different forms of affirmation then the prediction of sex differences in self-construal (with regards to one's romantic partner) has also been supported both through the experience of dissonance and through its alleviation via principles of self-affirmation theory.

As in Study 1, scales measuring various independent difference variables were included to investigate whether these characteristics mediate or moderate any observed sex differences in the elicitation of dissonance. Many of the scales from Study 1 were left out as they were found to have no association with the post-decision rationalization (e.g., sex role ideologies), however, the scales tapping relationship characteristics (e.g.,

satisfaction, commitment, etc) were left in. Scales measuring affiliative tendency and rejection sensitivity were added as these characteristics were not assessed in Study 1. In order to address a potential limitation of Study 1, the battery of scales was completed after the free-choice activities had been completed, ostensibly as part of another study, to prevent any influence they may exert on the dissonance process.

The hypotheses of Study 2 are as follows: 1) Men will experience more dissonance in the self condition than in the partner condition, 2) Men will be affirmed more by the independent SA than the relationship SA, 3) Women will experience dissonance in the partner condition and, to a lesser extent, in the self condition, 4) Women will be affirmed by the relationship SA and, to a lesser extent, by the independent SA. In the partner condition, however, it is possible that the relationship SA would exacerbate the experience of dissonance for women because it may make relationship maintenance motives salient thereby heightening the importance of making an optimal decision for one’s partner (see Stone & Cooper, 2001; also see a review on the hypocrisy paradigm, Aronson, 1999). This alternative prediction was explored. The study hypotheses are depicted in Table 2.

Table 2  
*Predicted Pattern of Post-decision Rationalization as a Function of Sex and Condition*

Decision Condition	SA Condition					
	No SA		Independent SA		Relationship SA	
	Men	Women	Men	Women	Men	Women
Self	++	+	--	-	++	--
Partner	--	++	--	-	--	-- / +++

*Note:* a plus (+) sign indicates more post-decision rationalization, whereas a minus sign (-) indicates less post-decision rationalization.

## Method

**Participants.** One hundred and seventy-eight individuals from the University of Western Ontario (UWO; 70 men, 108 women) involved in a romantic relationship for at least one month ( $M = 27.26$   $SD = 23.69$ ) participated in this research. Participants recruited from the introductory psychology course at the UWO received one participation credit towards their course grade. Additional participants recruited through advertising in the university newspaper received \$10 for their participation. Participants were randomly assigned to the self decision condition (90 participants) or to the partner decision condition (88 participants), and to one of three self-affirmation conditions (60 participants in the no SA condition, 59 participants in the independent SA condition, and 59 participants in the relationship SA condition).

**Procedure.** The procedure of Study 2 was similar to Study 1 with a few exceptions. The instructions given to participants explaining the entrée ranking and rating procedure were emphasized, both verbally and in writing, to ensure the task was completed properly. Participants randomly assigned to the independent or relationship SA conditions received the pertinent value survey (self-affirmation) prior to choosing between the presented coupons. As well, all participants were told that the study combined two separate studies: a decision-making study (containing the free-choice dissonance procedures) that was completed first and a relationship study (containing the individual difference and relationship questionnaires) that was completed second. A distracter task was included in the middle to separate the ostensibly independent studies. This task asked participants to decide whether numbers appearing on a computer screen were even or odd numbers as quickly and as accurately as they could. This task included

59 trials (see Appendices O and P for the experimenter scripts for the self and partner conditions, respectively).

**Measures.** Participants completed the following questionnaires after the free-choice procedures.

***Inclusion of Other in the Self Scale (IOS).*** The single-item, pictorial IOS scale (Aron, Aron, & Smollan, 1992; see Appendix I) was used to measure relationship quality. Responses to this scale have been shown to be related to relationship closeness, satisfaction and commitment (Aron et al., 1992). Participants were asked to indicate which set of increasingly overlapping circles (representing the self and partner) best “describes you and your current dating partner”. In each set, the word ‘self’ appeared in one circle and the word ‘partner’ appeared in the other. Higher scores indicate greater relationship quality

***Perceived Relationship Quality Components Scale – satisfaction subscale (PRQC – SAT).*** This 3-item scale (Fletcher, Simpson, & Thomas, 2000; see Appendix J) was used to assess participants’ relationship satisfaction (e.g., “How satisfied are you with your relationship?”). Participants responded to each item using a seven-point scale (anchored 1 = *not at all*, 7 = *extremely*). Scores on each item were averaged with higher scores indicating greater perceived relationship satisfaction (men’s  $\alpha = .94$ , women’s  $\alpha = .97$ ).

***The Investment Model Scale – Commitment Level Items (COMM).*** This 7-item scale (Rusbult, Martz, & Agnew, 1998; see Appendix K) was used to measure participants’ commitment to their partner and romantic relationship. Participants responded to each item using a seven-point scale (anchored 1 = *do not agree at all*, 4 =

*agree somewhat, 7 = agree completely*). Scores on each item were averaged with higher scores indicating greater levels of commitment (men's  $\alpha = .88$ , women's  $\alpha = .86$ ).

***Relational-Interdependent Self-Conceptual scale (RISC)***. This eleven item scale (Cross, Bacon, & Morris, 2000; see Appendix F) was used to measure individual differences in the level of relational self-construal. Participants indicated how much they agreed with each statement on a 7-point scale (anchored 1 = *strongly disagree*, 7 = *strongly agree*). Aggregated scores on this scale may be used to determine if individual differences in relational self-construal mediate the relationships between sex and post-decision rationalization in each condition (see Uskul, Hynie, & Lalonde, 2004). Scores on each item were averaged with higher scores indicating a stronger relational self-construal (men's  $\alpha = .87$ , women's  $\alpha = .91$ ).

***Self-esteem Scale (SE)***. This 10 item measure (Rosenberg, 1965; see Appendix H) was used to assess global levels of self-esteem. Participants indicated how much they agreed with each statement on a 7-point scale (anchored 1 = *strongly disagree*, 7 = *strongly agree*). Scores on each item were averaged with higher scores indicating more positive self-esteem (men's  $\alpha = .83$ , women's  $\alpha = .85$ ).

***Affiliative Tendency Scale (MAFF)***. This 26-item scale (Mehrabian, 1976; see Appendix Q) measures affiliative tendencies. Participants indicate how much they agree with each statement on a 9-point scale (anchored +4 = *very strong agreement*, -4 = *very strong disagreement*). Scores on each item were averaged with higher scores indicating a stronger affiliative tendency (men's  $\alpha = .76$ , women's  $\alpha = .74$ ).

***Sensitivity to Rejection (MSR)***. This 24-item scale (Mehrabian, 1976; see Appendix R) measures sensitivity to rejection. Participants indicate how much they agree

with each statement on a 9-point scale (anchored +4 = *very strong agreement*, -4 = *very strong disagreement*). Scores on each item were averaged with higher scores indicating stronger rejection sensitivity (men's  $\alpha = .84$ , women's  $\alpha = .78$ ).

**Value Survey.** The value survey (Hoshino-Browne et al., 2005) was used as a self-affirmation (SA) manipulation. Participants in the two SA conditions completed one of two value surveys. Participants assigned to the independent SA condition were asked to choose a value most important to them (out of a list of seven: Business/Economics, Social life/Relationships, Art/Music/Theatre, Science/Pursuit of knowledge, Religion/Spirituality, Social action/Helping others, Other: please specify) and then write a paragraph explaining why it is important to who they are (see Appendix S). Participants assigned to the relationship SA condition were asked to choose a value (from the same list as the independent SA condition) that is most important to themselves *and* their partner and then write a paragraph explaining why they share this value (see Appendix S).

## Results

For descriptive purposes, means, standard deviations, and correlations (partialling out the effects of experimental condition) between all study variables for men and women are presented in Table 3. Also, as shown in Table 3, there were sex differences for some of the study variables (e.g., commitment and sensitivity to rejection) that will be explored as alternative explanations for the findings of the current study.

**Data Analytic Strategy.** Prior to analyses, 3 participants were removed due to suspicion regarding the restaurant and coupon before debriefing, 8 participants were removed due to food restrictions of themselves or their partners that precluded the use of

the coupon, 5 participants were removed because their responses to the main dependent variable were over 4 standard deviations away from the mean, and therefore regarded as an extreme outlier, and 2 participants were removed due to failure to follow instructions properly. Thus, 160 participants remained in the sample to be analysed (63 men and 97 women).<sup>3</sup>

The remaining sample was fairly equally distributed across all study conditions with 81 participants in the self condition, 79 participants in the partner condition, and 53-54 participants in each of the self-affirmation conditions. The number of participants removed from each cell was also fairly equally distributed (0-2 men removed from each cell and 1-3 women removed from each cell). As in Study 1, the dependent variable was the amount of post-decision rationalization that was expressed by participants as measured by the spread of alternatives.

**Primary Analyses.** A 2(decision condition: Self vs. Partner) X 2(Sex: Men vs. Women) X 3(SA condition: No SA vs. Interdependent SA vs. Relationship SA) factorial ANOVA was conducted to test the prediction that sex, decision condition, and self-affirmation condition will interact in the prediction of spread of alternatives. Self-esteem was initially included as a covariate but was not significantly associated with the dependent variable and therefore was subsequently removed from the analyses (the ANOVA results were unchanged with the removal of self-esteem).<sup>4</sup>

---

<sup>3</sup> Unlike Study 1, when the data is re-run including these excluded participants the pattern of results does not remain the same. This difference is most likely due to the smaller cell sizes in Study 2 compared to Study 1.

<sup>4</sup> Also, given that the self-esteem scale was completed after the FCP procedure in this study (rather than during the procedure as in Study 1) and that some participants received a self-affirmation manipulation (presumably enhancing, or repairing, their feelings of self-worth) the theoretical reason to include self-esteem in the analyses in Study 1 is not applicable to Study 2.

Table 3  
*Zero-Order Correlations of Study Variables Controlling for Condition: Study 2*

	Mean (SD)							t		
	1	2	3	4	5	6	7		Men	Women
1. IOS	—	.51*	.57*	.13	.10	.02	-.06	5.27(1.23)	5.48(1.11)	-1.14
2. PRQC-SAT	.42*	—	.70*	.26*	.39*	.12	-.17	5.92(0.91)	5.92(1.03)	0.26
3. COMM	.42*	.44*	—	.13	.22*	.11	-.09	5.88(1.08)	6.17(0.94)	-1.80†
4. RISC	.43*	.33*	.31*	—	.13	.50	-.02	5.05(0.99)	5.27(0.99)	-1.34
5. SE	.01	.21	.06	.05	—	.16	-.33*	5.86(0.77)	5.78(0.83)	0.64
6. MAFF	.56*	.47*	.35*	.56*	.15	—	-.02	27.70(19.56)	26.57(17.92)	0.38
7. MSR	.13	.15	-.15	.11	-.02	.35*	—	2.51(23.10)	13.64(20.20)	-3.22*

*Note.* Correlations for women appear above the diagonal, whereas correlations for men appear below the diagonal. †  $p < .10$  \*  $p < .05$ .



The main effect of sex was marginally significant,  $F(1, 148) = 2.83, p = .10$ , demonstrating that women's post-decision rationalization across all conditions ( $M = 0.69, SD = 1.66$ ) was greater than men's ( $M = 0.26, SD = 1.36$ ). Although not reaching conventional levels of significance, the main effect of SA condition,  $F(1, 148) = 2.28, p = .11$ , suggests that levels of post-decision rationalization across decision condition and sex differed. The least amount of post-decision rationalization occurred in the independent SA condition ( $M = 0.21, SD = 1.50$ ), as expected, followed by the No SA condition ( $M = 0.45, SD = 1.71$ ), and, unexpectedly, the most post-decision rationalization occurred in the Relationship SA condition ( $M = 0.89, SD = 1.41$ ). The main effect of decision condition was not significant,  $F(1, 148) = 0.12, n.s.$ , as expected.

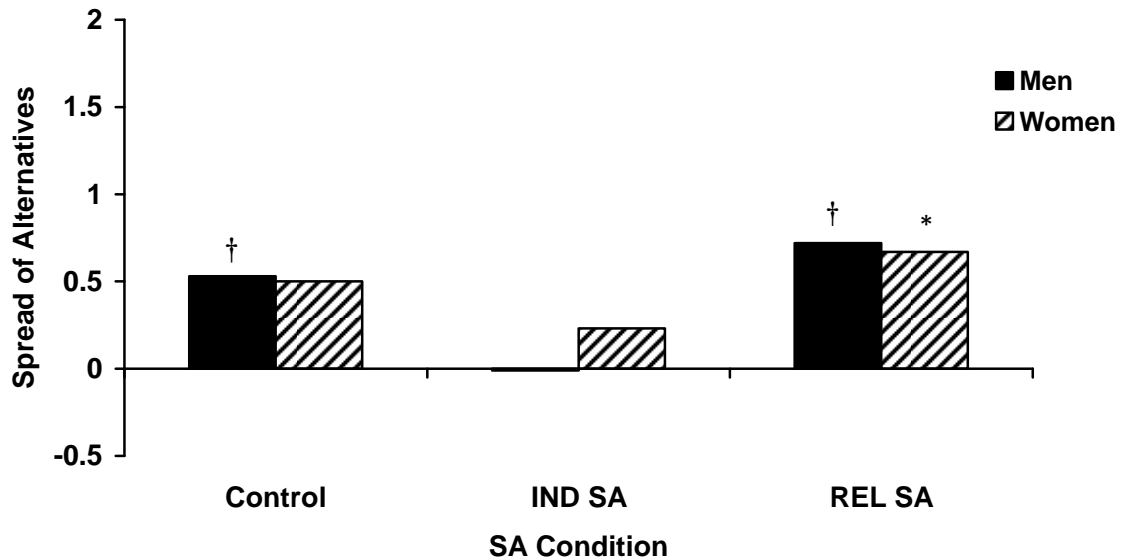
Although also not significant, the interaction of sex and decision condition,  $F(1, 148) = 2.17, p = .14$ , indicated the trend expected with men ( $M = 0.40, SD = 1.59$ ) and women ( $M = 0.46, SD = 1.62$ ) exhibiting similar levels of post-decision rationalization in the self condition,  $t(148) = 0.17, n.s.$ , but women ( $M = 0.95, SD = 1.68$ ) exhibiting more post-decision rationalization than men ( $M = 0.18, SD = 1.13$ ) in the partner condition,  $t(148) = 5.40, p = .02$ . The interaction of sex and SA condition was not significant as expected,  $F(1, 148) = 0.47, n.s.$  The predicted interaction of decision condition and SA condition also was not significant,  $F(1, 148) = 0.41, n.s.$  Although all but one cell mean (women in the self and relationship SA condition) was in the hypothesized direction (see Figures 2 and 3) the predicted three-way interaction of sex, decision condition, and SA condition was not significant,  $F(1, 148) = 1.12, n.s.$

As in Study 1, one-sample t-tests (one-tailed) were conducted on each of the 12 sample cells to determine if the amount of post-decision rationalization was significantly

different from zero (suggesting the occurrence of dissonance and the attempt to alleviate it). As indicated in Figures 2 and 3, men engaged in post-decision rationalization in the self decision condition when no affirmation was received,  $t(8) = 1.52, p = .08$ , and when the relationship affirmation,  $t(9) = 1.47, p = .09$  was received, as predicted. Males did not engage in significant amounts of post-decision rationalization in any of the other conditions, as predicted.

Figure 2

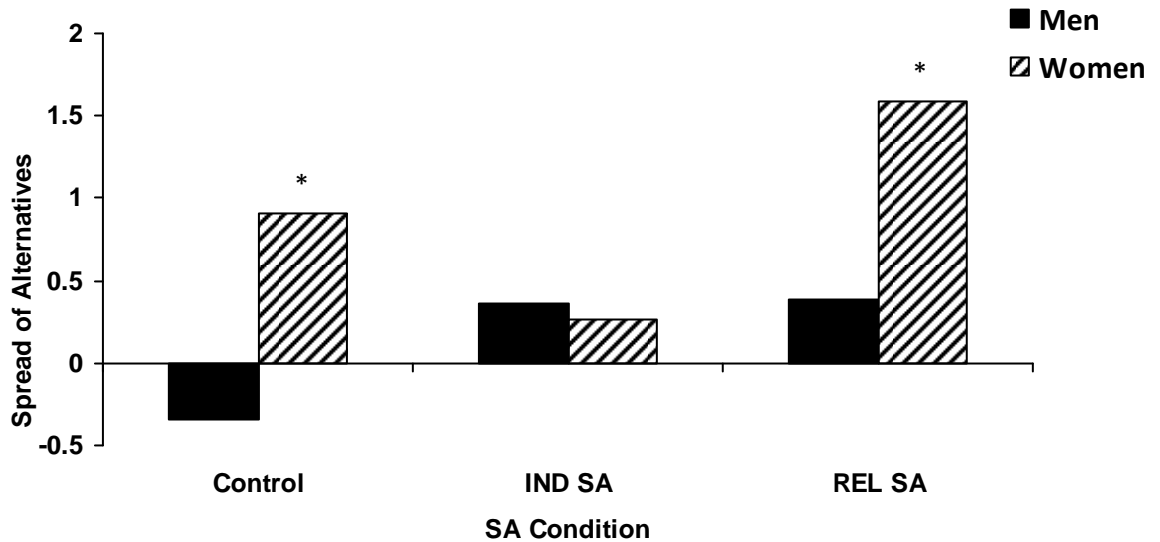
*Mean Spread of Alternatives as a Function of Sex and SA Condition within the Self Condition*



*Note:* An asterisk indicates that the mean spread of alternatives of the condition is significantly different from zero and a dagger indicates marginal significance (one-tailed).

