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**THE GRASS IS ALWAYS GREENER...OR IS IT? THE CONSEQUENCES OF
VARIABILITY OF INFORMATION AND RELATIONSHIP UNCERTAINTY IN THE
RELATIONSHIP SOCIAL COMPARISON PROCESS**

A Thesis in

Psychology

by

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ABSTRACT

Prior research indicates that chronic social comparison tendencies (i.e., comparisons with other people) lead to negative evaluation. The current research addresses why this association exists. Two studies tested the hypotheses that direction and variability of comparison information, and relationship uncertainty play important roles in explaining this association in romantic relationships. Study 2 also tested the hypothesis that the relationship social comparison (RSC) process has ironic consequences in that people seek comparisons to reduce uncertainty; however exposure to variable comparisons increases uncertainty.

Participants were either exposed to (Exp 1) or allowed to seek (Exp 2) variable or non-variable RSCs and then completed measures of relationship uncertainty and evaluation. Across the two studies, contrary to predictions, manipulated direction and variability of RSCs did not predict relationship evaluation. Self-reported direction and variability of RSCs did partially support predictions. Consistent with predictions, as participants rated the RSCs as more upward (better than their relationship) versus downward (worse than their relationship), or more variable, relationship evaluation became more negative. Consistent with variability predictions, but inconsistent with direction predictions, relationship uncertainty mediated the effect of direction and variability on relationship evaluation. Finally, Study 2 illustrated that rather than alleviating uncertainty, increased variable comparison seeking lead to increases in uncertainty.

These results have important implications for social comparison theory. As the first studies to expose participants to multiple comparisons in various directions results indicate that variability is an important factor in the RSC process. Thus, implicating that future research must include exposure to multiple comparisons in various directions to understand the comparison process. Second, relationship uncertainty mediated the effect of direction of RSCs on relationship evaluation, indicating that uncertainty does more than moderate the effect of comparison direction on evaluation. Finally, Study 2 highlights the ironic consequences of the

RSC process, in that those who receive variable comparison information report increases rather than decreases in uncertainty. These results suggest the need for future longitudinal studies allowing the comparison process to play out over time. This step would allow researchers to examine both predictors of comparison seeking and the outcomes that result from receiving comparison information.

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Chapter 1: Introduction

The quality of your life is the quality of your relationships.

-Anthony Robbins

As Anthony Robbins alludes to in the quote above, quality of life depends in part on successful social relationships. Research indicates that success in romantic relationships can influence both psychological and physical well-being (for review see Berkman, Glass, Brissette, & Seeman, 2000). Satisfying marriages tend to buffer individuals from psychological distress and negative life events (Waltz, Badura, Pfaff, & Schott, 1998), while distress and instability during a romantic relationship can lead to negative physical and emotional well-being (Bloom, Asher, & White, 1978). Given that satisfying romantic relationships afford people so many benefits in terms of their psychological and physical well being, how do people know when their relationship is successful? What strategies do they use to evaluate their romantic relationships? And, how do these strategies influence the evaluations that people make?

Research suggests that a common evaluation strategy that people employ is to engage in social comparisons (Suls & Wheeler, 2000; Wood, 1989). When people feel uncertain, such as when they are uncertain as to whether they are in a good romantic relationship, they may compare with others as a means to reduce this uncertainty (Festinger, 1954; Taylor, Buunk, & Aspinwall, 1990). Interestingly, research indicates that the tendency to make romantic relationship social comparisons (RSCs) actually results in negative relationship evaluations (Smith LeBeau & Buckingham, 2007). That is, the more people tend to compare their relationship with other people's relationship, the worse that they evaluate their relationship.

In this paper, I am interested in exploring the mechanisms behind the association between RSCs and negative relationship evaluation. To address this issue, I will first review research concerning romantic relationship evaluation strategies, focusing on the influence of RSCs on romantic relationship evaluation. I define romantic relationship evaluation as people's

overall opinion of the quality of their relationship, including feelings of relationship commitment, satisfaction, intimacy, and perceived quality of relationship alternatives. Next, I will outline what I believe to be the primary mechanisms behind the association between RSCs and negative evaluation.

Specifically, I will propose and test three hypotheses. First, based on extent literature, I hypothesize that one factor that influences the link between RSC and negative evaluation is the direction of the social comparison (Directionality Hypothesis). Specifically, individuals who make more upward comparisons (comparing one's relationship with those that are better than one's current relationship) will evaluate their romantic relationship more negatively than those who make downward comparisons (comparing one's relationship with those that are worse than one's current relationship). However, I also build on extant research by proposing that in addition to the direction of the comparison, there is another, yet unexplored, factor. Specifically, I hypothesize that individuals who make a lot of comparisons are exposed to variable information. I predict that exposure to variable information leads to increased uncertainty about where one's romantic relationship stands, which in turn leads to negative relationship evaluation (Variability Hypothesis). Finally, I hypothesize that the RSC process has potentially ironic consequences, in that individuals seek RSCs to alleviate uncertainty, but exposure to variable information leads to increases in uncertainty (Ironic Consequences Hypothesis). Below, I discuss the rationale for these three hypotheses and discuss the results of two studies that examine them.

Relationship Evaluation Strategies

What strategies do people use to evaluate whether they are in a good and satisfying romantic relationship? Because people often view their romantic relationships as an extension of the self (Aron, Aron, Tudor & Nelson, 1991), researchers have argued that a good starting place for exploring relationship evaluation would be with evaluation strategies already shown as important in self-evaluation (Wayment & Cambell, 2000). A commonly studied self-evaluation strategy is social comparisons (i.e., comparing one's self to other people). In his original

formulation of social comparison theory, Festinger (1954) argued that people have a drive to evaluate their opinions and abilities. When people are uncertain about their standing, according to Festinger, they compare with others in order to reduce this uncertainty. Research indicates that people rely on comparisons with others to evaluate a range of dimensions from sports and academic ability to the extent to which they are coping well with cancer (Buunk, Collins, Taylor, VanYperen & Dakof, 1990). Thus, one might expect, given the large literature on social comparison and self-evaluation (see Suls & Wheeler, 2000 for a review), to find that people evaluate their romantic relationships by comparing their relationships to other peoples' relationships. That is, they make relationship social comparisons (RSCs).

In support of this idea, romantic relationship research indicates that people do indeed evaluate their relationships by making RSCs. For example, Wayment and Cambell (2000) conducted a study in which they asked participants to rate the extent to which they relied on various types of information for relationship evaluation. Participants indicated that they did rely on social comparisons (as well as other types of information) to evaluate their relationships. Additional evidence for the use of social comparisons comes from a follow-up study conducted by Wayment (2006). Here, participants described their personal standards for romantic relationships and indicated what information was important for creating these standards. Results indicated that participants rated social comparisons (with other people's relationships) and temporal comparisons (with past relationships) as the most important factors in creating romantic relationship standards.

Given that people do evaluate their relationships by making social comparisons, what effect, if any, does using this strategy have on the type of evaluations that people make? Researchers have addressed this question by examining how the chronic tendency to engage in social comparisons influences evaluations.

Chronic Social Comparison Tendencies

Research on chronic social comparison tendencies reveals that individuals who expressed a general tendency to compare with others tended to hold more negative self-evaluations (Butzer & Kuiper, 2006; Gibbons & Buunk, 1999). For example, being high in social comparison tendencies predicted lower self-esteem, increased depression, and higher perceived stress (Gibbons & Buunk, 1999). Moreover, this effect also appears when it comes to romantic relationship evaluations. RSC tendencies are associated with negative relationship outcomes (Smith LeBeau & Buckingham, 2007), such as more anxious and avoidant attachment styles and relationship insecurity (Study 1), lowered relationship satisfaction, intimacy, commitment and increased quality of alternative relationships (Study 2).

One possible explanation for this link may be that people compare more when they are dissatisfied with their relationships, thus it is not that RSC tendencies predict negative outcomes, but rather result from them. However, research indicates that RSC tendencies predict negative relationship evaluations, rather than the other way around. In a longitudinal study, Smith LeBeau and Buckingham, (2007; Study 3) found that RSC tendencies at time 1 significantly predicted changes in relationship satisfaction from time 1 to time 2. In that those with high RSC tendencies showed significant decreases in relationship satisfaction across time. In sum, research examining social comparison tendencies indicates that increased tendencies to compare are related to negative evaluation of one's self and one's romantic relationship. However, a question that still remains is why do social comparison tendencies lead to negative evaluation?