Figure 3

*Mean Spread of Alternatives as a Function of Sex and SA Condition within the Partner Condition*



*Note:* An asterisk indicates that the mean spread of alternatives of the condition is significantly different from zero and a dagger indicates marginal significance (one-tailed).

Women in the partner decision condition, when no affirmation was received, engaged in significant post decision rationalization  $t(15) = 1.98, p = .03$ , as predicted. When the relationship affirmation was received women also engaged in significant amounts of post decision rationalization,  $t(15) = 4.20, p < .001$ , consistent with the alternative prediction that the relationship SA may serve to exacerbate the experience of dissonance for women when making a decision for their partner. In the self decision condition, however, the anticipated pattern of results was not found. Although similar to the men in amount, women’s post-decision rationalization was not significant when no

self-affirmation was received,  $t(16) = 0.95$ , *n.s.* Also unexpectedly, women engaged in a significant amount of post-decision rationalization when the relationship affirmation was received,  $t(15) = 2.10$ ,  $p = .03$ . Females did not engage in significant amounts of post-decision rationalization in any of the other conditions, as predicted.

In order to further investigate the specific sex differences that I predicted across the decision and SA conditions, planned contrasts were conducted. Within the self decision condition, I predicted that the difference between men's and women's post-decision rationalization would be significantly different in the relationship SA condition but not in the No SA or Independent SA conditions. As predicted, the contrasts for the No SA and Independent SA conditions were not significant; the contrast for the relationship SA condition, however, was also not significant contrary to prediction (all  $F_s < 1$ ). Unexpectedly, women engaged in post-decision rationalization in the self condition when they received the relationship SA as did men.

Within the partner decision condition, I predicted that the difference between men's and women's post-decision rationalization would be significantly different in the No SA and, potentially, in the Relationship SA conditions but not in the Independent SA condition. All contrasts turned out as predicted. When participants did not have a self-affirmation opportunity, women engaged in more post-decision rationalization ( $M = 0.91$ ,  $SD = 1.83$ ) than men ( $M = -0.34$ ,  $SD = 0.84$ ),  $F(1, 148) = 4.45$ ,  $p = .04$ . When participants completed the independent SA, men ( $M = 0.36$ ,  $SD = 1.37$ ) and women ( $M = 0.27$ ,  $SD = 1.51$ ) did not differ in their levels of post-decision rationalization,  $F < 1$ , *n.s.* When participants completed the relationship SA, however, women engaged in more post-decision rationalization ( $M = 1.59$ ,  $SD = 1.51$ ) than men ( $M = 0.39$ ,  $SD = 1.09$ ),  $F(1, 148)$

= 4.27,  $p = .04$ , again supporting the alternative prediction that the relationship SA exacerbated dissonance for women in this condition.

The final contrast conducted investigated the difference between the post-decision rationalizations of women in the partner condition when no affirmation or the relational affirmation was received. If, as speculated, this condition made aspects of women's relational bond salient, therefore exacerbating the importance of an inconsistency of decision for one's partner, then the post-decision rationalization should be greater in the relationship SA condition than in the No SA condition. Although women did show the expected pattern of results, such that more post-decision rationalization occurred in the relationship SA condition ( $M = 1.59$ ,  $SD = 1.51$ ) than in the No SA condition ( $M = 0.70$ ,  $SD = 1.99$ ), the contrast was not significant,  $F(148) = 1.56$ , *n.s.*

**Alternative Explanations.** The following analyses were conducted to investigate alternative explanations, or possible mediating mechanisms, for sex differences found in Study 2. Although the omnibus analyses did not yield a significant 3-way interaction of sex, decision condition, and SA condition, the pertinent a priori contrast of men's and women's post-decision rationalization in the partner decision condition, when no affirmations were provided, was significant (reported above) and in the direction predicted. That is, men engage in less post-decision rationalization than women when making a decision on behalf of their partner. Regression models were used to conduct the analyses; sex and decision condition were effect coded (men = 1, women = -1; self = 1, partner = -1) and all continuous predictor variables were centered.

**Relationship Quality.** Although not significant in Study 1, the argument could once again be made that relationship satisfaction may impact the extent to which a

person would possess a relational self-construal in regards to their romantic partner. Unlike Study 1, there was not a significant sex difference in level of relationship satisfaction (see Table 3) and therefore it is unlikely this alternative explanation accounts for the current findings. The regression model including relationship satisfaction (i.e., PRQC-sat) produced results concurring with this argument. That is, including relationship satisfaction in the regression model did not eradicate the pertinent sex difference nor did it moderate it (i.e., the interaction term of relationship satisfaction and sex was not significant).

As in Study 1, however, there was a moderate sex difference in relationship commitment (see Table 3) such that women were more committed to their relationship than men. Researchers (Gagné and Lydon, 2003) have argued that relationship commitment moderates the relation between sex and self-construal such that men and women do not differ in their relational self-construal once they feel adequately committed to their relationship. Therefore, the regression model was conducted with relationship commitment included as a predictor and an interaction term with sex. The results of this analysis revealed that relationship commitment was not mediating or moderating the sex difference in post-decision rationalization and the effect of sex remained, although becoming marginally significant,  $t(23) = -1.99, p = .06$ .

*Scales Measuring the Self in Relation to Others.* The Relational-Interdependent Self-Construal scale (RISC) was investigated, as in Study 1, to determine if participants' scores on this scale, designed to tap one's level of relational self-construal, could account for the observed sex difference. The regression model including the RISC as a predictor and an interaction term with sex was conducted. Consistent with

Study 1, however, scores of the RISC were not mediating or moderating sex differences in post-decision rationalization, although this effect did become marginal,  $t(23) = -1.80$ ,  $p = .09$ .

***Self-Other Overlap.*** The IOS has been argued to measure closeness to a significant other and the extent to which a specific other is incorporated into the self-concept thereby affecting the content of the self (i.e., the content of the self contains attributes of the close other). One could make the argument that IOS measured closeness, and therefore self-other overlap, may predict the experience of dissonance in the partner condition (i.e., the partner's preferences have been incorporated into the self and therefore the choice of coupon for the partner is potentially self-threatening). The primary analysis was run again controlling for scores on the IOS and the results remained as reported above. As well, regression models were conducted to test for possible moderating effects of the IOS but none were found.

***Affiliative Tendencies and Rejection Sensitivity.*** It is possible that the observed sex difference is due to women having a greater affiliative tendency or sensitivity to rejection (Mehrabian, 1976) than men. Such findings would not necessarily counter the assertions of the current research (i.e., the sex differences are due to differences in self-construal) because these qualities may be considered a part of a relational self-construal (e.g., the focus on nurturing bonds and the concern for maintaining such relationships) but may shed light on a mediating mechanism. Males and women did not differ, however, in their reported affiliative tendencies (see Table 3) and the results of the regression analyses revealed that such tendencies could not account for the pertinent sex difference.

Men and women did, on the other hand, differ quite substantially in their sensitivity to rejection (see Table 3) such that women reported greater sensitivity than men. Adding rejection sensitivity to the regression model did reduce the significance of the pertinent sex difference,  $b = -0.47$ ,  $t(23) = -1.30$ ,  $p = .21$ . Rejection sensitivity, however, did not significantly predict post-decision rationalization,  $b = 0.01$ ,  $t(25) = 0.90$ , *n.s.*, nor did it significantly interact with sex to predict spread,  $b = -0.02$ ,  $t(23) = -1.16$ , *n.s.*, and therefore cannot be interpreted as a mediator or moderator of the effect of sex (Baron & Kenny, 1986). Rejection sensitivity did significantly differ with sex and therefore the reduction of the sex difference is most likely due to issues of multicollinearity.

**Alternative Motivations.** As in Study 1, additional analyses were conducted in order to strengthen the argument that the results in this study are due to dissonance reduction rather than other motivations (e.g., a mere ownership effect, Beggan, 1992; an endowment effect, Kahneman et al., 1990; associative self-anchoring, Gawronski et al., 2007; or preference, Chen & Risen, 2010). First, the two significant sex differences found in the a priori contrasts (showing women engage in more dissonance reduction than men in the partner condition except when the independent SA was provided) were analysed once again but this time with the derogation of the rejected item as the dependent variable, rather than the spread of alternatives. The results remained as reported above.

Although the relationship SA manipulation did not demonstrate the anticipated reduction of post-decision rationalization (for women), the independent SA manipulation did appear to reduce both men's and women's need to justify their decision. As recommended by Chen & Risen (2010) however, in order to support the argument that



the reduction in spread of alternatives in the Independent SA condition was due to an alleviation of dissonance motivation rather than a change in the correspondence of rankings with coupon choice, additional analyses were conducted. Analyses revealed that participants were just as likely to choose their 5<sup>th</sup> ranked item when no affirmation was received as when the independent affirmation was received in the self condition,  $\chi^2(3) = 4.07, n.s.$ , and in the partner condition,  $\chi^2(3) = 5.56, n.s.$  Therefore, the interpretation that the independent SA condition alleviated the need to engage in dissonance reduction (i.e., post-decision rationalization) was supported.

## **Discussion**

The results of Study 2 provide some support for the predictions of the current research. Replicating the findings of Study 1, when participants did not affirm the self, sex differences in post-decision rationalization occurred. That is, women rationalized decisions made for their romantic partner, whereas men rationalized decisions made for themselves. Once again, the difference between men's and women's rationalization when deciding for themselves was not significant. This finding is consistent with previous dissonance research showing no sex differences (e.g., Elliot & Devine, 1994), however, women's rationalization was not statistically distinguishable from zero, meaning dissonance reduction cannot be argued.

The results of the independent SA condition provide support for the argument that dissonance reduction, rather than alternative explanations such as mere ownership (Beggan, 1992) or simply preference (Chen & Risen, 2010), is the motivational force behind the findings of this study. Neither men nor women significantly justified their decisions when given this affirmation opportunity prior to their decisions. That being

said, however, because women did not exhibit significant post-decision rationalization in the self condition it cannot be argued that they were affirmed by the independent SA in that condition. Nevertheless, women did justify their decisions in the partner condition but not when they received the independent SA therefore providing support for the prediction that women would be affirmed by the independent SA.

One potential issue with the independent SA manipulation, however, is the fact that participants could choose to affirm a value that is important to the relational self-construal. Although the manipulation asked participants to explain why the value they choose was important to themselves rather than shared with their partner, participants could choose to write about their values in a relational self-construal fashion (e.g., focus on nurturing their bonds with significant others). Indeed, in the independent SA condition more women (84%) chose an “interdependent” value (i.e., social life/relationships or social action/helping others) to affirm than men (62%),  $\chi^2(1) = 3.46$ ,  $p = .06$ . This concern does not contradict the argument that the results of the independent self-affirmation condition helps establish the occurrence of dissonance reduction, it does however limit the conclusions that can be made regarding what aspect of the self, or self-construal, was being affirmed for participants. The sex difference in choice of value to affirm, however, does support the sex differences in self-construal perspective.

In contrast to the independent SA condition, the relational SA manipulation did not appear to reduce the need to justify decisions, for oneself or one’s partner, for either men or women. In fact, women’s post-decision rationalization was increased (although not significantly) in this condition when making a decision for oneself or for one’s partner. As well, there was no sex difference in the likelihood of choosing a relational-

focused value to affirm (68% of men and 63% of women chose social life/relationships or social action/helping others) in the relational SA manipulation,  $\chi^2(1) < 1$ , *n.s.* There are a few possibilities that may explain why this manipulation was not affirming for women as anticipated. For example, one could speculate that the lack of affirmation provided by this manipulation indicates that neither men nor women possess a relational self-construal. This is unlikely, however, given the other findings of the present research and the significant amount of research supporting sex differences in self-construal (e.g., Gabriel & Gardner, 1999; Eagly, 2009; Foels & Tomcho, 2009).

Another, arguably more likely, possibility is that the relationship SA manipulation acted as a threat rather than an affirmation for a relational self-construal. The relationship self-affirmation manipulation, modelled after the Hoshino-Browne et al. (2005) cross-cultural dissonance research, was framed to highlight a trait or quality shared by the participant and his/her partner. This idea of sharing traits may be more reflective of a collective or interdependent self-construal than a relational self-construal (see Gabriel & Gardner, 1999; Eagly, 2009). Given that many men and women chose different types of values to affirm in the independent SA manipulation, as discussed above, choosing a value that is important to both partners may have been a challenging task (for heterosexual partners). Such difficulty in generating an example of a shared value could be misinterpreted by participants as an indication that the bond between partners is tenuous (e.g., see Schwarz et al., 1991), an interpretation that would be especially aversive to those with a relational self-construal.

The unpleasantness produced by the relational SA manipulation could have then been misattributed, or added to, the aversive experience of the difficult decision of

coupon. Indeed, the SA manipulation occurred immediately prior to the coupon choice. Dissonance research demonstrates that dissonance reduction attempts are driven by a desire to minimize the unpleasant state produced by holding inconsistent cognitions (Higgins, Rhodewalt, & Zanna, 1979; Losch & Cacioppo, 1990; Zanna & Cooper, 1974; Zanna, Higgins, & Taves, 1996). Importantly, previous research (Rhodewalt & Comer, 1979) has shown that additional negative affect (in this case manipulated through facial expressions) at the time of dissonance production causes an increase in dissonance-reduction attempts. Although this interpretation of the relationship SA manipulation is speculative, it does correspond quite well to the findings. Given the predicted sex differences in self-construal, and following this interpretation, one would expect that women would show greater justification in the relationship SA condition compared to the no affirmation condition whereas men would not show this enhancement of justification. Although the comparisons testing these comparisons were not significant, the trend of the data is in the predicted direction.

**Limitation.** Although the sample was larger in Study 2 than in Study 1, men and women in this study were spread across six possible conditions and therefore fewer participants were in each condition. The reduced cell sizes may have affected power and therefore the significance of some analyses. With a greater sample, perhaps some of the analyses demonstrating the predicted trends would have become statistically significant.

### **General Discussion**

To the best of my knowledge, the present research represents the first attempt to investigate the experience of cognitive dissonance when making difficult decisions for one's romantic partner. Dissonance research has established that differences in the self-concept (e.g., self-esteem, self-construal) can moderate the experience of cognitive dissonance. Essential to the present research, cross-cultural research investigating cognitive dissonance (e.g., Heine & Lehman, 1997; Hoshino-Browne et al., 2005) has demonstrated that individuals with more interdependently focused self-construals experience dissonance when making decisions for important others, whereas individuals with more independently focused self-construals experience dissonance when making decisions for themselves. This finding, in conjunction with gender research demonstrating that men tend to have an independent self-construal whereas women tend to have a relationally interdependent self-construal, led to the prediction that women would experience greater dissonance when making decisions for their romantic partners whereas men would experience greater dissonance when making decision for themselves.

In support of this prediction, both Study 1 and Study 2 demonstrated sex differences such that women justified decisions made for their romantic partner more than men. Additional analyses supported the interpretation that such post-decision rationalization was the result of dissonance reduction attempts rather than competing explanations (e.g., mere ownership, Beggan, 1992; an endowment effect, Kahneman, et al, 1990; or from associative self-anchoring, Gawronski et al, 2007). For women, potentially making a non-optimal decision for their partner is threatening to their relational self-construal and therefore the importance of this type of inconsistency would

be substantial resulting in heightened dissonance-reduction motivations. Males, on the other hand, are said to hold a more independent self-construal and therefore such inconsistencies would be less self-threatening and therefore any dissonance produced would be less pronounced. In order to support the argument that the observed sex difference was due to differences in self-construal, many individual difference variables that may have covaried with sex (e.g., gender roles, relationship commitment, etc) were investigated but were not found to be mediating or moderating the experience of dissonance after a decision for one's partner.