Directionality Hypothesis

One potential answer to this question may come from examining the direction of the social comparisons. People can make a variety of comparisons, including upward comparisons (comparing with others better off than the self) and downward comparisons (comparing with others worse off than the self). Previous studies indicate that when individuals are exposed to upward comparisons, they tend to make more negative evaluation; whereas when they are

exposed to downward comparisons, they tend to make more positive evaluations (Aspinwall & Taylor, 1993; Brickman & Bulman, 1977; Marsh & Parker, 1984; Pyszczynski, Greenberg, & LaPrelle, 1985; Wills, 1981; Wilson & Benner, 1971). Perhaps chronic social comparison tendencies are associated with negative evaluations because these individuals are exposed to more upward comparisons. That is, individuals who chronically compare may make many more upward comparisons than those who do not, and these comparisons lead to more negative romantic relationship evaluations.

This reasoning forms the foundation for the *directionality hypothesis*. According to it, the direction of the comparison influences relationship evaluation, such that upward comparisons compared to downward comparisons lead to more negative relationship evaluations because they highlight how one's relationship is poor relative to other relationships.

Although this directionality hypothesis logically follows from the previous research, it is unlikely that direction of comparison information is the only mechanism that explains the association between RSC tendencies and relationship evaluation. First, it is important to consider the types of information individuals receive when they are *chronically* making comparisons in daily life. In experiments, participants are typically exposed to all upward or all downward comparisons (Collins, 1996; Wills, 1981). In daily life, it is unlikely that people would be exposed to comparisons in only one direction. Ahrens (1991) argues that in daily interactions people are exposed to a variety of comparison information in various directions. Wood (1989) suggests that often the environment imposes comparison information upon people in their daily lives, even when the comparisons are unwanted. Therefore, despite what may be ones' preferences for comparisons in a particular direction, in daily life one is likely to encounter both upward and downward comparisons.

In addition, people may have little control over whether they make social comparisons, for research indicates that this process may be automatic. In fact, people may even automatically compare themselves to target's that are inappropriate standards of comparison

(Gilbert, Giesler, & Morris, 1995). Gilbert and colleagues conducted two studies in which participants made social comparisons even when the participants knew in advance that the comparison target was inappropriate. In the first study, participants' self-ratings of ability were impacted by a confederate's performance on the same task, despite the fact that participants were told ahead of time that the confederate was an inappropriate comparison target. In the second study participants showed a boost in affect (i.e., felt happier) when they outperformed a confederate, despite knowing that the confederate was an inappropriate comparison target. In sum, these studies indicate that even when it is apparent that a comparison target is inappropriate, there are certain situations in which people can not help but compare themselves to others.

This work indicates that people are exposed to a range of comparisons and that they may even make them when they are inappropriate. Thus, it may be important to not only consider the direction of the comparison, but also what effects being exposed to a range of comparisons may have on people's evaluations. That is, how might being exposed to variable comparisons alter evaluations?

Variability Hypothesis

Countless studies have examined how the direction of the social comparison influences evaluation (Aspinwall & Taylor, 1993; Brickman & Bulman, 1977; Bui & Pelham, 1999; Collins, 1996; Marsh & Parker, 1984; Pyszczynski et al., 1985; Wills, 1981; Wilson & Benner, 1971), but they have yet to examine how being exposed to variable or mixed comparisons might influence evaluation. In daily life, exposure to variable RSC information means receiving information that one's romantic relationship is BOTH better and worse than other people's relationships. For example, one may compare her own relationship with another couple's relationship and come to the conclusion that her own relationship is better than the comparison relationship. However, the very next comparison she makes may lead her to conclude that her own relationship is worse. This person is receiving mixed evidence about her relationship and does not know with certainty

where her relationship stands. As a result, she may become very uncertain about her relationship status and experience relationship uncertainty, which I define as feeling unsure about whether one's relationship will continue to satisfy one's relationship needs in the future.

Feeling uncertain about one's relationship may lead to negative relationship evaluations. For example, Attridge, Bersheid, and Spreacher (1998) found that relationship insecurity, which is akin to relationship uncertainty, leads to more negative relationship outcomes. Specifically, they found that relationship insecurity was associated with decreases in relationship commitment, satisfaction and love, as well as increases in perceived relationship alternatives, conflict, and jealousy. Attridge and colleagues argue that the reason that insecurity leads to more negative relationship evaluation is that feeling unsure about whether one's partner is going to fulfill one's relationship needs in the future decreases commitment to (or dependence on) the relationship. After all who wants to commit to a partner/relationship when they believe it may not satisfy their future needs? Thus, those who feel uncertain about their relationship doubt that the relationship will satisfy their needs in the future and begin to pull away from the relationship and see the relationship in a more negative light.

Based on this work, I propose the *variability hypothesis*, which is that exposure to variable RSC information increases relationship uncertainty because exposure to both upward and downward RSCs leaves one feeling unsure where their relationship stands. Moreover, I predict that relationship uncertainty will mediate the link between exposure to variable RSCs and negative relationship evaluations. In that, when trying to form their evaluations, individuals faced with variable RSCs feel uncertain about the relationship (not knowing whether it is better or worse than others), and this uncertainty leads to more negative relationship evaluation.

To my knowledge, researchers have not examined how the process of making variable comparisons might influence relationship evaluations. This gap occurs because researchers typically only expose participants to either all upward or downward comparisons. If a person only receives one type of information, then they are receiving consistent (i.e., not variable)

information and should feel pretty certain about where their relationship stands. As a result, the direction of the comparison (i.e., exposure to non-variable comparison information) should influence evaluation, but the effect should not be due to uncertainty. Thus, although I have proposed that relationship uncertainty is an important factor in the RSC process, I did not hypothesize that direction of comparison information would influence relationship uncertainty.

Even though researchers have not examined how variable comparison information may influence evaluations, research on how individuals make evaluations about their self-worth lends support to the variability hypothesis. Crocker, Luhtanen, Cooper, and Bouvrette (2003) find that college students who base their self-worth on the approval from others tend to have more fragile self-esteem than those who do not base their self-worth on the approval of others. The authors argue that those who base their self-worth on receiving approval from others experience more fragile self-esteem because they can not control the direction of the information they receive from others. Those who rely on approval from others really base their self-worth on *consistent* approval from others, for this information tells them where they stand. However, the information they receive from others can be quite variable (i.e., approval from some and disapproval from others), and people's sense of self-worth becomes fragile because it is constantly changing depending on the feedback that they receive. This research lends support to my predictions, in that here exposure to inconsistent (i.e., variable) information leads to a more fragile sense of self, whereas I am predicting that exposure to variable RSC information will lead to a more fragile sense of the relationship (i.e., increased relationship uncertainty).

Aspects of the variability hypothesis also are supported by Smith LeBeau and Buckingham, (2007; Study 3). They found that uncertainty may explain the effect that RSC tendencies have on negative evaluations. Specifically, RSC tendencies at time 1 positively predicted relationship uncertainty and negatively predicted relationship satisfaction at time 2. When both RSC tendencies at time 1 and uncertainty at time 2 were used as predictors of relationship satisfaction, only relationship uncertainty remained a significant predictor of

relationship satisfaction. Thus, these results indicated that relationship uncertainty mediated the effect of RSC tendencies on relationship satisfaction. What has not yet been tested is whether it is the variability of the RSCs that led to this uncertainty, which is a goal of the studies that follow.

Ironic Consequences Hypothesis

Although variability of comparison information has not been examined in previous social comparison research, social comparison has been linked to uncertainty since its formulation. Festinger (1954) argued that people have a drive to evaluate their opinions and abilities. When people are uncertain about their standing, according to Festinger, they compare with others. This part of Festinger's theory has received empirical support in that social comparisons are particularly likely during periods of uncertainty (e.g., Taylor, Buunk, & Aspinwall, 1990) and frequency of social comparisons is related to uncertainty (Butzer & Kuiper, 2006) and insecurity about the self (i.e., low self-esteem; Gibbons & Buunk, 1999). Thus, a logical hypothesis following from Festinger's original theory is that individual differences in relationship uncertainty will influence comparison seeking, in that individuals high in relationship uncertainty will seek more RSCs than those low in relationship uncertainty.

Presumably, individuals high in uncertainty are seeking out social comparisons to alleviate their uncertainty. The idea that people are generally motivated to reduce uncertainty is supported by a wealth of research in the uncertainty orientation literature (Sorrentino, Short, & Raynor 1984; Trope, 1975). They find that when people experience uncertainty, people seek out diagnostic information in order to reduce it. Thus, when allowed to seek RSC information, I would expect respondents experiencing relationship uncertainty to seek more comparisons than individuals feeling certain about their relationship. In addition, because exposure to variable RSCs increases uncertainty, I expect exposure to variable RSCs to lead to more comparison seeking than exposure to non-variable RSCs. Finally, I expect variability and relationship uncertainty to interact so that those exposed to variable information will seek more information if they are feeling uncertain about their relationship. Even though Festinger (1954) argues that

people seek social comparisons to *decrease* their uncertainty and to *avoid* negative outcomes, this may only be true if the information is consistent (e.g., all upward or all downward). If the social comparisons provide variable information, then I am proposing that increases in exposure to (or the seeking of) variable RSC information leads to both *increased* uncertainty and *increased* negative outcomes in the form of negative relationship evaluation. That is, obtaining variable RSC information may increase comparison seeking which in turn will ironically increase uncertainty rather than alleviate it.

Therefore, the *ironic consequences hypothesis* is that individuals chronically high in relationship uncertainty versus those low in relationship uncertainty will seek more RSCs in hopes of alleviating their uncertainty. In addition, I predict that individuals exposed to variable versus non-variable RSCs will seek more comparisons because variable information increases uncertainty and thus increases information seeking. I also expect variability and relationship uncertainty to interact so that uncertain individuals exposed to variable comparison information will seek the most comparisons. Finally, I predict that individuals who seek the most comparisons will also report the highest rates of uncertainty post comparing. This outcome is ironic because people seek comparisons in hopes of alleviating uncertainty and in the end uncertainty is increased.

Summary of Hypotheses and Overview of Experiments

Two studies were conducted to test the directionality, variability, and ironic consequences hypotheses. Study 1 examines the directionality and the variability hypotheses. Recall, that these two hypotheses could potentially explain why chronic RSC tendencies are linked to more negative relationship evaluations. An obvious way to examine this link would be to measure chronic RSC tendencies and examine whether those with high tendencies make more upward or variable comparisons than those low in chronic RSC tendencies. However, my goal in the current studies is to establish that variability and not directionality of RSCs leads to increased relationship uncertainty. Therefore, differentiation between variability and

directionality of RSC information is important for testing my hypotheses. Examining chronic RSC tendencies would not allow for this differentiation as participants would be free to seek as many comparisons as they wanted, in any direction, and with a varying range of variability, and the study would lack experimental control. As a result, I would not be able to discern whether number of comparisons, direction, or variability in comparison information was driving the effect.

Thus, because my focus is testing the directionality and variability hypotheses, I decided to begin by testing their viability in a controlled situation. Specifically, I plan on manipulating respondents' exposure to RSCs, that way I can hold the number of comparisons participants make constant (in Study 1) and systematically expose them to either variable or non-variable information. Thus my strategy in the following studies is to manipulate comparison information type and examine reactions to variable comparisons (mimicking what I believe occurs in daily life) versus non-variable comparisons to test my predictions.

Study 1 investigates the variability and the directionality hypotheses. To test these hypotheses, in Study 1, participants will be exposed to either non-variable (upward only or downward only) or variable (upward and downward) RSC information. In order to assure that the number of comparisons that respondents are exposed to does not influence these results, all respondents will see the same number of comparisons. Afterwards, they will complete measures of relationship uncertainty and evaluation.

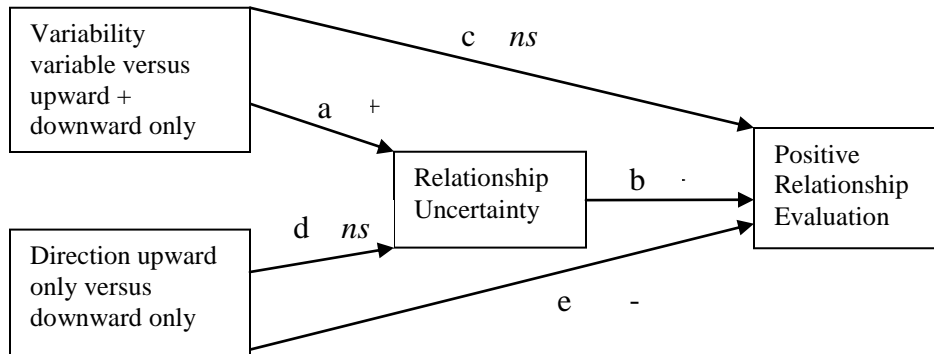
The first hypothesis is the *variability hypothesis*, which states that relationship uncertainty mediates the association between variability of comparison information and relationship evaluation. More specifically, this hypothesis consists of three sub-hypotheses: I predict that, as shown in the top half of Figure 1,

Variability Hypothesis A: exposure to variable comparison (versus non-variable comparisons) increases relationship uncertainty (link a).

Variability Hypothesis B: increases in relationship uncertainty lead to more negative relationship evaluations (link b).

Variability Hypothesis C: relationship uncertainty mediates the association between exposure to variable comparisons and relationship evaluation (the non-significance of link c).

Figure 1: Path model of the Variability and Directionality Hypotheses



Study 1 also tests the *directionality hypothesis* which states that exposure to non-variable comparison information influences relationship evaluation. Note that in the directionality hypothesis, there is no link between direction and uncertainty. I expect that relationship uncertainty will NOT mediate the effect of comparison direction on relationship evaluation because exposure to consistent information about one's relationship being better or worse than other people's relationships should lead to certainty about where one's relationships stands. More specifically, this directionality hypothesis consists of two sub-hypotheses: I predict that, as shown on the bottom half of Figure 1,

Directionality Hypothesis A: exposure to non-variable RSCs will be related to relationship evaluation, in that exposure to upward only comparisons (versus downward only) leads to negative relationship evaluation (link e),

Directionality Hypothesis B: the association between exposure to non-variable RSCs and relationship evaluation is not mediated by relationship uncertainty (the non-significance of link d).

Recall that I predict that direction of comparison information will not influence relationship uncertainty because participants in the upward and downward comparison conditions are receiving consistent information. Thus, participants in those conditions should feel certain about whether their relationship is better or worse than other people's relationships and certainty should not play a role in the association between direction of comparison information and relationship evaluation.

Study 2 builds on the first study by investigating not only the directionality and variability hypothesis, but also the ironic consequence hypothesis. First, Study 2 extends Study 1 by examining whether the directionality and variability hypotheses also apply to situations in which participants are allowed to seek comparisons rather than forced to view them. In Study 1, it is important to hold constant the amount of information participants receive, so that results directly test the effect of direction and variability of comparison information on the RSC process. Therefore the results from Study 1 can not be attributed to differences in amount of information participants received. However, because my overall goal in this research is to explain the consequences of the chronic RSC tendency process, testing the variability and directionality hypotheses when participants are allowed to seek comparison is important. If the results from Study 1 are replicated when participants are allowed to seek RSCs, it will be convincing evidence that these factors play an important role in the chronic RSC tendencies and relationship evaluation process. Allowing participants to seek comparisons is a proxy for what chronic social comparers do in their daily lives, in that participants can seek as many comparisons as they like in various directions (in the variable condition). Therefore replicating the variability and directionality results from Study 1, when participants are allowed to seek comparisons indicates that these results are not just artifacts of the experimental design in which exposure to comparison information is forced.

The second goal of Study 2 is to examine the ironic consequences of the RSC process. As mentioned previously Festinger's (1954) original social comparison theory proposes that

individuals experiencing uncertainty seek comparison information to alleviate this uncertainty. I have proposed that reliance on comparison information leads to exposure to variable comparison information which in turn leads to *increases* rather than decreases in relationship uncertainty. Thus, it appears that the RSC process has ironic consequences, in that uncertain individuals seek comparisons in an attempt to alleviate uncertainty, but instead end up more uncertain than those who did not seek comparisons. More specifically, this *ironic consequences hypothesis* consists of three sub-hypotheses,

Ironic Consequences Hypothesis A: Uncertain versus certain individuals will seek more RSCs.

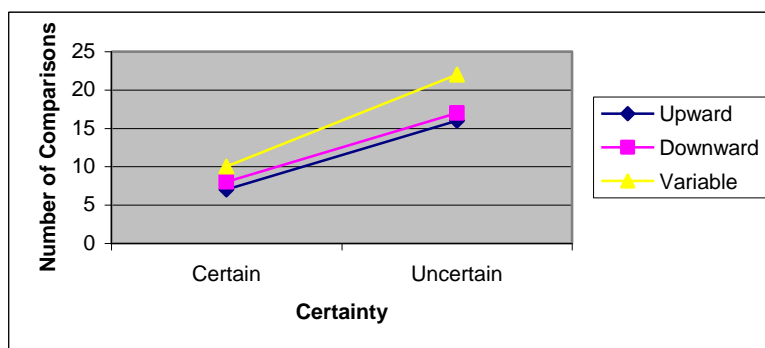
Ironic Consequences Hypothesis B: Individuals exposed to variable RSCs will seek more comparisons than those exposed to non-variable upward or downward RSCs. In addition, variability and uncertainty will interact so that those feeling uncertain and exposed to variable comparisons will seek the most comparisons.