The results of both studies in the current paper suggest that women may experience less dissonance than men when making decisions for themselves. Indeed, women's level of post-decision rationalization did not reach statistical significance in either study. On the face of it, this finding may seem to contradict previous dissonance research that has failed to report any sex differences (e.g., Elliott & Devine, 1994)<sup>5</sup> or has found dissonance-reduction behaviours with solely female samples (e.g., Brehm, 1956) but this is not necessarily the case. Consistent with prior dissonance research, men's and women's levels of post-decision rationalization in the self condition were not statistically different in either Study 1 or Study 2. Indeed, if the current research did not look at men's and women's post-decision rationalization separately, the results of the present study would have replicated the pattern of prior dissonance research. In addition, characteristics of the methodology in Study 1 and the small cell sizes in Study 2 may have contributed to the lack of women's post decision rationalization when making a decision for themselves.

---

<sup>5</sup> Many dissonance studies, however, are silent on the issue of sex differences and often don't even report the proportion of male and female participants in their samples (e.g., Cooper, Zanna, & Taves, 1978; Steele, Spencer, & Lynch, 1993)

In Study 1, because the battery of relationship questionnaires was completed prior to the critical decision task, women's relational aspects of their self-construal were possibly primed therefore reducing the importance of the inconsistencies in the self condition. In Study 2 the battery of relationship questionnaires was completed after the decision task and, although still not statistically significant, women's level of post-decision rationalization nearly doubled. The small cell sizes in Study 2 may account for this finding. Indeed, when women's post decision rationalization in the self condition for Study 1 and Study 2 are combined, the level of post-decision rationalization becomes marginally significant (one-tailed).

The results of the affirmation manipulations in Study 2 provided mixed support for the predictions of the current research. Both men and women did not justify their decisions when given an opportunity to affirm an independent aspect of their self-construal. This result provides additional support to the argument that the post-decision rationalization observed in Study 2 was due to dissonance-reduction motives as opposed to alternative explanations (e.g., mere ownership or an endowment effect). As discussed in the Study 2 discussion, however, because participants could choose to affirm a value relevant to a relational self-construal, and because more women chose to affirm such values than men, it is possible that this manipulation offered affirmation for different types of self-construal. Further, because the relational self-affirmation manipulation did not alleviate post-decision rationalization for either men or women, this manipulation was not able to provide the intended additional support for the argument that women hold more relational self-construals pertaining to romantic partners compared to men. As discussed however, the sex differences in choice of value to affirm and the possible

exacerbating effect of the relational self-affirmation for women but not men, may be interpreted as providing support for these arguments.

There is a body of romantic relationship research (e.g., Aron & Aron, 1986; Aron et al., 1992; Aron et al., 1995; Gagné & Lydon, 2003) that suggests that although men and women typically differ in how their self is construed, romantic relationships present a special case in which partners are equally included in the self-concept of men and women. For example, Aron and colleagues (Aron et al., 1992) suggest that as partners become subjectively closer to one another the boundary between self and partner overlaps thus removing this distinction. Colloquially speaking, two become one. Based on this research, one would not expect the sex differences observed in the current research for the experience of dissonance when decisions are made for one's partner because this should be equivalent to making a decision for oneself. An important distinction between that research and the current research, however, is that inclusion of the partner in the self is not the same as a relational self-construal. Indeed, although not speaking about self-construal per se, Niedenthal and Beike (1997) suggest that "the inclusiveness of a self-concept should not be confused with the nature . . . of its mental representation." (p. 114) That is, just because characteristics of one's partner become associated with oneself doesn't mean the self-construal has shifted to be primarily defined by the quality and nurturance of the relationship. This is a tricky distinction to make in research as paradigms need to be used that appeal uniquely to the relational self-construal rather than an independent self-construal in which the partner has become associated with the self. The present research provides such a paradigm and was able to demonstrate that, even when measures of relationship quality and closeness are taken into account, men and



women differ in their self-construal and this difference affects the experience of cognitive dissonance.

**Potential ramifications.** The findings of the current research have important consequences for understanding romantic relationships. The lives of romantic partners become entwined and therefore many decisions and actions made by either partner hold consequences for the other. The present research suggests that men and women may experience different motivations when decisions and actions impact their romantic partner and therefore may respond differently to the inherent interdependence of relationships. For example, research has found that women are more likely to address relationship problems (e.g., Gottman, 1994; Rusbult, 1987; Rusbult, Zembrodt, & Iwaniszek, 1986) and are more motivated to correct interpersonal mistakes (Baker & McNulty, 2011). Perhaps dissonance-related motivations contribute to such sex differences in relationship maintenance processes.

The dissonance-reduction response in the current research demonstrated that women changed their views of their partner's food preferences whereas men did not. Changes in knowledge about one's partner to reduce dissonance could affect relationships in a number of ways. For example, women's motivations to avoid "relational" dissonance may lead them to have attitudes or "knowledge" about the partner that isn't based in reality. If such cognitions are positively endowed, they may help to maintain idealized perceptions of the partner or relationship overall. Such idealized impressions have been shown to help buffer against deterioration of relationship satisfaction (e.g., Murray, Holmes, & Griffin, 1996). On the other hand, one can imagine that such changes may precipitate conflict if women persuade themselves of something

about their partner that isn't true and are eventually confronted with the truth. For example, if a wife has convinced herself that her husband is simply shy around her family only to find out that he doesn't talk to her family because he despises them, this could undoubtedly lead to conflict.

It is possible that sex differences in dissonance motivation underlie other sex differences that impact romantic relationships. For example, although gender socialization is likely to be the antecedent cause, it is possible that dissonance avoidance is a contributing mechanism for women's tendency to attend to, and retain more, relationally relevant information (e.g., Josephs et al., 1992; Ross & Holmberg, 1992). If dissonance is aroused when non-optimal decisions are made on behalf of one's partner, having superior knowledge about one's partner and the relationship can act as a buffer and help prevent dissonance. Such dissonance avoidance may also contribute to relationship processes that promote intimacy such as the alignment of attitudes that is commonly observed between partners (e.g., Davis & Rusbult, 2001). If partners are aligned in their important attitudes and values, inconsistencies are less likely to arise.

The present research focused on how self-construal affected the experience of cognitive dissonance but a more distal goal was to investigate sex differences in self-construal in general. The current research suggests that sex differences in self-construal do exist in romantic relationships. In a recent review, Leary (2002) reported that many questions concerning processes and differences of the self in a romantic framework remain unanswered. For example, how others are incorporated into the self-construal may affect how people communicate and behave towards one another. Leary suggested that further research into self processes such as egocentrism, the relational side of self-esteem,

and egotism within a relationship context may shed light on the antecedents of relational difficulties and perhaps lead to therapeutic solutions (also see Murray, Holmes, Bellavia, Griffin, & Dolderman, 2002).

Little research to date has explicitly investigated how differences in self-construal influence attitudes, behaviours, and communication within a romantic relationship context, with a few exceptions (see Sinclair & Fehr, 2005; Yum, 2004). For example, research conducted by Sinclair and Fehr (2005) did investigate differences in conflict styles related to self-construals within a relationship context. This research revealed that individuals with predominantly independent self-construals reported using more active and direct approaches to dealing with dissatisfaction in their relationships (e.g., expressing dissatisfaction to one's partner). In contrast, individuals with predominantly interdependent self-construals reported using more passive and indirect approaches (e.g., demonstrating loyalty and optimistically waiting for conditions to improve). Sinclair and Fehr did not investigate sex differences as their samples were predominantly female, however this research does demonstrate one way in which self-construals may impact romantic relationships. As well, Dion and Dion (2002) have conducted correlational research suggesting that extreme forms of individual or independent self-construals may be linked to negative relationship outcomes (e.g., levels of caring in relationships, divorce, and attitudes about relationships).

As reviewed above, research has demonstrated that self-construals influence many aspects of human experiences, and therefore it is reasonable to assume that self-construal differences between partners in romantic relationships may lead to relational difficulties. If partners in relationships have divergent self-construals, the behaviours and strategies

used to cope with relationship issues may conflict with one another. For example, if one partner prefers to confront issues directly and the other partner prefers to let issues pass, relationship difficulties are likely to be exacerbated. The results of the present research provide an initial attempt at understanding how differences in self-construals may lead to sex differences in motivational processes, such as cognitive dissonance, that can ultimately impact a relationship.

### **Limitations and Future Directions**

The present research utilized the free-choice paradigm to determine if sex differences in the experience of dissonance resulted when decisions were made for one's partner. As already discussed, within romantic relationships decisions are often made that impact both partners and therefore the free-choice paradigm was a particularly relevant method to use. The paradigm used in the present study, however, produced some "noise" in the data because issues such as food restrictions (e.g., peanut allergies) and whether or not the partner could use the gift coupon potentially interrupted the dissonance process. As well, this paradigm only addresses whether or not dissonance results in change in perceived partner preferences and therefore future research using different dissonance paradigms is needed to assess the extent to which dissonance can affect more important attitudes and behaviours within romantic relationships.

In addition, the FCP investigates post-decision dissonance, which has been argued to involve post-decision regret (e.g., Brehm & Cohen, 1962; Festinger & Walster, 1964; Walster, 1964). That is, immediately after making a difficult decision between two closely rated items, the negative qualities of the chosen item and the positive qualities of the discarded items are salient (i.e., the dissonant cognitions are salient) producing regret.

Such regret would be characterized by a derogation of the chosen item and an enhancement of the discarded item (the opposite of post-decision rationalization). This focus on the dissonant cognitions and the discomfort it produces is then thought to quickly give way to dissonance-reduction behaviours, in this case, post-decision rationalization. It is possible that when the men in the current study made a decision for their partner they were still in the regret phase when the items were re-evaluated. In both Study 1 and Study 2, men's spread of alternatives did show a pattern opposite to post-decision rationalization although this pattern was not statistically distinguishable from zero.

Although possible, this alternative explanation seems unlikely. Festinger and Walster (1964) argue that the experience of regret for such trivial decisions as that made in the current research would be fleeting (the regret would be replaced with rationalization within mere minutes). In the present research, participants were left alone for five minutes after the decision was made and before the items were re-evaluated to allow such a transition to occur. It has been found, however, that if a decision is very important (e.g., choice of career) and dissonance reduction strategies are difficult, then regret may last a bit longer (e.g., Walster, 1964, observed regret in army personnel four minutes after choosing their 2 year occupation). Although unlikely, especially in light of typical sex differences in self-construals, it may be possible that the men in the current research considered the decision for their partner to be far more important than the women. The present research did not measure the subjective importance of the decision made and therefore cannot completely refute this alternative interpretation. Further research using different dissonance paradigms is needed to explore this possibility.

As well, the present research investigated dissonance produced attitude change within the vacuum of the laboratory. Although an individual can maintain attitude and behavior change themselves, partners are necessarily faced with the reality of their partner and therefore dissonance-induced changes pertaining to one's partner may not last. Longitudinal research is needed to determine the staying power of dissonance-produced changes and the ultimate impact dissonance has on relationship maintenance and quality.

Finally, although participants had been involved with their romantic relationship for at least two years on average, the present research did not investigate sex differences in dissonance for individuals in more long-term established relationships (e.g., married couples). As well, the present research was based on a university sample of individuals rather than a community sample of couples. Future research needs to utilize community samples as well as study dissonance for one's partner within couples, in order to further understand how sex differences affect the experience of cognitive dissonance within relationships.

**Conclusion.** The present study provides a unique investigation of how dissonance operates within romantic relationships. Interestingly, it was found that women experience dissonance when making decisions for their partners whereas men do not. This sex difference in the experience of dissonance, argued to be caused by differences in self-construal, may result in wide-reaching consequences for how romantic relationships function and may provide insight into the mechanisms of other differences between the sexes. Although men and women may not be from different planets, the way they construe themselves, and the resulting motivations, may be quite different.

### References

- Aron, A., & Aron, E. N. (1986). *Love and the expansion of self: Understanding attraction and satisfaction*. New York: Hemisphere Publishing Corp/Harper & Row Publishers.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63(4), 596-612.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, 60(2), 241-253.
- Aron, A., Paris, M., & Aron, E. N. (1995). Falling in love: Prospective studies of self-concept change. *Journal of Personality and Social Psychology*, 69(6), 1102-1112.
- Aronson, E. (1969). The theory of cognitive dissonance: A current perspective. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 1-34). New York: Academic Press.
- Aronson, E. (1999). Dissonance, hypocrisy, and the self-concept. In E. Harmon-Jones, & J. Mills (Eds.), *Cognitive dissonance: Progress on a pivotal theory in social psychology* (pp. 103-126). Washington, DC: American Psychological Association.
- Aronson, E., & Carlsmith, J. M. (1962). Performance expectancy as a determinant of actual performance. *The Journal of Abnormal and Social Psychology*, 65(3), 178-182.
- Aronson, E., Fried, C., & Stone, J. (1991). Overcoming denial and increasing the intention to use condoms through the induction of hypocrisy. *American Journal of Public Health*, 81(12), 1636-1638.

- Aronson, E., & Mills, J. (1959). The effect of severity of initiation on liking for a group. *The Journal of Abnormal and Social Psychology, 59*(2), 177-181.
- Aronson, J., Cohen, G., & Nail, P. R. (1999). Self-affirmation theory: An update and appraisal. In E. Harmon-Jones, & J. Mills (Eds.), *Cognitive dissonance: Progress on a pivotal theory in social psychology* (pp. 127-147). Washington, DC: American Psychological Association.
- Baker, L. R., & McNulty, J. K. (2011). Self-compassion and relationship maintenance: The moderating roles of conscientiousness and gender. *Journal of Personality and Social Psychology, 100*(5), 853-873.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.
- Beggan, J. K. (1992). On the social nature of nonsocial perception: The mere ownership effect. *Journal of Personality and Social Psychology, 62*(2), 229-237.
- Beyer, S. (1990). Gender differences in the accuracy of self-evaluations of performance. *Journal of Personality and Social Psychology, 59*(5), 960-970.
- Brehm, S. & Miller, R. & Perlman, D. & Campbell, S. (2002). *Intimate relationships* (3rd ed.). New York: McGraw.
- Brehm, J. W. (1956). Postdecision changes in the desirability of alternatives. *The Journal of Abnormal and Social Psychology, 52*(3), 384-389.
- Brehm, J. W., & Cohen, A. R. (1962). *Explorations in cognitive dissonance*. New York: Wiley.



- Chang, L. (1999). Gender role egalitarian attitudes in Beijing, Hong Kong, Florida, and Michigan. *Journal of Cross-Cultural Psychology, 30*(6), 722-741.
- Chen, M. K., & Risen, J. L. (2010). How choice affects and reflects preferences: Revisiting the free-choice paradigm. *Journal of Personality and Social Psychology, 99*(4), 573-594.
- Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 229-266). New York: Academic Press.
- Cooper, J., Zanna, M. P., & Taves, P. A. (1978). Arousal as a necessary condition for attitude change following induced compliance. *Journal of Personality and Social Psychology, 36*(10), 1101-1106.
- Cota, A. A., & Xinaris, S. (1993). Factor structure of the sex-role ideology scale: Introducing a short form. *Sex Roles, 29*(5-6), 345-358.
- Cross, S. E., Bacon, P. L., & Morris, M. L. (2000). The relational-interdependent self-construal and relationships. *Journal of Personality and Social Psychology, 78*(4), 791-808.
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin, 122*(1), 5-37.
- Cross, S. E., Morris, M. L., & Gore, J. S. (2002). Thinking about oneself and others: The relational-interdependent self-construal and social cognition. *Journal of Personality and Social Psychology, 82*(3), 399-418.
- Davis, J. L., & Rusbult, C. E. (2001). Attitude alignment in close relationships. *Journal of Personality and Social Psychology, 81*(1), 65-84.

- Davis, K. E., & Jones, E. E. (1960). Changes in interpersonal perception as a means of reducing cognitive dissonance. *The Journal of Abnormal and Social Psychology*, *61*(3), 402-410.
- Dion, K. L., & Dion, K. K. (2005). Culture and relationships: The downside of self-contained individualism. In R. M. Sorrentino, D. Cohen, J. M. Olson & M. P. Zanna (Eds.), *Culture and Social Behavior: The Ontario Symposium* (pp. 77-94). Mahwah, N.J.: Lawrence Erlbaum.
- Eagly, A. H. (2009). The his and hers of prosocial behavior: An examination of the social psychology of gender. *American Psychologist*, *64*(8), 644-658.
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology*, *67*(3), 382-394.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *The Journal of Abnormal and Social Psychology*, *58*(2), 203-210.
- Festinger, L., Riecken, H. W., & Schachter, S. (1956). *Unfulfilled prophecies and disappointed messiahs*. Minneapolis, MN: University of Minnesota Press.
- Festinger, L., & Walster, E. (1964). Post-decision regret and decision reversal. In L. Festinger (Ed.), *Conflict, decision, and dissonance* (pp. 96-112). Stanford, CA: Stanford University Press.

- Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*(3), 340-354.
- Foels, R., & Tomcho, T. J. (2009). Gender differences in interdependent self-construals: It's not the type of group, it's the way you see it. *Self and Identity, 8*(4), 396-417.
- Frey, D. (1986). Recent research on selective exposure to information. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 41-80). New York: Academic Press.
- Gabriel, S., & Gardner, W. L. (1999). Are there "his" and "hers" types of interdependence? the implications of gender differences in collective versus relational interdependence for affect, behavior, and cognition. *Journal of Personality and Social Psychology, 77*(3), 642-655.
- Gagné, F. M., & Lydon, J. E. (2003). Identification and the commitment shift: Accounting for gender differences in relationship illusions. *Personality and Social Psychology Bulletin, 29*(7), 907-919.
- Gawronski, B., Bodenhausen, G. V., & Becker, A. P. (2007). I like it, because I like myself: Associative self-anchoring and post-decisional change of implicit evaluations. *Journal of Experimental Social Psychology, 43*(2), 221-232.
- Gawronski, B., Peters, K. R., Brochu, P. M., & Strack, F. (2008). Understanding the relations between different forms of racial prejudice: A cognitive consistency perspective. *Personality and Social Psychology Bulletin, 34*(5), 648-665.

- Gibbons, F. X., Eggleston, T. J., & Benthin, A. C. (1997). Cognitive reactions to smoking relapse: The reciprocal relation between dissonance and self-esteem. *Journal of Personality and Social Psychology*, 72(1), 184-195.
- Goethals, G. R., Messick, D. M., & Allison, S. T. (1991). The uniqueness bias: Studies of constructive social comparison. In J. Suls, & T. A. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 149-176). Hillsdale, NJ: Lawrence Erlbaum.
- Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Lawrence Erlbaum.
- Harmon-Jones, E., Amodio, D. M., & Harmon-Jones, C. (2010). Action-based model of dissonance: On cognitive conflict and attitude change. In J. P. Forgas, J. Cooper & W. D. Crano (Eds.), *The psychology of attitudes and attitude change* (pp. 163-181). New York, NY: Psychology Press.
- Harmon-Jones, E., & Mills, J. (1999). An introduction to cognitive dissonance theory and an overview of current perspectives on the theory. In E. Harmon-Jones, & J. Mills (Eds.), *Cognitive dissonance: Progress on a pivotal theory in social psychology* (pp. 3-21). Washington, DC: American Psychological Association.
- Heatherington, L., Daubman, K. A., Bates, C., & Ahn, A. (1993). Two investigations of "female modesty" in achievement situations. *Sex Roles*, 29(11-12), 739-754.
- Heine, S. J., Kitayama, S., & Lehman, D. R. (2001). Cultural differences in self-evaluation: Japanese readily accept negative self-relevant information. *Journal of Cross-Cultural Psychology*, 32(4), 434-443.
- Heine, S. J., & Lehman, D. R. (1997). Culture, dissonance, and self-affirmation. *Personality and Social Psychology Bulletin*, 23(4), 389-400.

- Higgins, E. T., Rhodewalt, F., & Zanna, M. P. (1979). Dissonance motivation: Its nature, persistence, and reinstatement. *Journal of Experimental Social Psychology, 15*(1), 16-34.
- Higgins, E. T., & Tykocinski, O. (1992). Self-discrepancies and biographical memory: Personality and cognition at the level of psychological situation. *Personality and Social Psychology Bulletin, 18*(5), 527-535.
- Hoshino-Browne, E., Zanna, A. S., Spencer, S. J., Zanna, M. P., Kitayama, S., & Lackenbauer, S. (2005). On the cultural guises of cognitive dissonance: The case of easterners and westerners. *Journal of Personality and Social Psychology, 89*(3), 294-310.
- Josephs, R. A., Markus, H. R., & Tafarodi, R. W. (1992). Gender and self-esteem. *Journal of Personality and Social Psychology, 63*(3), 391-402.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1990). Experimental tests of the endowment effect and the coase theorem. *The Journal of Political Economy, 98*(6), 1325-1348.
- Kitayama, S., Snibbe, A. C., Markus, H. R., & Suzuki, T. (2004). Is there any "free" choice? Self and dissonance in two cultures. *Psychological Science, 15*(8), 527-533.
- Leary, M. R. (2002). When selves collide: The nature of the self and the dynamics of interpersonal relationships. In A. Tesser, D. A. Stapel & J. V. Wood (Eds.), *Self and motivation: Emerging psychological perspectives* (pp. 119-145). Washington, DC: American Psychological Association.

- Losch, M. E., & Cacioppo, J. T. (1990). Cognitive dissonance may enhance sympathetic tonus, but attitudes are changed to reduce negative affect rather than arousal. *Journal of Experimental Social Psychology, 26*(4), 289-304.
- Maccoby, E. E. (1990). Gender and relationships: A developmental account. *American Psychologist, 45*(4), 513-520.
- Maccoby, E. E., & Jacklin, C. N. (1974). *The psychology of sex differences*. Stanford: Stanford University Press.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2), 224-253.
- Mehrabian, A. (1976). Questionnaire measures of affiliative tendency and sensitivity to rejection. *Psychological Reports, 38*(1), 199-109.
- Mills, J. (1999). Improving the 1957 version of dissonance theory. In E. Harmon-Jones, & J. Mills (Eds.), *Cognitive dissonance: Progress on a pivotal theory in social psychology* (pp. 25-42). Washington, DC: American Psychological Association.
- Murray, S. L., Holmes, J. G., Bellavia, G., Griffin, D. W., & Dolderman, D. (2002). Kindred spirits? The benefits of egocentrism in close relationships. *Journal of Personality and Social Psychology, 82*(4), 563-581.
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology, 70*(1), 79-98.
- Myers, D. G. (1999). Close relationships and quality of life. In Kahneman, D. & Diener, E. & Schwarz, N. (Ed.), *Well-being: The foundations of hedonic psychology* (pp. 374-391). New York: Russell Sage Foundation.

- Neisser, U. (1988). Five kinds of self-knowledge. *Philosophical Psychology*, *1*(1), 35-59.
- Niedenthal, P. M., & Beike, D. R. (1997). Interrelated and isolated self-concepts. *Personality and Social Psychology Review*, *1*(2), 106-128.
- Norton, M. I., Monin, B., Cooper, J., & Hogg, M. A. (2003). Vicarious dissonance: Attitude change from the inconsistency of others. *Journal of Personality and Social Psychology*, *85*(1), 47-62.
- Oyserman, D., & Markus, H. R. (1993). The sociocultural self. In J. M. Suls (Ed.), *The self in social perspective* (pp. 187-220). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Paquet, S. L., & Kline, T. J. B. (2009). Uncovering the psychometric properties of scales measuring individualist and collectivist orientations. *International Journal of Testing*, *9*(3), 260-270.
- Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist*, *54*(9), 741-754.
- Rhodewalt, F., & Comer, R. (1979). Induced-compliance attitude change: Once more with feeling. *Journal of Experimental Social Psychology*, *15*(1), 35-47.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, N. J.: Princeton University Press.
- Ross, M., & Holmberg, D. (1992). Are wives' memories for events in relationships more vivid than their husbands' memories? *Journal of Social and Personal Relationships*, *9*(4), 585-604.
- Rusbult, C. E. (1987). Responses to dissatisfaction in close relationships: The exit-voice-loyalty-neglect model. In D. Perlman, & S. Duck (Eds.), *Intimate relationships*:

- development, dynamics, and deterioration* (pp. 209-237). Thousand Oaks, CA: Sage Publications, Inc.
- Rusbult, C. E., & Arriaga, X. B. (1997). *Interdependence theory*. Hoboken, NJ: John Wiley & Sons Inc.
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, 5(4), 357-391.
- Rusbult, C. E., Zembrodt, I. M., & Iwaniszek, J. (1986). The impact of gender and sex-role orientation on responses to dissatisfaction in close relationships. *Sex Roles*, 15(1-2), 1-20.
- Sakai, H. (1981). Induced compliance and opinion change. *Japanese Psychological Research*, 23, 1-8.
- Sakai, H., & Andow, K. (1980). Attribution of personal responsibility and dissonance reduction. *Japanese Psychological Research*, 22(1), 32-41.
- Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., & Simons, A. (1991). Ease of retrieval as information: Another look at the availability heuristic. *Journal of Personality and Social Psychology*, 61(2), 195-202.
- Showers, C. (1992). Compartmentalization of positive and negative self-knowledge: Keeping bad apples out of the bunch. *Journal of Personality and Social Psychology*, 62(6), 1036-1049.
- Shultz, T. R., Léveillé, E., & Lepper, M. R. (1999). Free choice and cognitive dissonance revisited: Choosing "lesser evils" versus "greater goods". *Personality and Social Psychology Bulletin*, 25(1), 40-48.



- Sinclair, L., & Fehr, B. (2005). Voice versus loyalty: Self-construals and responses to dissatisfaction in romantic relationships. *Journal of Experimental Social Psychology, 41*(3), 298-304.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin. Special Issue: The Self and the Collective, 20*(5), 580-591.
- Spence, J. T., Helmreich, R., & Stapp, J. (1975). Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity. *Journal of Personality and Social Psychology, 32*(1), 29-39.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology: Social psychological studies of the self: Perspectives and programs* (pp. 261-302). San Diego, CA: Academic Press.
- Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of Personality and Social Psychology, 45*(1), 5-19.
- Steele, C. M., Spencer, S. J., & Lynch, M. (1993). Self-image resilience and dissonance: The role of affirmational resources. *Journal of Personality and Social Psychology, 64*(6), 885-896.
- Stone, J., Aronson, E., Crain, A. L., Winslow, M. P., & Fried, C. B. (2003). Inducing hypocrisy as a means of encouraging young adults to use condoms. In P. Salovey, & A. J. Rothman (Eds.), *Social psychology of health* (pp. 272-285). New York: Psychology Press.

- Stone, J., & Cooper, J. (2001). A self-standards model of cognitive dissonance. *Journal of Experimental Social Psychology, 37*(3), 228-243.
- Suh, E. M. (2002). Culture, identity consistency, and subjective well-being. *Journal of Personality and Social Psychology, 83*(6), 1378-1391.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge Cambridgeshire, New York: Cambridge University Press.
- Tajfel, H. & Turner, J. (1979). An integrative theory of intergroup conflict. In Austin, W.G. & Worchel, S. (Ed.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, California: Brooks/Cole.
- Uskul, A. K., Hynie, M., & Lalonde, R. N. (2004). Interdependence as a mediator between culture and interpersonal closeness for euro-Canadians and Turks. *Journal of Cross-Cultural Psychology, 35*(2), 174-191.
- Walster, E. (1964). The temporal sequence of post-decision processes. In L. Festinger (Ed.), *Conflict, decision, and dissonance* (pp. 112-128). Stanford, CA: Stanford University Press.
- Wicklund, R. A., & Brehm, J. W. (1976). *Perspectives on cognitive dissonance*. Oxford, England: Lawrence Erlbaum.
- Yamada, A., & Singelis, T. M. (1999). Biculturalism and self-construal. *International Journal of Intercultural Relations, 23*(5), 697-709.
- Yum, Y. (2004). Culture and self-construal as predictors of responses to accommodative dilemmas in dating relationships. *Journal of Social and Personal Relationships, 21*(6), 817-835.

Zanna, M. P., & Cooper, J. (1974). Dissonance and the pill: An attribution approach to studying the arousal properties of dissonance. *Journal of Personality and Social Psychology*, 29(5), 703-709.

Zanna, M. P., Higgins, E. T., & Taves, P. A. (1976). Is dissonance phenomenologically aversive? *Journal of Experimental Social Psychology*, 12(6), 530-538.

## Appendix A

## Experimenter Script for the Self Condition – Study 1

- Thank you for participating in our research! The current study is being conducted by a graduate student as part of her PhD dissertation and therefore your participation is greatly appreciated.
- Due to potential interference with our research results we ask that you turn off any electrical devices (like cell phones, MP3 players, etc.) and refrain from using them at any time during this study.
- This study is designed to investigate decision making styles of those involved in romantic relationships.
- In this study, you will be asked to complete a number of questionnaires on the computer pertaining to yourself, your partner, and your romantic relationship. You will also be given some decision making tasks.
- Normally, in our department, this kind of experiment involves hypothetical situations, for which participants are required to make decisions. In the current project, however, we are conducting research that involves realistic decision making because research has demonstrated that people respond differently to hypothetical decisions than to real decisions.
- For the decision-making component of the study we have partnered up with a soon-to-be-opening Vietnamese restaurant. The owners of the restaurant have allowed us the use of their menu and supplied us with gift coupons for a free entrée to use in our research.
- The current study is interested in how romantically involved people make decisions and therefore you will be asked to evaluate a selection of entrées on the lunch menu for the restaurant. Later you will be given the opportunity to choose a coupon for a free entrée for the restaurant.
- The session will take about one hour and you will receive one participation credit towards your Intro-Psych course.
- Your participation is strictly voluntary. You are always free to withdraw your participation in the study without loss of credit. As well, if you would prefer not to answer any question just let me know and I will skip you past the question on the computer.
- Here is the Letter of Information and consent form, which I just went over with you. Please read over the information letter and if you don't have any questions or concerns, sign and date the consent form.

## Appendix A Continued

- Do you have any questions before we continue?  
**[collect consent form]**
  - Throughout the study I will provide an explanation of each task but we ask that you still read each set of instructions provided to you carefully as sometimes subtle differences in task requirement exist.
  - **[place list of restaurant entrees in front of participant]** To begin, for the first part of the decision-making task we want you to pick the 10 dishes you think you would most prefer to order from this list in front of you. Later in the study we will ask you to evaluate the entrees based on the actual menu that provides more detail about each dish. Please read over the list of dishes and let me know if you have any questions.
  - We would like you to circle the 10 dishes you think **you [underline this phrase on the page in front of them]** would prefer and then rank order these dishes from 1 to 10 with 1 being the dish you think you would most prefer out of the ones you selected and 10 being the dish you would least prefer out of the 10
  - Next, please type the English names for the dishes on the computer in the order you have ranked them.
  - You will then be asked to rate each of the 10 selected dishes on a 1 to 7 scale in terms of how much you would like to order it. For each dish you rate, please copy your rating of 1 to 7 onto the sheet.
  - Please make sure the ranking and rating you enter in the computer matches what you have written on the sheet.
  - When you have finished rating each of the 10 entrées, the computer will prompt you to notify me. Come let me know you are done the first task [tell them/show them where you will be] and I will get you started on the second task.
- [Wait for participant to notify you that they have completed the first task. In the meantime, fill out the log sheet for this participant]**
- How did that task go?
  - This next part of the study involves answering a number of questionnaires on the computer about yourself, your partner, and your romantic relationship. This is the longest part of the study and will most likely take about 30 to 40 minutes.

## Appendix A Continued

- Once again, if there are any questions you would prefer not to answer for any reason, just let me know and I will skip you past that question. Let me know when you are finished the questionnaires and we will move on to the final part of the study.

**[Collect the entrée ranking/rating sheet and leave the participant to answer the questionnaires]**

**[Get the coupons (the 5<sup>th</sup> and 6<sup>th</sup> ranked dishes) ready for the next part of the study]**

- As I mentioned at the start of the study, the restaurant has provided gift certificates good for one free entrée for you to redeem at the restaurant
- The restaurant only provided us with certain entrée gift certificates so out of the 10 dishes you selected here are two gift coupons.
- Please take a moment to choose the gift certificate for the entrée you would most like to receive. **[once the participant has indicated his/her selection, ask:]**
- Are you sure this is the entrée you would like? O.K. then, please write your name on the gift certificate. **[leave the chosen coupon in front of the participant, taking away the non-chosen coupon. At the same time, RA looks at the watch in an exaggerated manner, and says]**
- Could you please excuse me for a few moments? I am expecting another participant to arrive soon and need to get the computer and materials set up. I'll be back in a few minutes and then we'll finish up. You will be finished on time.

**[RA leaves the participant alone in the room for exactly 5 minutes.]**

**[When you return, take notice of what the participant is doing and make a note if warranted]**

- Thanks for your patience. Now for the final task. Past research has shown that the more realistic the relevant decision-making information, the more reliable people's decision. Therefore, I would like you to take a few minutes to look over a more detailed version of the menu which provides more elaborated descriptions of each of the entrées.

**[Give the participant a moment to look over menu]**

- I have highlighted the 10 items that you selected from the original menu based on your preference. On the computer, enter the dish number for each of the 10 selected dishes in the order it appears on the menu.
- Next, the computer will prompt you to evaluate each dish on a 1-9 scale to indicate how much you think you would like the dish.