Ironic Consequences Hypothesis C: Those who seek the most RSCs will report the highest levels of relationship uncertainty.

Initial levels of chronic relationship uncertainty will be measured in two ways. First, research indicates that an excellent way to measure trait levels of relationship uncertainty is to assess individual differences in attachment styles (Griffin & Bartholomew, 1994). According to Bolby (1973) attachment styles are people's working model of their self and of other people. These working models influence people's feelings regarding close relationships with others. Individuals with secure attachments feel comfort and pleasure in close relationships. Individuals with less secure attachments feel anxiety or ambivalence about being close to others and therefore experience more *uncertainty* in their relationships (Griffin & Bartholomew, 1994). Thus, attachment style will be an indicator of individual differences in relationship uncertainty in Experiment 2.

However, attachment style reflects an overall tendency to be insecure in one's relationships. Thus, insecurely attached individuals should be generally uncertain about their relationships with their parents, friends, as well as with their romantic partners. This measure therefore does not allow for the fact that despite a history of secure/insecure relationships, it is possible for people to have a relationship that contradicts this trend. A securely attached person can feel insecure in any single, specific relationship. Similarly, an insecurely attached person can feel secure in any single, specific relationship. Therefore, I also included a measure of relationship specific uncertainty (i.e., the extent to which participants felt uncertain about their current relationship). I hypothesize that that these two measures of relationship uncertainty will interact with variability of comparison information to predict the number of comparisons sought. More specifically, I predict that, as shown in Figure 2, individuals with high levels of relationship uncertainty (measured by either attachment styles or relationship specific uncertainty) will seek more comparisons than individuals with secure attachments (part a). Individuals exposed to variable comparison information will make more comparisons than individuals exposed to non-variable comparison information and variability and relationship uncertainty will interact so that participants experiencing high levels of relationship uncertainty and exposed to variable RSCs will seek the most comparisons (part b).

Figure 2: Number of Comparisons as a Function of Relationship Certainty and RSC Information Type.



Finally, to illustrate the ironic consequences of the RSC seeking process, I will examine the association between number of comparisons sought and relationship uncertainty. I predict that increases in comparisons sought will predict increases in relationship uncertainty (part c).

Chapter 2: Study 1

Study 1 addresses the question: How do direction and variability of information influence relationship uncertainty and relationship evaluation? To address this question, I exposed participants to either upward only, downward only or variable (both upward and downward social comparisons) and examined the influence of comparison information type on relationship uncertainty and evaluation. I predicted that exposure to variable information will be associated with negative relationship evaluation, and this association will be mediated by relationship uncertainty, whereas exposure to upward versus downward only comparisons will be associated with negative relationship evaluation, regardless of uncertainty.

Study 1 also included a pre-test period in which participants completed measures of relationship uncertainty and evaluation 2 weeks prior to being exposed to comparison information. This testing was done as a way to assure random assignment to comparison information type conditions and to examine whether results remained when controlling for baseline levels of relationship uncertainty and evaluation.

Participants

At time 1, participants were 293 (226 females, 67 males) undergraduates who participated for credit in their introductory Psychology course. Participants reported being in their current relationship from less than a month to 84 months ($M = 13.56$ months). When asked to indicate how they would define the status of their current relationship most ($N = 198$) participants reported their current relationship status as dating exclusively, 87 reported their status as dating casually, 5 reported living with their partner, and 2 participants reported being engaged.

Two weeks later, 252 of the original participants completed part 2 of the study. At time 1, participants were instructed to generate a pin number (their birth date and last two digits of their phone number) that they could use to identify themselves at time 2, so I could match their data from the two time periods. The 204 participants who participated at both time periods and who correctly reported their pin number so the data could be matched were included in the analysis.

Finally, to test the key predictions in these studies it was important that participants received the comparison information manipulation directly prior to completing the dependent measures. For participants who took over 2 hours to complete the survey it was impossible to know whether the integrity of the experimental manipulation was maintained and therefore it was not appropriate to keep them in the analyses. Thus, participants who took longer than 2 hours to complete the survey were removed from the analyses. This criterion for inclusion was based on the assumption that responses outside these parameters did not represent a reasonable response time, given the number of items to be completed. Twenty-three participants were dropped and the remaining 181 participants (139 females, 41 males, 1 unknown) were included in the analyses. These participants reported being in their current relationship from less than a month to 84 months ($M = 14.46$)¹. Most of the participants ($N = 133$) reported their current relationship status as dating exclusively, 46 reported their status as dating casually, 1 reported living together, and 1 was engaged.

Procedures and Materials

First, participants learned that the study concerned how individuals with different personalities evaluate their close relationships. After signing up for the study participants were given a link to a web survey (developed in Survey Monkey) where they were presented with all experimental instructions and measures. Study 1 was a two part study where participants completed part 1 and then were given a link to part 2, two weeks later.

Time 1 Measures

Recall that the purpose of the pre-testing period was to assure random assignment to comparison information type conditions. More specifically, baseline measures were used to make sure that the comparison information type groups did not differ in initial relationship uncertainty and evaluation. These measures were also used to examine whether results concerning the directionality and variability hypothesis remained when controlling for baseline

levels of relationship uncertainty and evaluation. Thus, I assessed relationship uncertainty and evaluation at time 1.

Relationship Uncertainty. Relationship uncertainty was measured with a relationship insecurity measure, which is defined in the same way as relationship uncertainty, (Attridge, et al., 1998; Appendix A; $\alpha = .91$). This measure taps uncertainty about whether one's relationship will continue (i.e., Right now, at this moment I am concerned about my relationship), whether the relationship is a good relationship (My relationship with X is stable and quietly satisfying, reversed), and doubts about whether one's partner feels the same way about them as they feel about their partner (i.e., I worry that X doesn't care as much for me as I do for X).

Relationship Evaluation. In these studies, I am defining relationship evaluation rather globally, including feelings of relationship commitment, satisfaction, quality of relationship alternatives, investment size and intimacy. I chose to include each of these factors in my definition of relationship evaluation because they have been shown to be the key components of overall relationship evaluation (Rusbult, Martz, & Agnew, 1998; Rusbult, Onizuka, & Lipkus, 1993). To assess this construct, I used two measures. The first measure was the Investment Model Scale (IMS; Rusbult, et al., 1998; Appendix B) which includes four subscales examining commitment level ($\alpha = .90$), satisfaction level ($\alpha = .94$), quality of alternatives ($\alpha = .88$), and investment size ($\alpha = .88$). The second relationship measure participants completed was the Personal Assessment of Intimacy in Relationships (PAIR; Schaefer & Olson, 1981) which assesses self-reported feelings of intimacy ($\alpha = .94$) as shown in Appendix C.

Because I did not make individualized predictions regarding the specific factors involved in relationship evaluation, to simplify data analysis and interpretation, composites of the relationship evaluation measures were subjected to factor analysis to determine whether these measures can be combined to form one higher order measure of relationship evaluation. The factor analysis indicated that the subscales all loaded highly on 1 factor and reliability analysis

indicated that the composite had good reliability ($\alpha = .85$). Therefore, the subscales were standardized and combined to form a general relationship evaluation variable.

Time 2 Procedures:

Two weeks after Time 1, participants went to a second webpage and completed time 2 of the study. After completing demographic information about their relationship, participants received the following instructions:

We are going to ask you to write an assessment of your current relationship. However, before you write your own assessment, in order to give you an idea about the things people typically write in assessments, we would like to show you some examples from assessments written by previous participants.

We have found that the most accurate relationship assessments come from thinking about one's relationship in comparison to other people's relationships. Therefore, after each relationship assessment example we are going to ask you to rate that assessment in terms of whether you thought the relationship described in the assessment was better or worse than your own current relationship.

Participants then saw 16 relationship descriptions. These descriptions were based on relationship descriptions that were written by participants in a previous study (Smith LeBeau & Buckingham, 2007 Study 2, see Appendix D). Participants saw either upward only ($N = 66$; i.e., My relationship is amazing. We both care more about the other person than we do for ourselves), downward only ($N = 72$; It began as a romantic relationship that wasn't going to be serious. It turned serious and we now live together in a state of frustration and boredom), or variable ($N = 43$; alternating upward and downward) comparison information.

It is vital to the predictions that participants perceive some of the RSCs as upward and some as downward. Therefore, respondents were shown comparisons that have been rated as extremely upward (i.e., very positive) or extremely downward (i.e., very negative). Specifically, each assessment was rated independently by two trained research assistants on a scale ranging from 1- *extremely negative* to 5 *extremely positive* (with inter-rater reliabilities ranging from .74 - .82). Only those assessments receiving a mean rating of 2 or less were used as downward comparisons and only those with a mean rating of 5 were used as upward comparisons.

To also establish that all comparisons were either upward or downward, after each relationship description, respondents rated the RSC on a scale of 1- *worse than my relationship* to 10-*better than my relationship*. When participants finished viewing the example relationship descriptions, they then completed questionnaires containing measures of relationship uncertainty and evaluation.

Relationship Uncertainty. First, as in time 1, Attridge et al.'s (1998) relationship insecurity measure was used to assess general relationship uncertainty. Additionally, a measure of momentary uncertainty was also administered. Previous research indicates that chronic comparison tendencies influence general relationship uncertainty (Smith LeBeau & Buckingham, 2007). However, exposure to comparison information may operate at a more specific level than chronic comparison tendencies and influence more situation specific rather than general levels of uncertainty. Therefore, I included a measure of momentary feelings of relationship uncertainty with items shown in Appendix E. Items on the momentary uncertainty scale were rated from 1- *not at all* to 10 - *extremely*. Due to the fact that items from these two measures loaded onto one higher order relationship uncertainty factor, the items from these two measures were combined to form one composite measure of general relationship uncertainty ($\alpha = .93$).

Relationship Evaluation. To assess relationship evaluation, I used the IMS (Rusbult et al., 1998) and the PAIR (Schaefer & Olson, 1981), the same measures as Time 1. Once again, to simplify data analysis and interpretation, the subscales were subjected to factor analysis and results indicated that the subscales all loaded highly onto one factor. Therefore the subscales were standardized and then combined to form one higher order relationship evaluation composite. This composite scale had good reliability ($\alpha = .88$).

When respondents finished all of the self-report measures, they read a debriefing statement and then clicked a link to another webpage where they could enter their information to receive credit for participating².

Results

The means, standard deviations and correlations of all variables in Study 1, appear in Table 1, Appendix J.

Assuring Random Assignment

Prior to conducting manipulation checks, it was important to examine whether random assignment to variability of comparison information groups was successful. In order to examine random assignment, I conducted a Multivariate analysis of variance (MANOVA) to investigate whether relationship uncertainty and relationship evaluation at time 1 differed for individuals in the 3 comparison type conditions (upward, variable, downward). Results revealed that random assignment had been achieved, for comparison condition did not influence time 1 relationship evaluation or uncertainty, $F(2, 181) = .73, p = .57$.

Manipulation Checks

Respondents saw one of three different sets of comparisons (upward, downward, variable), to be sure that this manipulation did indeed vary the type of comparisons people made, I conducted two different analyses. First, to determine whether the comparisons successfully differed from each other in terms of direction, I created a mean comparative evaluation score for each participant from their ratings of each RSC they saw (with higher scores indicating the participants saw the comparison relationship as better than their own relationship). Then, I subjected the comparison evaluation composite to a one-way analysis of variance (ANOVA) with comparison condition as the independent variable. The comparison manipulation was successful, participants in the downward comparison condition rated the comparison relationships lower ($M = 2.49, SD = 1.47$) than participants in the variable condition ($M = 3.95, SD = 1.15$), who rated the comparisons lower than respondents in the upward condition ($M = 5.68, SD = 1.45$), $F(2, 181) = 90.41, p < .001$. Post hoc tests indicated that all conditions significantly differed from each other (downward vs variable, $F(1, 178) = 29.42, p < .001$, variable versus upward, $F(1, 178) = 40.40, p < .001$, upward vs downward, $F(1, 178) =$

180.73, $p < .001$). Although the overall pattern of results seems to indicate that the comparison direction manipulation was successful, it is important to note that participants in the upward comparison condition did not rate the comparisons as better than their own relationship. Respondents in the upward comparison condition had a mean comparison rating that fell at the mid-point of the scale. Thus, indicating that respondents in this condition actually saw the comparisons as on par with their own relationship, or as lateral comparisons rather than upward comparisons.

Second, I tested the success of the variability manipulation. I created a composite standard deviation measure of participants' ratings of the RSCs (with higher scores indicating more variability in ratings). I subjected this variability composite to a one-way ANOVA with comparison type as the independent variable. Results supported the prediction that individuals in the variable comparison condition made much more variable ratings ($M = 2.36$; $SD = .80$) than participants in the upward ($M = 1.53$; $SD = .67$) and downward ($M = 1.03$; $SD = .69$) conditions, $F(2, 181) = 47.27$, $p < .001$. Post hoc tests indicated that all conditions significantly differed from each other (variable vs upward, $F(1, 178) = 36.14$, $p < .001$; variable versus downward, $F(1, 178) = 94.53$, $p < .001$; upward vs downward, $F(1, 178) = 16.68$, $p < .001$). The overall pattern of these results provides evidence that the manipulation of variability of comparison information was successful. However, the results also indicate that the upward and downward comparison conditions differed in terms of variability, with respondents perceiving the upward comparisons as being more variable than the downward comparisons. I had originally predicted that the upward and downward comparison conditions would not differ as participants in both conditions were receiving consistent information that their relationships were either better than or worse than other people's relationships.

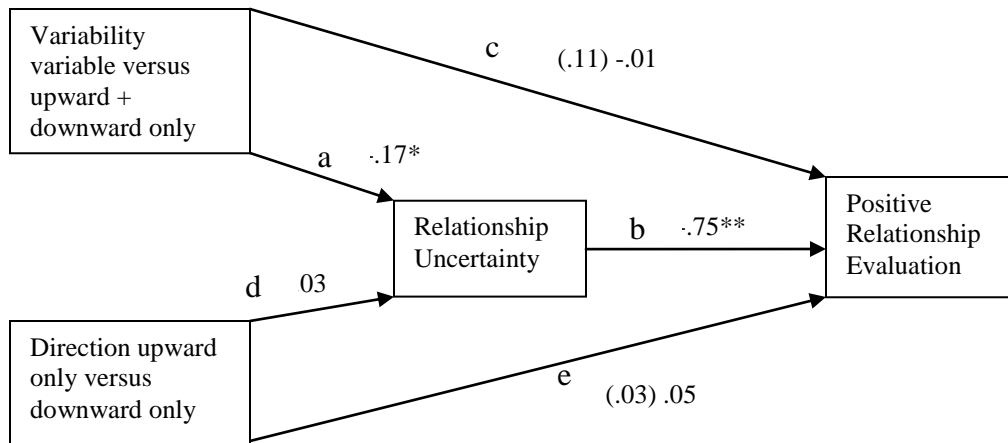
Variability and Direction of Information, Relationship Uncertainty and Evaluation.

Experiment 1 examined two key predictions, which are depicted in Figure 1. First, the data could be used to test the *variability hypothesis*, which is that exposure to variable

comparison (versus non-variable comparisons) increases relationship uncertainty (link a), and that increases in relationship uncertainty lead to more negative relationship evaluations (link b). Finally, relationship uncertainty should mediate the effect of exposure to comparison information on relationship evaluation (the non-significance of link c). Second, the data could be used to test the *directionality hypothesis*, which is that exposure to non-variable comparison information will be related to relationship evaluation, in that exposure to upward only comparisons (versus downward only) leads to negative relationship evaluation (link e), but that this relationship is not mediated by relationship uncertainty (the non-significance of link d).

The first step to testing these predictions was to create two dummy coded predictor variables: one that captured *variability* (labeled as such in Figure 1) of comparison information by comparing the variable comparison condition with both upward and downward conditions, the other captured *direction* (labeled as such in Figure 1) of comparison information by comparing the upward condition to the downward condition. Then, I conducted a Structural Equation Modeling (SEM) analysis testing the path model depicted in Figure 1 with direction and variability as predictor variables, relationship uncertainty as a mediator, and relationship evaluation as the outcome variable. Results as shown in Figure 3 (the number in parentheses represent the direct effects of variability and directionality on relationship evaluation), did not support predictions. Only the association between variability of comparison information and uncertainty (link a, $\beta = -.16$, $p < .05$), and the association between variability of comparison information and relationship evaluation (link b, $\beta = -.75$, $p < .001$) were significant. The association between uncertainty and relationship evaluation was in the predicted direction, with more uncertainty associated with decreased relationship evaluation. However, the association between variability of comparison information and uncertainty opposed the predicted direction of this effect, in that results indicated that as participants were exposed to more variable information, relationship uncertainty decreased. None of the other links were significant, p 's > .27.