## Appendix A Continued

- After this, you will be asked a few questions regarding your participation in the study and then the computer will instruct you to let me know you have finished the study.

**[Leave and get debriefing form ready]**

- Before we wrap up, did you have any questions or concerns about the study?
- This is the end of the experiment, and I would like to thank you for your participation and share some information concerning it.
- The purpose of this study was to investigate cognitive dissonance within the topic of romantic relationships. Cognitive dissonance is defined as a feeling of discomfort caused by performing an action that is inconsistent with one's attitudes or by making an irrational decision such as favouring one alternative despite having reasons to favour another. People can reduce this threat of having made a non-optimal decision by rationalizing their decision. Namely, by increasing the rating of the chosen decision and lowering the rating of the unchosen alternative. In the current study...
- In our current study, we are interested in whether or not people experience cognitive dissonance in response to a decision made for a romantic partner and therefore rationalize their coupon decision in a similar manner to a decision made for oneself.
- We used some minor deceptions in this study. The study was presented as being in collaboration with a soon-to-be-opening restaurant. In fact, the restaurant does not exist. Consequently, the gift coupon that you have chosen is not a valid coupon.

**[Ask for coupon back]**

- We needed to use these minor deceptions to make the decision making tasks more realistic and engaging for you. Also, the deceptions were necessary because knowing the true purposes of the study beforehand might have influenced your responses on the ranking and rating tasks.
- **One last thing, this is very important, we ask that you do not discuss this experiment with other students who might be potential participants, as it may influence the results of the study.**

**[give the participant the debriefing sheet and ask if they have any questions or concerns]**

- Here is the feedback sheet, which I briefly explained to you. The sheet contains more detailed information about the rationale for our research.

## Appendix B

## Experimenter Script for the Partner Condition – Study 1

- Thank you for participating in our research! The current study is being conducted by a graduate student as part of her PhD dissertation and therefore your participation is greatly appreciated.
- Due to potential interference with our research results we ask that you turn off any electrical devices (like cell phones, MP3 players, etc.) and refrain from using them at any time during this study.
- This study is designed to investigate decision making styles of those involved in romantic relationships.
- In this study, you will be asked to complete a number of questionnaires on the computer pertaining to yourself, your partner, and your romantic relationship. You will also be given some decision making tasks.
- Normally, in our department, this kind of experiment involves hypothetical situations, for which participants are required to make decisions. In the current project, however, we are conducting research that involves realistic decision making because research has demonstrated that people respond differently to hypothetical decisions than to real decisions.
- For the decision-making component of the study we have partnered up with a soon-to-be-opening Vietnamese restaurant. The owners of the restaurant have allowed us the use of their menu and supplied us with gift coupons for a free entrée to use in our research.
- The current study is interested in how romantically involved people make decisions based on their partner's preferences and therefore you will be asked to evaluate a selection of entrées on the lunch menu for the restaurant, based on your romantic partner's preference. Later you will be given the opportunity to choose a coupon for a free entrée for your romantic partner
- The session will take about one hour and you will receive one participation credit towards your Intro-Psych course.
- Your participation is strictly voluntary. You are always free to withdraw your participation in the study without loss of credit. As well, if you would prefer not to answer any question just let me know and I will skip you past the question on the computer.
- Here is the Letter of Information and consent form, which I just went over with you. Please read over the information letter and if you don't have any questions or concerns, sign and date the consent form.



## Appendix B Continued

- Do you have any questions before we continue?  
**[collect consent form]**
  - Throughout the study I will provide an explanation of each task but we ask that you still read each set of instructions provided to you carefully as sometimes subtle differences in task requirement exist.
  - **[place list of restaurant entrees in front of participant]** To begin, for the first part of the decision-making task we want you to pick the 10 dishes you think your partner would most prefer to order from this list in front of you. Later in the study we will ask you to evaluate the entrees based on the actual menu that provides more detail about each dish. Please read over the list of dishes and let me know if you have any questions.
  - We would like you to circle the 10 dishes you think **your partner** **[underline this phrase on the page in front of them]** would prefer and then rank order these dishes from 1 to 10 with 1 being the dish you think your partner would most prefer out of the ones you selected and 10 being the dish your partner would least prefer out of the 10
  - Next, please type the English names for the dishes on the computer in the order you have ranked them.
  - You will then be asked to rate each of the 10 selected dishes on a 1 to 7 scale in terms of how much your partner would like to order it. For each dish you rate, please copy your rating of 1 to 7 onto the sheet.
  - Please make sure the ranking and rating you enter in the computer matches what you have written on the sheet.
  - When you have finished rating each of the 10 entrées, the computer will prompt you to notify me. Come let me know you are done the first task [tell them/show them where you will be] and I will get you started on the second task.
- [Wait for participant to notify you that they have completed the first task. In the meantime, fill out the log sheet for this participant]**
- How did that task go?
  - This next part of the study involves answering a number of questionnaires on the computer about yourself, your partner, and your romantic relationship. This is the longest part of the study and will most likely take about 30 to 40 minutes.

## Appendix B Continued

- Once again, if there are any questions you would prefer not to answer for any reason, just let me know and I will skip you past that question. Let me know when you are finished the questionnaires and we will move on to the final part of the study.

**[Collect the entrée ranking/rating sheet and leave the participant to answer the questionnaires]**

**[Get the coupons (the 5<sup>th</sup> and 6<sup>th</sup> ranked dishes) ready for the next part of the study]**

- As I mentioned at the start of the study, the restaurant has provided gift certificates good for one free entrée for your partner to redeem at the restaurant
- The restaurant only provided us with certain entrée gift certificates so out of the 10 dishes you selected for your partner here are two gift coupons.
- Please take a moment to choose the gift certificate for the entrée your partner would most like to receive. **[once the participant has indicated his/her selection, ask:]**
- Are you sure this is the entrée your partner would like? O.K. then, please write your partner's name in the first space provided on the gift certificate, and then write YOUR name where it says "Compliments of."

**[leave the chosen coupon in front of the participant, taking away the non-chosen coupon.**

**At the same time, RA looks at the watch in an exaggerated manner, and says]**

- Could you please excuse me for a few moments? I am expecting another participant to arrive soon and need to get the computer and materials set up. I'll be back in a few minutes and then we'll finish up. You will be finished on time.

**[RA leaves the participant alone in the room for exactly 5 minutes. During this time, highlight 10 preferred dishes on detailed menu]**

**[When you return, take notice of what the participant is doing and make a note if warranted]**

- Thanks for your patience. Now for the final task. Past research has shown that the more realistic the relevant decision-making information, the more reliable people's decision. Therefore, I would like you to take a few minutes to look over a more detailed version of the menu which provides more elaborated descriptions of each of the entrées.

**[Give the participant a moment to look over menu]**

- I have highlighted the 10 items that you selected from the original menu based on your partner's preference. On the computer, enter the dish number for each of the 10 selected dishes in the order it appears on the menu.

## Appendix B Continued

- Next, the computer will prompt you to evaluate each dish on a 1-9 scale to indicate how much you think your partner would like the dish.
- After this, you will be asked a few questions regarding your participation in the study and then the computer will instruct you to let me know you have finished the study.

**[Leave and get debriefing form ready]**

- Before we wrap up, did you have any questions or concerns about the study?
- This is the end of the experiment, and I would like to thank you for your participation and share some information concerning it.
- The purpose of this study was to investigate cognitive dissonance within the topic of romantic relationships. Cognitive dissonance is defined as a feeling of discomfort caused by performing an action that is inconsistent with one's attitudes or by making an irrational decision such as favouring one alternative despite having reasons to favour another. People can reduce this threat of having made a non-optimal decision by rationalizing their decision. Namely, by increasing the rating of the chosen decision and lowering the rating of the unchosen alternative. In the current study...
- In our current study, we are interested in whether or not people experience cognitive dissonance in response to a decision made for a romantic partner and therefore rationalize their coupon decision in a similar manner to a decision made for oneself.
- We used some minor deceptions in this study. The study was presented as being in collaboration with a soon-to-be-opening restaurant. In fact, the restaurant does not exist. Consequently, the gift coupon that you have chosen is not a valid coupon.

**[Ask for coupon back]**

- We needed to use these minor deceptions to make the decision making tasks more realistic and engaging for you. Also, the deceptions were necessary because knowing the true purposes of the study beforehand might have influenced your responses on the ranking and rating tasks.
- **One last thing, this is very important, we ask that you do not discuss this experiment with other students who might be potential participants, as it may influence the results of the study.**
- Here is the feedback sheet, which I briefly explained to you. The sheet contains more detailed information about the rationale for our research.

## Appendix C

**Preference of Ten Entrées (Self condition)**

1. Please examine the 22 entrées listed below and choose the 10 dishes that you would most prefer, by circling the entrées. \*\*\* = vegetarian dish
2. Rank order the 10 you have selected (1 = most preferred of chosen 10, 10 = least preferred of chosen 10)
3. Type the entrée name (the English name) into the computer in the ranked order and rate how much you would like each dish

<b>Rank</b>	<b><u>Entrées</u></b>
	1. <b>Nuer Yang</b> (BBQ Beef Ribs with Thai Coleslaw)
	2. <b>Banh Hoi Bo Xao</b> (Curry Beef Noodle Rolls)
	3. <b>Banh Xeo Ga</b> (Chicken and Bean Crepe)
	4. <b>Bo Bun</b> (Spicy Beef Stir-fry with Vermicelli)
	5. <b>Bun Cari Ga</b> (Curry Chicken Vermicelli)
	6. <b>Cary Ga</b> (Curry Chicken and Potatoes)
	7. <b>Com Sao Cai</b> (Tofu Vegetable Stir-fry with Rice)***
	8. <b>Kai Himaparn</b> (Orange Cashew Chicken with Rice)
	9. <b>Kai Yang</b> (Grilled Chicken with Thai Coleslaw)
	10. <b>Mi Can Ram Xa</b> (Lemongrass Sauté with Rice)***
	11. <b>Mi Xao Don</b> (Crispy Egg Noodle Vegetable Stir-fry)***
	12. <b>Mien Xao</b> (Clear Bean Noodle Vegetable Stir-fry)***
	13. <b>Nuer Pad Khing</b> (Ginger Beef with Rice)
	14. <b>Pad Kana</b> (Garlic Chili Stir-fry with Rice)***
	15. <b>Pad Makheur</b> (Thai Spicy Eggplant with Rice)***
	16. <b>Pad Nomai Sod</b> (Spicy Asparagus with Vermicelli)***
	17. <b>Pad Thai Ga</b> (Chicken Rice Noodle Dish)
	18. <b>Panang Curry</b> (Curry Peanut Beef with Rice)
	19. <b>Radnar Talay</b> (Seafood Noodles)
	20. <b>Pad Phed Talay</b> (Spicy Seafood with Rice)
	21. <b>Ca Nuong</b> (Grilled Salmon with Rice)
	22. <b>Goong Ma Kam</b> (Shrimp with Thai Coleslaw)

Appendix D

**TRĂM CÂY TRE NÚT**  
**The Hundred-knot Bamboo**

Gift Certificate  
for  
**One Lunch Entrée for One Person**  
Nuer Yang (BBQ Beef Ribs with Thai Coleslaw)

Customer Name: \_\_\_\_\_

Valid until December 31, 2009; Not valid with any other promotion

TRAM CAY TRE NUT  
GIFT CERT # 0140



**TRĂM CÂY TRE NÚT**  
**The Hundred-knot Bamboo**

Gift Certificate  
for  
**One Lunch Entrée for One Person**  
Nuer Yang (BBQ Beef Ribs with Thai Coleslaw)

Customer Name: \_\_\_\_\_

Compliments of: \_\_\_\_\_

Valid until December 31, 2009; Not valid with any other promotion

TRAM CAY TRE NUT  
GIFT CERT # 0140



Appendix E

**The Story of the  
hundred-knot bamboo**

There was a rich devious landowner who used all kind of tricks to exploit his servants and laborers. He had a beautiful noble daughter. Khoai lived as a servant in this household from the time he was a young boy.

He had to work very hard. He is now in his late teens. The landowner was afraid that Khoai will leave the household and thus he would lose a very hard working helper. So, one day he called Khoai and told him: "If you stayed in the household and work hard day and night, I will give you my daughter in marriage."

Khoai believed the landowner and was very happy. He redoubled his efforts to win the heart of the landowner. Three years have passed. The daughter is now grown. In the region, there is this very wealthy village chief, who eyed the daughter for his son. So, the village chief came and ask for the hand of the daughter. The landowner agreed and set out to prepare for the wedding.

When Khoai realized that he has been taken advantage of, he was mad and went to the landowner to complain. He asked the landowner: "You have promised your daughter to me. Why are you going back on your promise now?"

The landowner did not like to be addressed in such a manner. He was going to beat him, but taking another look at the young man, he dared not. He told him instead:

"My son, you are mistaken! My daughter is now of age and the preparation for the wedding that I am undertaking now is actually for you. However, if you want the wedding to take place, you must accomplish the following task. You need to find a bamboo with one hundred knots. Then you will need to cut it up into chopsticks for the wedding feast. That is my condition for giving you my daughter's hand in marriage."

Khoai again believed him and went up the forest in search of the bamboo with 100 knots. He searched for days on end and went from one end of the jungle to the other without success. In despair he sat down in the jungle and wept in despair.

Suddenly he saw an old cheery man with all white hair but with rosy complexion. The old man approached him and asked:

"Son, why are you so sad?"

Khoai told him his story. The old man told him:

"Go and cut 100 stems of bamboo and bring them back here".

Khoai went out and brought back the bamboo that the old man asked.

The old man then gave the command

"Stick together! Stick together" (Kha(c nɦa^p)

The bamboo sticks that were lying here and there on the ground immediately came together all in a row to make a bamboo with 100 knots. Khoai was filled with joy. He wanted to thank the old man, but he has disappeared.

He realized that he has met Buddha. He set out to bring the bamboo back. But there was no way for him to load this long bamboo on his shoulder. He kept on running into other trees. He sat down again in despair and wept.

Immediately he saw the old man reappear. Buddha asked him:

"Why do you weep?"

He explained his situation. Buddha pointed at the bamboo and said

"Unstick! Unstick!" (Kha(c xua^t).

and the bamboo came apart in 100 stems. And Buddha disappeared. Khoai tied up the 100 bamboo stems and proceeded to take them home.

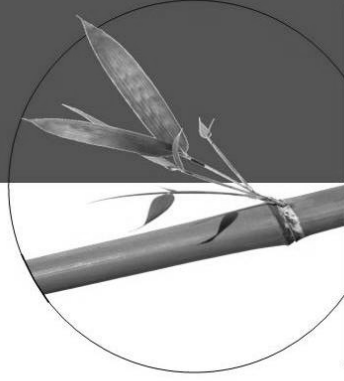
When he arrived home, he found the two families preparing to feast in the courtyard. The village chief family has come for the wedding. Khoai was really mad and ran to the landowner to ask for an explanation. The landowner told him

"I asked you to get me a bamboo with 100 knots, not 100 stems of bamboo!"

Both family stopped their feasts and laughed derisively at Khoai, and joked about his naivety. Khoai told the landowner that he has the bamboo and the courtyard and the landowner should come out and examine it. As the landowner approached the pile of bamboo, Khoai said in a low voice "stick together! stick together!". Immediately the bamboo stems came together and the landowner was also stuck at the end of the bamboo. The landowner tried to pull himself away but failed. The future in-laws came to his rescue. Khoai waited until the village chief has touched the landowner before he said "stick together! stick together!". Immediately the village chief became stuck to the landowner. The same fate happened to the village chief's son. The more they tried to pull away, the harder and more painful they became stuck. Both families were now in panic. Nobody dared to pull the three men away any longer nor joked about Khoai. They lined up and asked him to pardon the 3 men stuck at the end of the bamboo.

Khoai had the landowner promise his daughter to him and the village chief has to agree not to seek vengeance. Then Khoai said "unstick! unstick!" and they all became free.

The village chief and his party quickly left the festivities. And Khoai moved into the bridegroom chair and the celebration continued!



**TBÀM CÂY TRE NÚT**  
**The Hundred-knot Bamboo**

*Dine-in LUNCH MENU*

Locations available in  
Mississauga , London, and  
Waterloo.

**Story Continued on back of menu →**

Appendix E Continued

<p><b>TRÂM CÂY TRE NÚT</b> The Hundred-knot Bamboo</p> <p><b>KHAI VI—APPELIZERS</b></p> <ul style="list-style-type: none"> <li>● A1 - Pho (Rice Noodle Soup) \$3.99 Clear broth with flat rice noodles and your choice of meats. Garnished with onions, cilantro, green onions, bean sprouts, jalapeño peppers, lime and basil.</li> <li>● A2 - Banh Beo Bi Tom (Pork &amp; Shrimp Dumplings) \$4.99 Steamed rice dumplings served with dry shrimp &amp; julienne pork.</li> <li>● A3 - Cha Gio (Egg Rolls - chicken, pork, or vegetarian) \$3.50 Carrot and taro root wrapped in wonton paper, fried to golden perfection. Served with sweet and sour sauce.</li> <li>● A4 - Goi Du Du Tom (Shrimp Papaya Salad) \$3.99 Shredded green papaya served with shrimp in a mildly spicy red chili dressing with mint and peanuts.</li> <li>● A5 - Goi Cuon (Spring Rolls - chicken, pork, or vegetarian) \$4.50 Vermicelli rice noodles, shredded lettuce, mint, cilantro, green onion and bean sprouts wrapped in rice paper. Served with Vietnamese peanut sauce.</li> </ul> <p><b>MON AN - ENTREES</b> <b>GA - POULTRY</b></p> <ul style="list-style-type: none"> <li>● C1 - Bun Cari Ga (Curry Chicken Vermicelli) \$10.99 White meat chicken with vermicelli, red onions, and potatoes in Vietnamese curry sauce with coconut milk, scallions, cilantro and roasted ground peanut.</li> <li>● C2 - Cary Ga (Curry Chicken and Potatoes) \$9.50 Chicken, potatoes, and onions simmered in a light coconut milk and spicy curry served with baguette</li> <li>● C3 - Kai Yang \$9.50 (Grilled Chicken with Thai Coleslaw) Marinated chicken breast in garlic and Thai spices grilled with Thai coleslaw and sweet chili sauce.</li> <li>● C4 - Banh Xeo Ga (Chicken and Bean Crepe) \$11.50 Crispy crepe filled with chicken, mung beans, bean sprouts, mushrooms, onions, and nuoc mam sauce.</li> </ul>	<p><b>BÒ - BEEF</b></p> <ul style="list-style-type: none"> <li>● B1 - Bo Bun \$10.99 (Spicy Beef Stir-fry with Vermicelli) Vietnamese rice noodles topped with a spicy stir-fry of beef, vegetables and roasted peanuts.</li> <li>● B2 - Nuer Yang \$12.99 (BBQ Beef Ribs with Thai Coleslaw) Grilled tender back ribs marinated in lemongrass, garlic, honey, lime juice, red wine, black pepper and Thai spices, served with Thai coleslaw.</li> <li>● B3 - Nuer Pad Khing \$11.99 (Ginger Beef with Rice) Fresh ginger sautéed with tender beef, onions, black oyster mushrooms, broccoli and carrots in Thai sauce served over steamed rice.</li> <li>● B4 - Banh Hoi Bo Xao \$11.99 (Curry Beef Noodle Rolls) Sliced beef sautéed with spicy curry and onions served with rice paper, noodles, salad, and nuoc mam sauce to create your own rolls.</li> <li>● B5 - Panang Curry \$10.99 (Curry Peanut Beef with Rice) Sliced beef in red curry, coconut milk, peanut sauce, tamarind and lime leaves served with sticky rice.</li> </ul> <p><b>DO BIEN - SEAFOOD</b></p> <ul style="list-style-type: none"> <li>● S1 - Radnar Talay (Seafood Noodles) \$11.99 Stir fried shrimp, scallop, squid, crabstick, mussels and Chinese broccoli served over vermicelli.</li> <li>● S2 - Pad Phed Talay \$11.99 (Spicy Seafood with Rice) Shrimp, scallops, mussels, squid, and fish cake in Thai sauce with eggplant, bamboo shoots, long bean, sweet bell pepper and basil served over rice.</li> <li>● S3 - Ca Nuong (Grilled Salmon with Rice) \$10.99 Grilled salmon, topped with ginger nuoc mam sauce served with perfumed rice and vegetables.</li> <li>● S4 - Goong Ma Kam \$12.50 (Shrimp with Thai Coleslaw) Tiger shrimps in tamarind ginger sauce, with green onions, dried chili, and roasted onions. Served with Thai Coleslaw.</li> </ul>	<ul style="list-style-type: none"> <li>● C5 - Kai Himaparn \$11.99 (Orange Cashew Chicken with Rice) Sautéed slices of chicken breast in chili paste, garlic sauce with jackfruit, sweet peppers, green onions and roasted cashew nuts served over a bed of rice.</li> <li>● C6 - Pad Thai Ga (Chicken Rice Noodle Dish) \$10.99 Thai rice noodles stir fried with chicken, egg, tofu, bean sprouts, and chives in sweet &amp; sour tamarind sauce, topped with dry chili, bean sprouts and lime.</li> </ul> <p><b>MON CHAY - VEGETARIAN</b></p> <ul style="list-style-type: none"> <li>● V1 - Mien Xao (Bean Noodle Vegetable Stir-fry) \$8.99 Crystal clear bean thread noodles stir-fried with assorted vegetables in light brown sauce topped with cilantro &amp; scallions.</li> <li>● V2 - Mi Xao Don \$7.99 (Crispy Egg Noodle Vegetable Stir-fry) Stir-fried mixed vegetables in a light ginger sauce over a nest of crispy egg noodles.</li> <li>● V3 - Com Sao Cai \$10.50 (Tofu Vegetable Stir-fry with Rice) A tasty stir-fry of assorted Asian vegetables and deep fried tofu, served over a bed of rice.</li> <li>● V4 - Pad Makheur \$10.99 (Thai Spicy Eggplant with Rice) Roasted eggplant sautéed in garlic, Thai chili, green onions, tofu, sweet bell peppers and basil served with coconut sticky rice.</li> <li>● V5 - Pad Kana (Garlic Chili Stir-fry with Rice) \$10.50 Stir fried Chinese broccoli, tofu and oyster mushroom in garlic chili sauce with basil over rice.</li> <li>● V6 - Pad Normai Sod \$9.99 (Spicy Asparagus with Vermicelli) Stir fried Asparagus with garlic, chili, tofu and black mushrooms served on vermicelli.</li> <li>● V7 - Mi Can Ram (Lemongrass Sauté with Rice) \$8.99 Strips of braised gluten, with lemongrass in a vegetarian sauce with vegetables and perfumed rice.</li> </ul> <p style="text-align: center;">Dessert Menu Available Upon Request</p>
--	--	---

Appendix F  
Relational-Interdependent Self-construal Scale

Cross, Bacon, & Morris. (2000). The Relational-Interdependent Self-Construal and Relationships. *Journal of Personality and Social Psychology*, 78, 791-808.

Answered on a 7-point scale anchored 1 (strongly disagree) to 7 (strongly agree).

\*\*\*\*\* reverse-keyed items

1. My close relationships are an important reflection of who I am.
2. When I feel very close to someone, it often feels to me like that person is an important part of who I am.
3. I usually feel a strong sense of pride when someone close to me has an important accomplishment.
4. I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are.
5. When I think of myself, I often think of my close friends or family also.
6. If a person hurts someone close to me, I feel personally hurt as well.
7. In general, my close relationships are an important part of my self-image.
8. Overall, my close relationships have very little to do with how I feel about myself.  
\*\*\*\*\*
9. My close relationships are unimportant to my sense of what kind of person I am.  
\*\*\*\*\*
10. My sense of pride comes from knowing who I have as close friends.
11. When I establish a close friendship with someone, I usually develop a strong sense of identification with that person.



## Appendix G

**Independent/Interdependent Self-Construal Scale**

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals.

*Personality and Social Psychology Bulletin*, 20, 580-591.

You will probably find that you agree or disagree to the statements in varying amounts. Please indicate how much you agree or disagree with each statement using the appropriate number from the following scale:

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree

- 1 It is important for me to maintain harmony within my group.
- 2 Having a lively imagination is important to me.
- 3 I enjoy being unique and different from others in many respects.
- 4 I value being in good health above everything.
- 5 I will sacrifice my self-interest for the benefit of the group I am in.
- 6 My personal identity independent of others, is very important to me.
- 7 I act the same way no matter who I am with.
- 8 I often have the feeling that my relationships with others are more important than my own accomplishments.
- 9 Being able to take care of myself is a primary concern for me.
- 10 I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am.
- 11 Even when I strongly disagree with group members, I avoid an argument.
- 12 I am comfortable with being singled out for praise or rewards.
- 13 It is important to me to respect decisions made by the group.
- 14 I have respect for the authority figures with whom I interact.
- 15 I will stay in a group if they need me, even when I'm not happy with the group.
- 16 If my brother or sister fails, I feel responsible.
- 17 I would offer my seat in a bus to my professor.
- 18 Speaking up during a class is not a problem for me.
- 19 My happiness depends on the happiness of those around me.
- 20 I prefer to be direct and forthright when dealing with people I've just met.
- 21 I am the same person at home that I am at school.
- 22 I respect people who are modest about themselves.
- 23 I should take into consideration my parents' advice when making education/career plans.
- 24 I'd rather say "No" directly, than risk being misunderstood.

Appendix H  
Rosenberg Self-Esteem Inventory (RSEI)

Rosenberg, M. (1965). The measurement of self-esteem. In M. Rosenberg (Ed.), *Society and the adolescent self-image* (pp. 16-36). New Jersey: Princeton University Press.

**Listed below are a number of statements about how people feel about themselves. Please read each statement and decide whether you agree or disagree that the statement describes you, and to what extent. If you strongly disagree, circle 1; if you strongly agree, circle 4. If you feel somewhere in-between, circle either 2 or 3, as appropriate.**

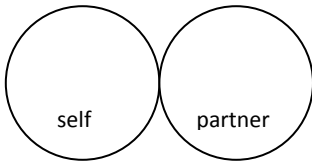
	<b>Strongly Strongly Disagree Agree</b>	<b>Disagree</b>	<b>Agree</b>	
1. I feel that I am a person of worth, at least on an equal basis with others.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
3. All in all, I am inclined to feel that I am a failure.*	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
5. I feel I do not have much to be proud of. *	1	2	3	4
6. I take a positive attitude toward myself.	1	2	3	4
7. On the whole, I am satisfied with myself.	1	2	3	4
8. I wish I could have more respect for myself. *	1	2	3	4
9. I certainly feel useless at times.*	1	2	3	4
10. At times I think I am no good at all.*	1	2	3	4

\*Scale responses to these items are reversed prior to calculating total score.

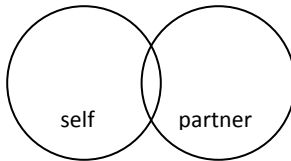
Appendix I  
Inclusion of Other in the Self Scale

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63, 596-612.

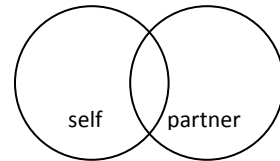
Which of the following sets of circles best describes you and your current dating partner?  
(Circle the correct set of circles).



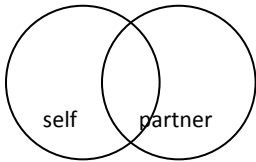
1



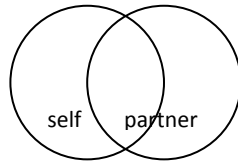
2



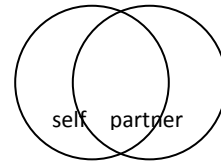
3



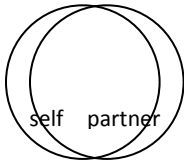
4



5



6



7

Appendix J

**Perceived Relationship Quality Components Inventory (PRQC) – Satisfaction Subscale**  
Fletcher, G. J. O., Simpson, J., & Thomas, G. (2000). The measurement of relationship quality components: A confirmatory factor analytic study. *Personality and Social Psychology Bulletin*, 26, 340-354.

Please indicate your response to each question using the scale provided.

Not at all    1    2    3    4    5    6    7    Extremely

1.    How satisfied are you with your relationship?
2.    How content are you with your relationship?
3.    How happy are you with your relationship?

Appendix K  
The Investment Model Scale - Commitment Level Items

Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, 5, 357-387.

Please indicate the degree to which you agree with each of the following statements regarding your current relationship.

0	1	2	3	4	5	6	7	8
Do Not				Agree				Agree
Agree				Somewhat				Completely
At All								

1. I want our relationship to last for a very long time.
2. I am committed to maintaining my relationship with my partner.
3. I would not feel very upset if our relationship were to end in the near future.
4. It is likely that I will date someone other than my partner within the next year.
5. I feel very attached to our relationship—very strongly linked to my partner.
6. I want our relationship to last forever.
7. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

Appendix L

**Personal Attributes Questionnaire**

Spence, J. T., Helmreich, R. L., & Stapp, J. (1975). Ratings of self and peers on sex-role attributes and their relation to self-esteem and conceptions of masculinity and femininity. *Journal of Personality and Social Psychology*, 32, 29-39.

The items below inquire about what kind of a person **you think you are**. Each item consists of a pair of characteristics, with the letters A-E in between. For example:

Not at all artistic      A...B...C...D...E      Very artistic

Each pair describes contradictory characteristics – that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would choose A. If you think you are pretty good, you might choose D. If you are only medium, you might choose C, and so forth. *Be as honest and as accurate as possible.*

1.	Not at all aggressive	A B C D E	Very aggressive
2.	Not at all independent	A B C D E	Very independent
3.	Not at all emotional	A B C D E	Very emotional
4.	Very submissive	A B C D E	Very dominant
5.	Not at all excitable in a major crisis	A B C D E	Very excitable in a major crisis
6.	Very passive	A B C D E	Very active
7.	Not at all able to devote self completely to others	A B C D E	Able to devote self completely to others
8.	Very rough	A B C D E	Very gentle
9.	Not at all helpful to others	A B C D E	Very helpful to others
10.	Not at all competitive	A B C D E	Very competitive
11.	Very home oriented	A B C D E	Very worldly
12.	Not at all kind	A B C D E	Very kind
13.	Indifferent to others' approval	A B C D E	Highly needful of others' approval
14.	Feelings not easily hurt	A B C D E	Feelings easily hurt
15.	Not at all aware of feelings of others	A B C D E	Very aware of feelings of others
16.	Can make decisions easily	A B C D E	Has difficulty making decisions
17.	Gives up very easily	A B C D E	Never gives up easily
18.	Never cries	A B C D E	Cries very easily
19.	Not at all self-confident	A B C D E	Very self-confident
20.	Feels very inferior	A B C D E	Feels very superior
21.	Not at all understanding of others	A B C D E	Very understanding of others
22.	Very cold in relations with others	A B C D E	Very warm in relations with others
23.	Very little need for security	A B C D E	Very strong need for security
24.	Goes to pieces under pressure	A B C D E	Stands up well under pressure

Appendix M

Gender Role Egalitarian Attitudes Test (GREAT)

Chang, L. (1999). Gender role egalitarian attitudes in Beijing, Hong Kong, Florida, and Michigan. *Journal of Cross-Cultural Psychology*, 30, 722-741.

The following questions ask if you think it is more important or more appropriate for men or women to conduct different behaviours. If you think a behaviour is more important/appropriate for men than it is for women, please use -1, -2, -3, or -4 next to “more for men” to indicate the degree to which you think it is more important or more appropriate for men than it is for women. If you think it is equally important or appropriate for men and women, please select zero. If you think it is more important or more appropriate for women than it is for men, please use 1, 2, 3, or 4 next to “more for women” to indicate the degree to which you think it is more important or more appropriate for women than it is for men.

		<u>In the Work Domain</u>								
		-4	-3	-2	-1	0	1	2	3	4
1.	Be a leader									
	More for men					Same				More for women
2.	Have a successful career	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
3.	Conduct business	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
4.	Receive highest education possible	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
5.	Make money	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
		<u>In the Home Domain</u>								
6.	Take care of children	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
7.	Do laundry	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
8.	Do housework	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
9.	Cook at home	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women
10.	Shop for groceries	-4	-3	-2	-1	0	1	2	3	4
	More for men					Same				More for women

## Appendix N

**Sex-Role Ideology Scale – Short Version**

Cota, A. A., & Xinaris, S. (1993). Factor structure of the sex-role ideology scale:

Introducing a short form. *Sex Roles*, 29, 345-358.