Figure 3: Path Model Depicting Tests of the Variability and Directionality Hypotheses in Study 1



Results from the manipulation checks provide possible explanations regarding the lack of significance in the SEM analysis. As mentioned previously, the variability manipulation check provided evidence that variability of comparison ratings were significantly higher for the variable condition versus the non-variable conditions. However, the variability of comparison ratings in the upward and downward conditions were significantly different from each other as well - with individuals in the upward condition making more variable comparison ratings than participants in the downward condition. The fact that respondents in the upward comparison condition perceived the comparisons as variable may explain why the results from the SEM analysis were not significant. It may be the case that the categorical breakdown was too restrictive, in that upward comparisons were seen as quite variable making it inappropriate to classify them as non-variable. Results from the directionality manipulation check indicate that this manipulation may not have operated in an ideal fashion either. Although the manipulation check reveals that individuals in the upward condition saw the RSCs as more upward than those in the downward condition, they did not view the comparisons as better than their own relationship. The mean rating of RSCs for respondents in the upward condition fell right at the midpoint of the scale ($M =$

5.68, on a scale of 1-10). Thus, these comparisons may not have been upward comparisons as much as they were lateral comparisons.

In sum, respondents perceived neither direction nor variability of comparison information as they were originally intended. Therefore, it became clear that using the manipulated categories was inappropriate, so I turned my attention to participants' self-reported perceptions of comparison information. Recall, as a manipulation check of comparison direction, participants were asked to rate each RSC in terms of whether they thought each comparison was upward or downward in relation to their own relationship. In addition, I used a composite standard deviation of those ratings as a manipulation check of variability. Therefore, these self-reported perceptions of variability and direction capture the full spectrum of comparison direction and variability as actually perceived by the participants. Thus, rather than relying on the manipulated groups which did match participants' perceptions of the comparison information, I utilized participants' self-reported perceptions of variability and directionality. Relying on self-reports of variability and directionality allows me to compare responses from those who actually viewed the comparisons as upward versus downward and variable versus non-variable.

To assess whether participants' self-reported perceptions of the RSC information would influence relationship uncertainty and evaluation, I utilized the manipulation checks of variability and direction as predictors to test the directionality and variability hypotheses. Because both variability and direction of comparison information come from the same dependent measure (i.e., participants' comparison evaluation ratings), it was inappropriate to include both measures as predictors in an SEM analysis. Therefore, I conducted separate regression analyses to test each prediction.

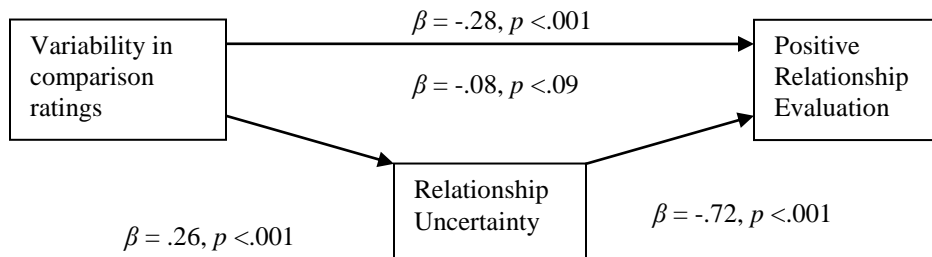
Variability of Comparison Information

First, I tested the variability hypothesis (i.e., that variability of comparison information would negatively predict relationship evaluation, and that the variability of information and relationship evaluation association would be mediated by relationship uncertainty). To do so, I

conducted a series of linear regression analyses. Figure 4 presents results from the variability regression analyses. First, to test the direct effect of variability of comparison ratings on relationship evaluation, I regressed relationship evaluation on to variability of ratings. Results supported the prediction that the effect of variability on relationship evaluation was significant, $\beta = -.28$, $t(1, 180) = -3.87$, $p < .001$, with increased variability in ratings leading to more negative relationship evaluation. Next, to examine whether relationship uncertainty mediates the association between variability and relationship evaluation, I analyzed the indirect (or mediated) effect of variability of comparison information on relationship evaluation, through relationship uncertainty. Following suggestions by MacKinnon and colleagues (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002; MacKinnon, Lockwood & Williams, 2004), I first regressed relationship uncertainty on to variability of comparison ratings. Results supported the prediction that as participants made more variable ratings, they indicated more relationship uncertainty $\beta = .27$, $t(1, 180) = 3.67$, $p < .001$. Then, I regressed relationship evaluation on to relationship uncertainty and variability of comparison ratings, and results indicated that variability of comparison ratings was no longer a significant predictor of relationship evaluation, $\beta = -.08$, $t(2, 180) = -1.67$, $p = .09$. However, relationship uncertainty remained a significant predictor, $\beta = -.72$, $t(2, 180) = -13.93$, $p < .001$, even when controlling for variability of comparison ratings. Finally, to test the significance of the indirect (mediation) effect, I calculated the cross product of the effect of variability on relationship uncertainty and the effect of uncertainty on relationship evaluation. Then I divided the cross product of the effects by the cross product of their standard errors, which gave me the significance of the indirect effect, $Z = -6.55$, which was compared to the critical values table provided by MacKinnon et al., (2002). The critical value for an effect at $p < .01 = -1.11$, which is less than the significance of the indirect effect obtained here. Therefore, the indirect effect of variability of comparison information on relationship evaluation through relationship uncertainty was significant. Thus, results supported the prediction that relationship

uncertainty mediates the association between variability of comparison ratings and relationship evaluation.

Figure 4: Results from the Variability Hypothesis, Study 1

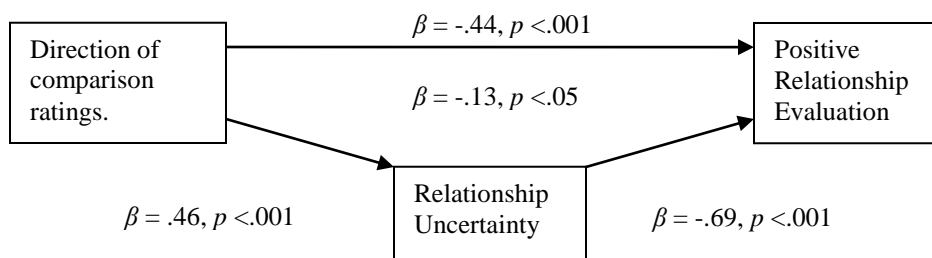


Direction of Comparison Information

I also examined the association between direction of comparison information and relationship evaluation. I predicted that direction of comparison information would negatively predict relationship evaluation with exposure to upward comparisons leading to more negative relationship evaluation. In addition, I expected that the association between direction of comparison information and relationship evaluation would be NOT be mediated by relationship uncertainty. To test these hypotheses, I began by examining the effect of directionality of comparison information on relationship evaluation by regressing relationship evaluation on to comparison direction ratings. Results (as shown in Figure 5) supported the prediction that as participants rated the comparison as better than their own, they reported less positive relationship evaluation, $\beta = -.44$, $t(1, 180) = 6.64$, $p < .001$. Next, to examine whether relationship uncertainty mediated the association between directionality and relationship evaluation, I analyzed the indirect effect of direction of comparison information on relationship evaluation, through relationship uncertainty. Once again, I followed suggestions by MacKinnon and colleagues (MacKinnon et al., 2002; 2004), and began by regressing relationship uncertainty on to comparison ratings. Contrary to predictions, results indicated that the more upward the participants rated the RSCs, the more relationship uncertainty they reported, $\beta = .46$, $t(1, 180) =$

6.90, $p < .001$. Then, I regressed relationship evaluation on to relationship uncertainty and direction of comparison information, and results indicated that both direction of comparison ratings, $\beta = -.13$, $t(2, 180) = -2.29$, $p < .05$ and relationship uncertainty, $\beta = -.69$, $t(2, 180) = -12.33$, $p < .001$ remained significant predictors of relationship evaluation. Finally, to test the significance of the indirect (or mediated) effect, I calculated the cross product of the effect of direction of RSCs on relationship uncertainty and the effect of uncertainty on relationship evaluation. Then I divided the cross product of the effects by the cross product of their standard errors, which gave me the significance of the indirect effect, $Z = -24.15$, which was compared to the critical values table provided by MacKinnon et al., (2002). The critical value for an effect at $p < .01 = -1.11$, which is less than the significance of the indirect effect obtained here. Therefore, the indirect effect of direction of comparison information on relationship evaluation through relationship uncertainty was significant. Thus, these results indicated that contrary to predictions relationship uncertainty was a significant mediator of the association between comparison direction and relationship evaluation.