Please indicate the extent to which you agree with each of the statements below. *Be as honest and accurate as possible.* Use the following scale:

1	2	3	4	5
<b>strongly disagree</b>				<b>strongly agree</b>

1. The husband should be regarded as the legal representative of the family group in all matters of law.
2. A wife's activities in the community should complement her husband's position.
3. A married woman should feel free to have men as friends.
4. Women's work and men's work should be fundamentally different in nature.
5. Swearing by a woman is no more objectionable than swearing by a man.
6. When a man and woman live together, she should do the housework and he should do the heavier chores.
7. A normal man should be wary of a woman who takes the initiative in courtship even though he may be attracted to her.
8. It is an outdated custom for a woman to take her husband's name when she marries.
9. Marriage should not interfere with a woman's career any more than it does with a man's.
10. A man's main responsibility to his children is to provide them with the necessities of life and discipline.
11. A woman should be careful how she looks, for it influences what people think of her husband.
12. Homosexual relationships should be as socially accepted as heterosexual relationships.
13. Women should be allowed the same sexual freedom as men.
14. A man's job is too important for him to get bogged down with household chores.
15. The first duty of a woman with young children is to home and family.
16. For the good of a family, a wife should have sexual relations with her husband whether she wants to or not.
17. A woman should be more concerned with helping her husband's career than having a career herself.
18. Women should not expect men to offer them seats in buses.



## Appendix O

## Experimenter Script for the Self Condition – Study 2

- Thank you for participating in our research! The current study is being conducted by a graduate student as part of her PhD dissertation and therefore your participation is really important and greatly appreciated. First, so that you are aware, this study will take the full hour to complete and you will receive 1 credit toward your intro-psych course requirements.
- Due to potential interference with our research results we ask that you turn off any electrical devices (like cell phones, MP3 players, etc.) and refrain from using them at any time during this study.
- This study is actually two 30 minutes studies combined into a 1 hour session. The first 30 minutes will be a decision-making study that I will explain in a moment, and the second 30 minutes will be a questionnaire study.
- The decision making study involves some explanation because it is more involved. Normally, in our department, this kind of experiment would involve giving you a set of hypothetical situations and asking you to make decisions about them but because research has demonstrated that people behave differently in real life to how they respond to hypothetical scenarios, we prefer to use real-life decision-making tasks.
- Each year we use a local business in the community and ask participants to make decisions about their product. This year we have partnered up with a Vietnamese restaurant that will be opening downtown soon. You will be evaluating and making decisions about items on the restaurant's menu. **You will be making these evaluations based on your own food preferences.**
- A perk of working with local businesses is that the restaurant has provided us with gift coupons so later on in the study I will let you pick a gift coupon. The decision-making tasks are all about the partner! This is why we require people involved in a relationship.
- The decision-making study is split up into 3 parts. At the end of the 3<sup>rd</sup> part, you will be asked to do a reaction time task. Numbers will appear on the screen and you have to decide as quickly as you can while being as accurate as you can whether it is an

## Appendix O Continued

even or odd number. This is just to measure the general speed with which you make decisions.

- Your participation is strictly voluntary. You are always free to withdraw your participation in the study without loss of credit. As well, if you would prefer not to answer any question just let me know and I will skip you past the question on the computer.
- Here is the Letter of Information and consent form, which I just went over with you. Feel free to read over the information letter and if you don't have any questions or concerns, sign and date the consent form.

**[collect consent form]**

- Throughout the study I will provide an explanation of each task but we ask that you still read each set of instructions provided to you carefully as sometimes subtle differences in task requirement exist.
- **[place list of restaurant entrees in front of participant]** To begin, for the first part of the decision-making task we want you to read over this list of dishes from the Vietnamese restaurant; English explanations are provided. Keep in mind that any dish with asterisks beside it (**CIRCLE THE ASTERISKS**) is a vegetarian dish.
- We would like you to circle the 10 dishes that you think **you** would prefer and then rank order these dishes from 1 to 10 with 1 being the dish you would most prefer out of the ones you selected and 10 being the dish you would least prefer out of the 10.
- Once you have filled in the sheet, read the instructions on the computer (**TURN ON THE MONITOR**) and then type each of the dishes you chose in the order you have ranked them. Please type the English names NOT the Vietnamese names.
- After you have typed all 10 dishes in in their order, the computer will present them back to you in the order you entered them and ask you how much you think you would like each dish on a 1-7 point scale. I know this may seem repetitive because you just ranked them but ranking doesn't tell us **HOW MUCH** you think you would like each dish. We know that you will rate the ones you entered first higher than the ones at the end but that's expected.

Appendix O Continued

- When you have finished rating each of the 10 entrées, the computer will prompt you to notify me. At this point just reach over and open the door; you don't even need to stand up. I will then come in and set you up on part 2 of 3 of the decision-making study

**[Wait for participant to notify you that they have completed the first task. In the meantime, fill out the log sheet for this participant]**

- How did that task go?
- This next part of the study involves answering a number of demographic and eating habit questions about yourself.
- \*\*\*\*\*ONLY FOR AFFIRMATION CONDITIONS\*\*\*\*\*
- The last question is a value survey in which you will be asked to choose a value and to write something about it. The instructions will explain but if you have any questions just ask.
- \*\*\*\*\*

**[Collect the entrée ranking/rating sheet and leave the participant to answer the questionnaires]**

**[Get the coupons (the 5<sup>th</sup> and 6<sup>th</sup> ranked dishes) ready for the next part of the study. For conditions 1 & 2 students will be done quickly so you need to get the coupons quickly]**

- Sorry, but I'm going to have to leave for just a few minutes to finish getting the last part of the decision-making study set up for you but I can do this part quickly:
- As I mentioned earlier, the restaurant gave us gift coupons. They didn't give us all of the dishes you saw on the menu but of the 10 you thought you might like these are two they provided us with. Please pick the one you think you would most prefer.
- **[once the participant has indicated his/her selection, take the non-chosen coupon back and put it in your binder:]**
- O.K. then, you can write your name in the space provided on the gift certificate.

**[leave the chosen coupon in front of the participant, taking away the non-chosen coupon. At the same time, RA is apologetic, and says]**

## Appendix O Continued

- Okay, I'll just be two or three minutes and then we'll finish up the decision-making study

**[leave the participant alone in the room for 5 minutes (use stopwatch). During this time, highlight 10 preferred dishes on detailed menu]**

**[Put back unchosen coupon and highlight on list of entrees the coupon the participant did choose]**

**[When you return, take notice of what the participant is doing and make a note if warranted]**

- Thanks for your patience. So this is the last part of the decision-making study and then I'll set you up on the questionnaire study and it will be straight-forward from then on. I have photocopied the actual menu from the restaurant (**put menu down in front of them**) and highlighted the 10 dishes that you picked the first time around. What you are going to do is very similar to what you did the first time but with a lot less work!
- You will enter each of the 10 dishes into the computer again but this time you can just type the dish codes (**underline the dish code of the first highlighted dish**) and you don't need to rank order the 10 dishes; just enter them in the order they appear on the menu.
- Next, the computer will prompt you to evaluate each dish on a 1-9 scale to indicate how much you think you would like the dish with the idea being that now you have more information.
- After this, you will be asked a few open-ended questions asking you what you were thinking and feeling while you made your decisions. Just type N/A for any questions that don't apply to you. After that is the timed even or odd number task and then I'll get you started on the questionnaires.

**[Leave and make a note if they did something with the coupon (e.g., they had put the coupon away or didn't fill it in, etc)]**

- Great! So that's it for the decision-making study. The questionnaire study will ask you questions about how you feel about yourself, your partner, and your relationship

## Appendix O Continued

overall. This typically takes students 20-25 minutes to complete and then we'll finish up.

**[open QUESTIONNAIRE STUDY and enter participant's subject number and condition number and then leave]**

- This is the end of the experiment, and I would like to thank you for your participation and share some information concerning it.
- The purpose of this study was to investigate cognitive dissonance within the topic of romantic relationships. Cognitive dissonance is defined as a feeling of discomfort caused by performing an action that is inconsistent with one's attitudes or by making an irrational decision such as favouring one alternative despite having reasons to favour another. People can reduce this threat of having made a non-optimal decision by rationalizing their decision. Namely, by increasing the rating of the chosen decision and lowering the rating of the unchosen alternative. In the current study...
- In our current study, we are interested in whether or not people experience cognitive dissonance in response to a decision made for a romantic partner and therefore rationalize their coupon decision in a similar manner to a decision made for oneself. You are in the self or control condition and therefore made the choices based on your own preferences. The other half of the participants in the study do the same tasks as you did but they are asked to make the decisions based on what they think their romantic partner would like and they choose a coupon for their partner. We are interested in comparing the motivations people have when a decision ultimately impacts themselves versus their romantic partner.
- We used some minor deceptions in this study. The study was presented as being in collaboration with a soon-to-be-opening restaurant. In fact, the restaurant does not exist. Consequently, the gift coupon that you have chosen is not a valid coupon.

**[Ask for coupon back – VERY IMPORTANT]**

- We needed to use these minor deceptions to make the decision making tasks more realistic and engaging for you. Also, the deceptions were necessary because knowing

## Appendix O Continued

the true purposes of the study beforehand might have influenced your responses on the ranking and rating tasks.

- **One last thing, this is very important, we ask that you do not discuss this experiment with other students who might be potential participants, as it may influence the results of the study.**

**[give the participant the debriefing sheet and ask if they have any questions or concerns]**

- Here is the feedback sheet, which I briefly explained to you. The sheet contains more detailed information about the rationale for our research.
- Also, as our way of saying thank you we are having a draw at the end of the term for a \$50 gift certificate to the restaurant of your choice. Please sign the draw form if you would like to be entered.

**[give them form to sign]**

**[thank them again and escort them at least part way out to the door]**

## Appendix P

## Experimenter Script for the Partner Condition – Study 2

- Thank you for participating in our research! The current study is being conducted by a graduate student as part of her PhD dissertation and therefore your participation is really important and greatly appreciated. First, so that you are aware, this study will take the full hour to complete and you will receive 1 credit toward your intro-psych course requirements.
- Due to potential interference with our research results we ask that you turn off any electrical devices (like cell phones, MP3 players, etc.) and refrain from using them at any time during this study.
- This study is actually two 30 minutes studies combined into a 1 hour session. The first 30 minutes will be a decision-making study that I will explain in a moment, and the second 30 minutes will be a questionnaire study.
- The decision making study involves some explanation because it is more involved. Normally, in our department, this kind of experiment would involve giving you a set of hypothetical situations and asking you to make decisions about them but because research has demonstrated that people behave differently in real life to how they respond to hypothetical scenarios, we prefer to use real-life decision-making tasks.
- Each year we use a local business in the community and ask participants to make decisions about their product. This year we have partnered up with a Vietnamese restaurant that will be opening downtown soon. You will be evaluating and making decisions about items on the restaurant's menu. **The unique aspect of this research is that you will be making these evaluations based on your romantic partner's food preferences.**
- A perk of working with local businesses is that the restaurant has provided us with gift coupons so later on in the study I will let you pick a gift coupon. **Again, however, you have to pick the coupon for your romantic partner.** The decision-making tasks are all about the partner! This is why we require people involved in a relationship.

## Appendix P Continued

- The decision-making study is split up into 3 parts. At the end of the 3<sup>rd</sup> part, you will be asked to do a reaction time task. Numbers will appear on the screen and you have to decide as quickly as you can while being as accurate as you can whether it is an even or odd number. This is just to measure the general speed with which you make decisions.
- Your participation is strictly voluntary. You are always free to withdraw your participation in the study without loss of credit. As well, if you would prefer not to answer any question just let me know and I will skip you past the question on the computer.
- Here is the Letter of Information and consent form, which I just went over with you. Feel free to read over the information letter and if you don't have any questions or concerns, sign and date the consent form.  
**[collect consent form]**
- Throughout the study I will provide an explanation of each task but we ask that you still read each set of instructions provided to you carefully as sometimes subtle differences in task requirement exist.
- **[place list of restaurant entrees in front of participant]** To begin, for the first part of the decision-making task we want you to read over this list of dishes from the Vietnamese restaurant; English explanations are provided. Keep in mind that any dish with asterisks beside it (**CIRCLE THE ASTERISKS**) is a vegetarian dish.
- We would like you to circle the 10 dishes you think **your partner** **[underline this phrase on the page in front of them]** would prefer and then rank order these dishes from 1 to 10 with 1 being the dish you think your partner would most prefer out of the ones you selected and 10 being the dish your partner would least prefer out of the 10.
- Once you have filled in the sheet, read the instructions on the computer (**TURN ON THE MONITOR**) and then type each of the dishes you chose for your partner in the order you have ranked them. Please type the English names NOT the Vietnamese names.



Appendix P Continued

- After you have typed all 10 dishes in in their order, the computer will present them back to you in the order you entered them and ask you how much you think your partner would like each dish on a 1-7 point scale. I know this may seem repetitive because you just ranked them but ranking doesn't tell us HOW much you think your partner would like each dish. We know that you will rate the ones you entered first higher than the ones at the end but that's expected.
- When you have finished rating each of the 10 entrées, the computer will prompt you to notify me. At this point just reach over and open the door; you don't even need to stand up. I will then come in and set you up on part 2 of 3 of the decision-making study

**[Wait for participant to notify you that they have completed the first task. In the meantime, fill out the log sheet for this participant]**

- How did that task go?
- This next part of the study involves answering a number of demographic and eating habit questions about both you and your partner.
- \*\*\*\*\*ONLY FOR AFFIRMATION CONDITIONS\*\*\*\*\*
- The last question is a value survey in which you will be asked to choose a value and to write something about it. The instructions will explain but if you have any questions just ask.
- \*\*\*\*\*

**[Collect the entrée ranking/rating sheet and leave the participant to answer the questionnaires]**

**[Get the coupons (the 5<sup>th</sup> and 6<sup>th</sup> ranked dishes) ready for the next part of the study. For conditions 1 & 2 students will be done quickly so you need to get the coupons quickly]**

- Sorry, but I'm going to have to leave for just a few minutes to finish getting the last part of the decision-making study set up for you but I can do this part quickly:
- As I mentioned earlier, the restaurant gave us gift coupons. They didn't give us all of the dishes you saw on the menu but of the 10 you thought your partner might like

## Appendix P Continued

these are two they provided us with. Please pick the one you think your partner would most prefer.

- **[once the participant has indicated his/her selection, take the non-chosen coupon back and put it in your binder:]**
- O.K. then, please write your partner's name in the first space provided on the gift certificate, and then write YOUR name where it says "Compliments of" like a gift certificate.

**[leave the chosen coupon in front of the participant, taking away the non-chosen coupon. At the same time, RA looks at the watch in an exaggerated manner, and says]**

- Okay, I'll just be two or three minutes and then we'll finish up the decision-making study

**[leave the participant alone in the room for 5 minutes (use stopwatch). During this time, highlight 10 preferred dishes on detailed menu]**

**[Put back unchosen coupon and highlight on list of entrees the coupon the participant did choose]**

**[When you return, take notice of what the participant is doing and make a note if warranted]**

- Thanks for your patience. So this is the last part of the decision-making study and then I'll set you up on the questionnaire study and it will be straight-forward from then on. I have photocopied the actual menu from the restaurant (**put menu down in front of them**) and highlighted the 10 dishes that you picked for your partner the first time around. What you are going to do is very similar to what you did the first time but with a lot less work!
- You will enter each of the 10 dishes into the computer again but this time you can just type the dish codes (underline the dish code of the first highlighted dish) and you don't need to rank order the 10 dishes; just enter them in the order they appear on the menu.

## Appendix P Continued

- Next, the computer will prompt you to evaluate each dish on a 1-9 scale to indicate how much you think your partner would like the dish with the idea being that now you have more information.
- After this, you will be asked a few open-ended questions asking you what you were thinking and feeling while you made your decisions. Just type N/A for any questions that don't apply to you. After that is the timed even or odd number task and then I'll get you started on the questionnaires.

**[Leave and make a note if they did something with the coupon (e.g., they had put the coupon away or didn't fill it in, etc)]**

- Great! So that's it for the decision-making study. The questionnaire study will ask you questions about how you feel about yourself, your partner, and your relationship overall. This typically takes students 20-25 minutes to complete and then we'll finish up.

**[open QUESTIONNAIRE STUDY and enter participant's subject number and condition number and then leave]**

- This is the end of the experiment, and I would like to thank you for your participation and share some information concerning it.
- The purpose of this study was to investigate cognitive dissonance within the topic of romantic relationships. Cognitive dissonance is defined as a feeling of discomfort caused by performing an action that is inconsistent with one's attitudes or by making an irrational decision such as favouring one alternative despite having reasons to favour another. People can reduce this threat of having made a non-optimal decision by rationalizing their decision. Namely, by increasing the rating of the chosen decision and lowering the rating of the unchosen alternative. In the current study...
- In our current study, we are interested in whether or not people experience cognitive dissonance in response to a decision made for a romantic partner and therefore rationalize their coupon decision in a similar manner to a decision made for oneself.

Appendix P Continued

- We used some minor deceptions in this study. The study was presented as being in collaboration with a soon-to-be-opening restaurant. In fact, the restaurant does not exist. Consequently, the gift coupon that you have chosen is not a valid coupon.

**[Ask for coupon back – VERY IMPORTANT]**

- We needed to use these minor deceptions to make the decision making tasks more realistic and engaging for you. Also, the deceptions were necessary because knowing the true

purposes of the study beforehand might have influenced your responses on the ranking and rating tasks.

- **One last thing, this is very important, we ask that you do not discuss this experiment with other students who might be potential participants, as it may influence the results of the study.**

**[give the participant the debriefing sheet and ask if they have any questions or concerns]**

- Here is the feedback sheet, which I briefly explained to you. The sheet contains more detailed information about the rationale for our research.
- Also, as our way of saying thank you we are having a draw at the end of the term for a \$50 gift certificate to the restaurant of your choice. Please sign the draw form if you would like to be entered.

**[give them form to sign]**

**[thank them again and escort them at least part way out to the door]**

## Appendix Q

Mehrabian, A. (1976). Questionnaire measures of affiliative tendency and sensitivity to rejection. *Psychological Reports*, 38, 199-209.

**Affiliative Tendency Scale**

Please use the following scale to indicate the degree of your agreement or disagreement with each of the statements below. Record your numerical answer to each statement in the space provided preceding the statement. Try to describe yourself accurately and in terms of how you are generally (that is, the average of the way you are in most situations -- not the way you are in specific situations or the way you would hope to be).

- +4 = very strong agreement
- +3 = strong agreement
- +2 = moderate agreement
- +1 = slight agreement
- 0 = neither agreement nor disagreement
- 1 = slight disagreement
- 2 = moderate disagreement
- 3 = strong disagreement
- 4 = very strong disagreement

- \_\_\_ 1. When I am introduced to someone new, I don't make much effort to be liked.
- \_\_\_ 2. I prefer a leader who is friendly and easy to talk to over one who is more aloof and respected by his followers.
- \_\_\_ 3. When I am not feeling well, I would rather be with others than alone.
- \_\_\_ 4. If I had to choose between the two, I would rather be considered intelligent than sociable.
- \_\_\_ 5. Having friends is very important to me.
- \_\_\_ 6. I would rather express open appreciation to others most of the time than reserve such feelings for special occasions.
- \_\_\_ 7. I enjoy a good movie more than a big party.
- \_\_\_ 8. I like to make as many friends as I can.
- \_\_\_ 9. I would rather travel abroad starting my trip alone than with one or two friends.
- \_\_\_ 10. After I meet someone I did not get along with, I spend time thinking about arranging another, more pleasant meeting.
- \_\_\_ 11. I think that fame is more rewarding than friendship.
- \_\_\_ 12. I prefer independent work to cooperative effort.
- \_\_\_ 13. I think that any experience is more significant when shared with a friend.
- \_\_\_ 14. When I see someone I know walking down the street, I am usually the first one to say hello.
- \_\_\_ 15. I prefer the independence that comes from lack of attachments to the good and warm feelings associated with close ties.
- \_\_\_ 16. I join clubs because it is such a good way of making friends.
- \_\_\_ 17. I would rather serve in a position to which my friends had nominated me than be appointed to an office by a distant national headquarters.
- \_\_\_ 18. I don't believe in showing overt affection toward friends.
- \_\_\_ 19. I would rather go right to sleep at night than talk to someone else about the day's activities.
- \_\_\_ 20. I have very few close friends.

Appendix Q Continued

- \_\_\_ 21. When I am with people I don't know, it doesn't matter much to me if they like me or not.
- \_\_\_ 22. If I had to choose, I would rather have strong attachments to my friends than have them regard me as witty and clever.
- \_\_\_ 23. I prefer individual activities such as crossword puzzles to group ones such as bridge or canasta.
- \_\_\_ 24. I am much more attracted to warm, open people than I am to stand-offish ones.
- \_\_\_ 25. I would rather read an interesting book or go to the movies than spend time with friends.
- \_\_\_ 26. When traveling, I prefer meeting people to simply enjoying the scenery or going places alone.

Appendix R

**The Sensitivity to Rejection Scale**

Mehrabian, A. (1976). Questionnaire measures of affiliative tendency and sensitivity to rejection. *Psychological Reports, 38*, 199-209.

Please use the following scale to indicate the degree of your agreement or disagreement with each of the statements below. Record your numerical answer to each statement in the space provided preceding the statement. Try to describe yourself accurately and generally (that is, the way you are actually in most situations -- not the way you would hope to be).

- |  |                               |
|--|-------------------------------|
| +4 = very strong agreement             | -1 = slight disagreement      |
| +3 = strong agreement                  | -2 = moderate disagreement    |
| +2 = moderate agreement                | -3 = strong disagreement      |
| +1 = slight agreement                  | -4 = very strong disagreement |
| 0 = neither agreement nor disagreement |                               |

- |       |   |
|-------|---|
| _____ | 1. I sometimes prefer being with strangers than with familiar people.   |
| _____ | 2. If I don't enjoy a party, I don't mind being the first one to leave.   |
| _____ | 3. I would be very hurt if a close friend should contradict me in public.   |
| _____ | 4. When a group is discussing an important matter, I like my feelings to be known.  |
| _____ | 5. I tend to associate less with people who are critical.   |
| _____ | 6. I often visit people without being invited.  |
| _____ | 7. I don't mind going some place even if I know that some of the people there don't like me.                                    |
| _____ | 8. I try to feel a group out before I take a definite stand on a controversial issue.   |
| _____ | 9. When two of my friends are arguing, I don't mind taking sides to support the one I agree with.                               |
| _____ | 10. If I ask someone to go someplace with me and they refuse, I am hesitant to ask them again.                                  |
| _____ | 11. I am cautious about expressing my opinions until I know people quite well.  |
| _____ | 12. If I can't understand what someone says in a discussion, I will let it pass rather than interrupt to ask them to repeat it. |
| _____ | 13. I enjoy discussing controversial topics like politics and religion.   |
| _____ | 14. I feel uneasy about asking someone to return something they borrowed from me.   |
| _____ | 15. I criticize people openly and expect them to do the same.   |
| _____ | 16. I can still enjoy a party even if I find that I am not properly dressed for the occasion.                                   |
| _____ | 17. I sometimes take criticisms too hard.   |
| _____ | 18. If someone dislikes me, I tend to avoid him/her.  |
| _____ | 19. It seldom embarrasses me to ask someone for a favor.  |
| _____ | 20. I seldom contradict people for fear of hurting them.  |
| _____ | 21. I am very sensitive to any signs that a person might not want to talk to me.  |
| _____ | 22. Whenever I go somewhere where I know no one, I always like to have a friend come along.                                     |
| _____ | 23. I often say what I believe, even when it alienates the person with whom I am speaking.                                      |
| _____ | 24. I enjoy going to parties where I don't know anyone.   |

Appendix S

Self-affirmation Value Surveys

adapted from:

Hoshino-Browne, E., Zanna, A. S., Spencer, S. J., Zanna, M. P., Kitayama, S., & Lackenbauer, S. (2005). On the cultural guises of cognitive dissonance: The case of easterners and westerners. *Journal of personality and social psychology*, 89, 294-310.

**Values Survey** (independent self-affirmation)

Please circle the value that is **MOST** important to you from the values listed below.

Business/Economics  
Art/Music/Theatre  
Religion/Spirituality  
other: (specify)

Social life/Relationships  
Science/Pursuit of knowledge  
Social action/Helping others

Please write a paragraph explaining why this value is important to you.

---

**Values Survey** (relationship self-affirmation)

Please circle the value that is **MOST** important to you and your romantic partner from the values listed below.

Business/Economics  
Art/Music/Theatre  
Religion/Spirituality  
other: (specify)

Social life/Relationships  
Science/Pursuit of knowledge  
Social action/Helping others

Please write a paragraph explaining why you and your partner share this value.



Appendix T

Ethics Approval Form for Study 1



**Department of Psychology** The University of Western Ontario  
 Room 7418 Social Sciences Centre,  
 London, ON, Canada N6A 5C1  
 Telephone: (519) 661-2067 Fax: (519) 661-3961

**Use of Human Subjects - Ethics Approval Notice**

<b>Review Number</b>	09 03 02	<b>Approval Date</b>	09 03 04
<b>Principal Investigator</b>	Lorne Campbell/Sandra Lackenbauer	<b>End Date</b>	09 08 30
<b>Protocol Title</b>	Qualities of romantic relationships and decision making styles		
<b>Sponsor</b>	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.

Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2008-2009 PREB are: David Dozois, Bill Fisher, Riley Hinson and Steve Lupker

CC: UWO Office of Research Ethics

*This is an official document. Please retain the original in your files*

## Appendix U

## Ethics Approval Form for Study 2



**Department of Psychology** The University of Western Ontario  
 Room 7418 Social Sciences Centre,  
 London, ON, Canada N6A 5C1  
 Telephone: (519) 661-2067 Fax: (519) 661-3961

**Use of Human Subjects - Ethics Approval Notice**

<b>Review Number</b>	10 03 04	<b>Approval Date</b>	10 03 19
<b>Principal Investigator</b>	Lorne Campbell/Sandra Lackenbauer	<b>End Date</b>	10 08 31
<b>Protocol Title</b>	Two studies: Decision making styles and qualities of romantic relationships		
<b>Sponsor</b>	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.

Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2009-2010 PREB are: David Dozois, Bill Fisher, Riley Hinson and Steve Lupker

CC: UWO Office of Research Ethics

*This is an official document. Please retain the original in your files*

## Curriculum Vitae

**Sandra D. Lackenbauer**

### Education

- 2011 (expected)      Doctor of Philosophy (Ph.D.), Social Psychology  
The University of Western Ontario  
Thesis: *Do I feel dissonance over you? Gender differences in self-construal and the experience of dissonance for romantic partners*
- 2005                    Master of Arts (M.A.), Social Psychology  
The University of Western Ontario
- 2002                    Honour's Bachelor of Arts (B.A.),  
The University of Waterloo

### Awards and Scholarships

- 2007                    *Poster Award – Runner-up*  
Society of Personality and Social Psychology  
Value: \$50
- 2006-2009            *Canada Graduate Scholarship*  
Social Sciences and Humanities Research Council (SSHRC)  
Value: \$35,000/year (total: \$105,000)
- 2006                    *Western Graduate Thesis Research Award*  
The University of Western Ontario  
Value: \$718
- 2006-2007            *Ontario Graduate Scholarship (declined)*  
Ontario Graduate Scholarship Program  
Value: \$15,000
- 2005-2006            *Ontario Graduate Scholarship*  
Ontario Graduate Scholarship Program  
Value: \$15,000
- 2005-2006            *Western Graduate Research Scholarship*  
The University of Western Ontario  
Value: \$2,500
- 2004-2005            *Canada Graduate Scholarship*  
Social Sciences and Humanities Research Council (SSHRC)  
Value: \$17,500

### Awards and Scholarships

- 2003-2004            *Special University Scholarship*  
The University of Western Ontario  
Value: \$6,000
- 2003-2004            *The Reva Gerstein Fellowship for Masters Study in Psychology*  
The University of Western Ontario  
Value: \$2,800
- 2002                    *Honours Thesis Award – Nominee*  
The University of Waterloo

### Published Papers

- Lackebauer, S. D.**, Campbell, L., Rubin, H., Fletcher, G., & Troister, T. (2010). Seeing clearly through rose-coloured glasses: The unique and combined benefits of being perceived accurately and in a positively biased manner by romantic partners. *Personal Relationships*, 17, 475-493.
- Campbell, L., **Lackebauer, S. D.**, & Muise, A. (2006). When is being known or adored by romantic partners most beneficial? Self-perceptions, relationship length, and responses to partner's verifying and enhancing appraisals. *Personality and Social Psychology Bulletin*, 32, 1283-1294.
- Hoshino-Browne, E., Zanna, A. S., Spencer, S. J., Zanna, M. P., Kitayama, S., & **Lackebauer, S. D.** (2005). On the cultural guises of cognitive dissonance: The case of Easterners and Westerners. *Journal of Personality and Social Psychology*, 89, 294-310.

### Manuscripts In Progress

- Lackebauer, S. D.**, & Campbell, L. *Measuring up: The Unique Emotional and Regulatory Outcomes of Different Perceived Partner-Ideal Discrepancies in Romantic Relationships*. Manuscript invited for resubmission to Journal of Personality and Social Psychology.
- Rubin, H., Campbell, L., **Lackebauer, S. D.**, & Overall, N. C. *Inferring a partner's ideal discrepancies: Accuracy, projection, and the communicative role of interpersonal behaviour*. Manuscript invited for resubmission to Journal of Personality and Social Psychology.

### Conference Presentations

**Lackebauer, S. D., & Campbell, L.** (2009, August). *Do I Feel Dissonance Over You? Gender Differences in Self-construal and the Experience of Dissonance for Romantic Partners*. Poster presented at the 12<sup>th</sup> Ontario Symposium, London, ON.

### Conference Presentations

**Lackebauer, S. D., & Campbell, L.** (2009, June). *The Influence of Partner Discrepancies on Emotion and Regulatory Focus*. Paper presented at the annual meeting for the Canadian Psychological Association, Montreal, QC.

**Lackebauer, S. D., Campbell, L., Rubin, H., Fletcher, G., & Troister, T.** (2009, June). *Seeing clearly through rose-coloured glasses: Partner Perceptions and the Possibility of Accuracy with Bias*. Poster presented at the annual meeting for the Canadian Psychological Association, Montreal, QC.

**Lackebauer, S. D., & Campbell, L.** (2009, February). *The "Fit" to My Mis-Match: The Influence of Partner Discrepancies on Regulatory Focus*. Poster presented at the annual meeting for the Society for Personality and Social Psychology, Tampa, FL.

**Lackebauer, S. D., Campbell, L., Rubin, H., Fletcher, G., & Troister, T.** (2008, February). *Seeing clearly through rose-coloured glasses: Partner Perceptions and the Possibility of Accuracy with Bias*. Poster presented at the annual meeting for the Society for Personality and Social Psychology, Albuquerque, NM.

Rubin, H., Campbell, L., **Lackebauer, S. D., & Overall, N. C.** (2008, February). Assessing the accuracy of perceived ideal discrepancies and the moderating effects of interpersonal behavior. Poster presented at the annual meeting for the Society for Personality and Social Psychology, Albuquerque, NM.

Butzer, B., & **Lackebauer, S. D.** (2008, February). *Understanding Our Romantic Relationships*. Talk presented at London Public Library as part of the Advocacy through Action series, London, ON.

**Lackebauer, S. D., Campbell, L., & Wong, J.** (2007, January). *Ideal standards and relationship evaluations: Different forms of partner discrepancies and their emotional outcomes*. Poster presented at the annual meeting for the Society for Personality and Social Psychology, Memphis, TN.

**Lackebauer, S. D., Campbell, L., & Wong, J.** (2006, July). *Ideal standards and the experience of emotions in relationships*. Paper presented at the biennial meeting for the International Association for Relationship Research, Crete, Greece.

**Lackenbauer, S. D.**, Campbell, L., & Muise, A. (2005, January). *My partner, my critic: The influence of relationship length on preferred partner appraisals*. Poster presented at the annual meeting for the Society for Personality and Social Psychology, New Orleans, LA.

**Lackenbauer, S. D.**, Hoshino-Browne, E., Zanna, M. P., & Spencer, S. J. (2004, January). *Self-affirmation and dissonance: Do sex differences in self-construals determine the type of affirmation that will “take the sting” out of dissonance?* Poster presented at the annual meeting of the Society for Personality and Social Psychology, Austin, TX.

### **Related Work Experience**

2009-present	Instructor Psychology for Recreation and Leisure, Introduction to Psychology, The Mating Game, When Love Hurts: Relationship Violence, Psychology of Evil Fanshawe College
2007-present	Instructor Human Sexuality and Introduction to Social Psychology The University of Western Ontario
2006-2007	Honours Thesis Supervision Supervisor to Nicole Notarfonzo The University of Western Ontario
Winter 2006	Psychology 120 – Addictive Behaviours Teaching Assistant for Dr. Monika Stelzl The University of Western Ontario
2005-2006	Psychology 280 - Introduction to Research Methods Lab Coordinator for Drs. Patrick Brown and Doug Hazlewood The University of Western Ontario
Fall 2005	Psychology 120 – Addictive Behaviours Teaching Assistant for Dr. Monika Stelzl The University of Western Ontario
2004-2005	Psychology 280 - Introduction to Research Methods Lab Instructor for Drs. Patrick Brown and Doug Hazlewood The University of Western Ontario
2003-2004	Psychology 020 - Introduction to Psychology Teaching Assistant for Dr. Kim Clow The University of Western Ontario