Figure 5: Results from Directionality Hypothesis, Study 1



Controlling for Baseline Relationship Uncertainty and Evaluation

Finally, regression analysis testing the variability and directionality hypotheses were re-run controlling for Time 1 relationship uncertainty and evaluation. First results indicated that directionality, $\beta = -.14$, $t(3, 180) = -2.87$, $p < .01$ and variability, $\beta = -.14$, $t(3, 180) = -2.87$, $p < .01$ were both significant predictors of time 2 relationship evaluation, controlling for time 1

relationship uncertainty and evaluation. In addition, results indicated that the indirect effect of variability on relationship evaluation through relationship uncertainty remained significant when controlling for baseline relationship evaluation and uncertainty (variability predicting time 2 uncertainty, $\beta = .12$, $t(3, 180) = 2.15$, $p < .05$; time 2 uncertainty predicting evaluation, $\beta = -.48$, $t(3, 180) = -8.15$, $p < .001$; $Z = -19.33$, ($CL_{.99} = -1.11$), $p > .01$). Finally, results indicated that the indirect effect of directionality on relationship evaluation through relationship uncertainty was significant controlling for baseline relationship uncertainty and evaluation, (directionality predicting time 2 uncertainty, $\beta = .20$, $t(3, 180) = -3.61$, $p < .001$; time 2 uncertainty predicting evaluation controlling for time 2 uncertainty, $\beta = -.46$, $t(3, 180) = -7.74$, $p < .001$; $Z = -92.00$, ($CL_{.99} = -1.11$), $p > .01$). In sum, variability and direction of comparison information remained significant predictors of time 2 relationship evaluation when controlling for baseline measures of relationship uncertainty and evaluation. In addition, time 2 relationship uncertainty was still a mediator of the effect of both direction and variability of comparison information on relationship evaluation at time 2, controlling for baseline measures of relationship uncertainty and evaluation³.

Discussion

The goal of Study 1 was to test the variability and directionality hypotheses. To do so SEM analyses were conducted. The results failed to support either of these two hypotheses, because neither variability nor direction of comparison information significantly predicted relationship evaluation. It could be the case that my hypotheses were incorrect and that neither direction nor variability of comparison information influences relationship evaluation. However, these results could also be explained by the fact that that neither the direction nor the variability of comparison information manipulation was completely successful, in that participants did not perceive the RSCs as they were originally intended. As mentioned previously, participants in the upward RSC condition did not view the comparisons as better than their own relationship. In addition, participants made significantly more variable ratings of the upward comparisons than

downward comparisons, indicating that it was inappropriate to categorize upward comparisons as non-variable.

Therefore, knowing that the variability and directionality manipulations did not work, I relied on participants' self-reports of variability and direction of comparison information to test the hypotheses. Specifically I used participants' comparison ratings and the variability in their comparison ratings as participants' perceptions of the comparison information. Because variability and directionality now come from the same measure, it would be inappropriate to include both of them in a single SEM analyses. Thus, I conducted 2 separate path analyses. First, I examined the variability hypothesis, which was that relationship uncertainty would mediate the effect of perceptions of variability on relationship evaluations. Results supported predictions in that increased variability in comparison ratings led to more negative relationship evaluation. In addition, these results provided evidence regarding the mechanism by which variable RSCs impact relationship evaluation, in that exposure to variable RSCs leads to increased feelings of relationship uncertainty, which in turn leads to decreased relationship evaluation.

Next, I examined the directionality hypothesis, utilizing participants self-reports of comparison direction as a predictor of relationship uncertainty and evaluation. Results partially supported predictions regarding the association between direction of RSCs and relationship evaluation. As participants rated the RSCs more upward (i.e. better than their own relationship) they also reported more negative relationship evaluation. Contrary to predictions, however, results also indicated that relationship uncertainty was a significant mediator of the association between direction of RSCs and relationship evaluation. Originally, I had predicted that the effect of direction of RSCs on relationship evaluation would not be mediated by relationship uncertainty because participants were receiving consistent information about where their relationship stood relative to other people's relationships. However, it appears that even if the

information is consistent, when RSCs are perceived as upward comparisons, there is an increase in relationship uncertainty, which in turn leads to negative relationship evaluation.

One possible explanation for why exposure to upward comparisons increases relationship uncertainty is that participants may have seen the upward comparisons as inconsistent with their own view of their relationship. Participants in this study reported high initial relationship evaluation, therefore, receiving consistent information that other people's relationships are better than their own may be inconsistent with their own view of their relationship as a really good one. Thus, initial relationship evaluation may be a moderator of the effect of RSC direction on relationship uncertainty. Specifically, for individuals who report high initial relationship evaluation, exposure to upward versus downward comparisons may lead to increases in relationship uncertainty because this information is inconsistent with their own view of the relationship. For individuals who report relatively low initial relationship satisfaction, direction of comparison information should not influence relationship uncertainty. Post hoc analyses examining time 1 relationship evaluation as moderator of the effect of direction of comparison information on relationship uncertainty at time 2, did not support this prediction. Results indicated significant main effects of relationship evaluation at time 1, $\beta = -.53$, $t(3,180) = -8.92$, $p < .001$, and direction of comparison information, $\beta = .26$, $t(3,180) = 4.41$, $p < .001$, however the two did not significantly interact, $\beta = .06$, $t(3,180) = -1.05$, $p = .29$.

One reason why time 1 relationship evaluation may not have moderated the effect of direction of RSC information on uncertainty is because there was too much time between the assessment of time 1 relationship evaluation and exposure to the RSCs. Assessing relationship evaluation directly prior to participants receiving the RSC information may be a more accurate predictor of participants' reactions to the RSC information. Therefore, to test this hypothesis in Study 2 initial relationship evaluation (in the form of baseline relationship satisfaction) will be assessed immediately before participants are exposed to the RSCs.

In addition to assessing baseline relationship satisfaction, Study 2 also builds on Study 1 by strengthening the variability and directionality manipulations. First, I tackled the directionality aspects of the manipulation. Participants in the upward comparison condition saw the RSCs on average to be equal to, rather than better than their own relationship. This occurred despite the fact that pre-testing revealed that these were extremely positive relationships (e.g., In my relationship we are completely in love: emotionally, physically and mentally. We just connect, we are best friends too). So it appears that participants may have seen these stellar relationships as being similar to or on par with their own relationships. If so, then participants may be focusing on the similarities that exist between their relationships and the upward comparisons, rather than focusing on the differences that exist (e.g, that relationship is perfect, whereas mine is not). A focus on similarities, rather than differences could be problematic, as evidenced by research on assimilation and contrast effects and how they alter the role that social comparisons play in evaluations.

Assimilation effects refer to instances when one judges the self to be similar to the comparison target, contrast effects refer to instances when one judges the self to be different from the comparison target. Mussweiler and colleagues (Mussweiler, 2003; Mussweiler, Ruter & Epstude, 2004) find that a focus on differences between one's self and the comparison target leads to contrast and more negative evaluations after an upward comparison. Whereas, a focus on similarities between one's self and the comparison target leads to assimilation and more positive evaluations after an upward comparison. I suspect that participants in Study 1 faced with upward comparisons focused on how similar their relationships were to the stellar relationships and this assimilation process lead participants to view the RSCs as lateral rather than upward. As a way to strengthen the perception that the upward comparisons were actually better than the participants' relationships, I changed the instructions in Study 2. Specifically, participants were told to focus on how their relationship differs from the RSCs, which should produce a contrast effect (Mussweiler, 2003; Mussweiler et al., 2004).

In terms of the variability manipulation, upward RSCs were seen as significantly more variable than downward RSCs when the two were originally expected not to differ. By strengthening the directionality manipulation, I hoped that participants would also see the upward comparisons as more extreme and less variable. Research on social categorization provides evidence that people perceive out-group members as more similar to each other (i.e. more homogeneous) than in-group members (Linville, Fischer, & Salovey, 1989). Thus, forcing participants to view differences between their relationship and the RSCs is an attempt to force participants to perceive the relationship members described in the RSCs as out-group members. If participants see the upward comparisons as extremely upward, and therefore in a different relationship category than they themselves belong, they may rate the RSCs as more similar to each other (i.e., less variable) than they did in Study 1.

It may still be the case that respondents' perceptions of variability are important, regardless of how well variability is manipulated in Study 2. Therefore I will also measure perceptions of variability directly. Specifically, after respondents indicate they no longer wish to examine additional RSCs, they will answer questions regarding how variable (i.e. providing information about different types of relationships) the RSCs were. This measure of overall variability will provide an additional manipulation check of variability.

In sum, Study 2 was designed to strengthen respondents' perception of both directionality and variability. Directionality will be strengthened by explicitly asking participants to focus on how their relationship differs from the RSCs. The variability manipulation will also be strengthened by this manipulation and overall perceptions of variability will be directly measured. Finally, the ultimate goal of Study 2 is to extend Study 1 by examining the ironic consequences hypothesis, which is described in more detail below.

Chapter 3: Study 2

The goals of Study 2 are to test the ironic consequences hypothesis and extend the variability and directionality hypotheses to situations that involve information seeking. Results are expected to replicate Study 1 findings regarding variability and direction of comparison information. In addition, Study 2 examines the potentially ironic consequences of the RSC process. Recall, that the ironic consequences hypothesis states that individuals high in relationship uncertainty, as well as those exposed to variable RSCs will seek more RSCs than individuals low in relationship uncertainty and those exposed to non-variable comparisons respectively. To test this hypothesis, I included two measures of initial relationship uncertainty, a measure of chronic relationship uncertainty (relationship attachment style) as well as a measure of relationship specific uncertainty. Also, since the prediction involves seeking comparison information, participants are now allowed to seek rather than being forced to see the RSC information. It is predicted that both insecure attachment styles and variability of comparison information will increase comparison seeking. In addition, it is predicted that variability and uncertainty will interact so that those who were uncertain and exposed to variable information would seek the most comparisons. Similar findings are expected when relationship specific uncertainty is substituted for attachment style. Finally, to illustrate the ironic consequences of the RSC process, I will test the hypothesis that individuals who seek the most comparisons will report the most uncertainty.

Method

Participants

Participants were 182 (124 females, 57 males) undergraduates who received credit in their Introductory Psychology course for participating. To test the key predictions in these studies it was important that participants received the comparison information manipulation directly prior to completing the dependent measures. For participants who took over 2 hours to complete the survey it was impossible to know whether the integrity of the experimental

manipulation was maintained and therefore it was not appropriate to keep them in the analyses. Thus, participants who took longer than 2 hours to complete the survey were removed from the analyses. This criterion for inclusion was based on the assumption that responses outside these parameters did not represent a reasonable response time, given the number of items to be completed. Twenty-one participants were dropped and the remaining 161 participants (109 females, 51 males, 1 unknown) were included in the analyses. The remaining participants reported being in their current relationship from less than a month to 62 months ($M = 11.59$ months)⁴. Most of the participants ($N = 90$) reported their current relationship status as dating exclusively, 65 reported their status as dating casually, 4 reported living together, and 2 were engaged.

Procedures and Measures

Participants completed the study over the web and received the same cover story as Study 1. Prior to receiving the comparison information manipulation, participants completed Fraley, Waller and Brennan's (2000) Experiences in Close Relationships scale (ECR, $\alpha = .95$) which was used to measure attachment styles. Fraley and colleagues created this measure from items that emerged as the most accurate measure of attachment styles based on an item response theory analysis of multiple self-report attachment style measures. To complete this measure, respondents indicated the extent to which they agreed (1- *disagree strongly* to 7- *agree strongly*) with items presented in Appendix G. Recall that I hypothesized that initial relationship evaluation may moderate the effect of comparison direction on relationship uncertainty. In addition, I suggested one reason why this hypothesis was not supported in Study 1 was due to the length of time between the measurement of initial relationship evaluation and exposure to the comparison information. Therefore, to test these hypotheses, participants also completed the satisfaction subscale of the IMS (Rusbult, et al., 1998) prior to the comparison type manipulation.

Next, participants received the instructions for the comparison task. The major change in these instructions was that participants were asked to think about how their relationship differed from the comparison relationship. This change was done as an attempt to strengthen the comparison direction manipulation so participants would perceive upward comparison information as truly upward rather than equal to one's own relationship. The instructions were:

For the next part of the study, we are going to ask you some questions to assess your current relationship. In previous research we have found that the most accurate assessments come from thinking about how your relationship differs from other people's relationships. Thus, it is really important that you GET A GOOD IDEA of how YOUR RELATIONSHIP DIFFERS from other people's relationships. To understand how your relationship differs from other people's relationships, we would like you to view some descriptions that other PSU students wrote about their relationships.

Feel free to view as many of these descriptions as you need to in order to get a good feel for how your relationship truly differs from other people's relationships. There is plenty of time built into the study for you to look at numerous descriptions. In order to help you think about how your relationship differs from other people's relationships, we are going to ask you to rate how your own current relationship differs from each relationship description.

After participants read the instructions, they then saw 2 relationship descriptions (either upward only $N = 50$, downward only $N = 64$, or variable $N = 57$, 1 upward and 1 downward), which were the same revised relationship assessments used in Experiment 1 (see Appendix D). After seeing the two forced comparisons, participants received the opportunity to seek up to 28 additional comparisons. After each relationship description, respondents were asked to rate on a scale of 1- *my relationship is much worse* to 11- *my relationship is much better*, the extent to which their relationship differed from the one described in the example. Note that this rating scale differs from the one used in Experiment 1 so as to be consistent with the instructions informing participants to think about how their relationship *differed* from the comparison relationships. After rating each RSC, participants indicated whether they would like to see an additional relationship description. For participants who viewed all 28 additional comparisons, the computer informed them that due to time constraints we would be unable to show them any more relationship descriptions, asked them how many additional they would like to have seen, and then they completed the remaining questionnaires.

When participants finished viewing the comparisons, they completed the manipulation checks and questionnaires assessing the dependent variables. Recall that Study 1 provided evidence that participants' ratings of variability were a significant predictor of relationship evaluation, whereas manipulated variability condition was not a predictor of relationship evaluation. Therefore, I wanted to assess perceptions of variability directly, by asking participants to answer three questions about variability of the comparison information. To complete the variability measure, participants rated the extent to which they agreed with the items shown in Appendix H on a scale 1- *not at all* to 10- *extremely*. The three items were combined to form a composite of perceived overall variability ($\alpha = .76$).

After completing the measure of perceived overall variability, participants completed the same measures of momentary ($\alpha = .93$), and general (Attridge et al., 1998; $\alpha = .89$) relationship uncertainty as Study 1. These scales were once again combined to form one measure of relationship uncertainty ($\alpha = .93$). In addition, I created a measure of relationship specific uncertainty ($\alpha = .91$) which was used as a measure of initial relationship uncertainty to test the ironic consequences hypothesis. These 6 items (see Appendix I) were revised from the momentary uncertainty scale to specify that participants should be rating how they feel overall about their current relationship.

Finally, participants completed the IMS (Rusbult et al., 1998) and PAIR (Schaefer & Olson, 1981) as measures of relationship evaluation. As was the case in Study 1, these two measures were combined to form a composite measure of relationship evaluation ($\alpha = .85$).

Results

The means, standard deviations and correlations of all variables in Study 2, appear in Table 2, Appendix K.

Manipulation Checks

I provided respondents with upward, downward, and variable comparison information to manipulate both direction and variability of comparison information. First, I tested whether the

manipulation altered the perceived direction of the comparisons. I created a mean comparative evaluation score for each participant (with higher scores indicating the participants saw their relationship as much better than the comparison relationship). Then I subjected the comparison evaluation composite to a one-way ANOVA with comparison type as the independent variable. Results supported predictions, in that individuals in the downward condition rated their relationship as better than the comparison relationship ($M = 8.95$, $SD = 1.84$) more so than did participants in the variable condition ($M = 7.49$, $SD = 2.24$), who rated their relationship as better more so than the upward condition ($M = 6.74$, $SD = 2.19$), $F(2, 161) = 15.13$, $p < .001$. Post hoc tests indicated that the downward condition differed significantly from the variable, $F(1, 158) = 13.51$, $p < .001$, and upward, $F(1, 158) = 28.92$, $p < .001$ conditions, however the upward and variable conditions were only marginally significantly different from each other, $F(1, 158) = 3.41$, $p = .07$.

In Study 2, variability of comparison information was assessed in the same manner as Study 1, by looking at a composite of standard deviation of comparison ratings (with high scores indicating that participants made more variable comparison ratings). I subjected the variability of comparison ratings composite to a one-way ANOVA with comparison information condition as the independent variable. As predicted, individuals in the variable condition rated the comparisons as more variable ($M = 1.63$, $SD = 1.05$) than respondents in the upward ($M = 1.01$, $SD = .82$) and downward conditions ($M = .83$, $SD = .82$), $F(2, 161) = 11.83$, $p < .001$. Post hoc tests indicated that the variable condition differed significantly from both the upward, $F(1, 158) = 12.58$, $p = .001$ and downward, $F(1, 158) = 21.33$, $p < .001$, conditions. More importantly, the new instructions were effective in that the upward and downward conditions now did not differ significantly from each other, $F(1, 158) = .94$, $p = .34$).

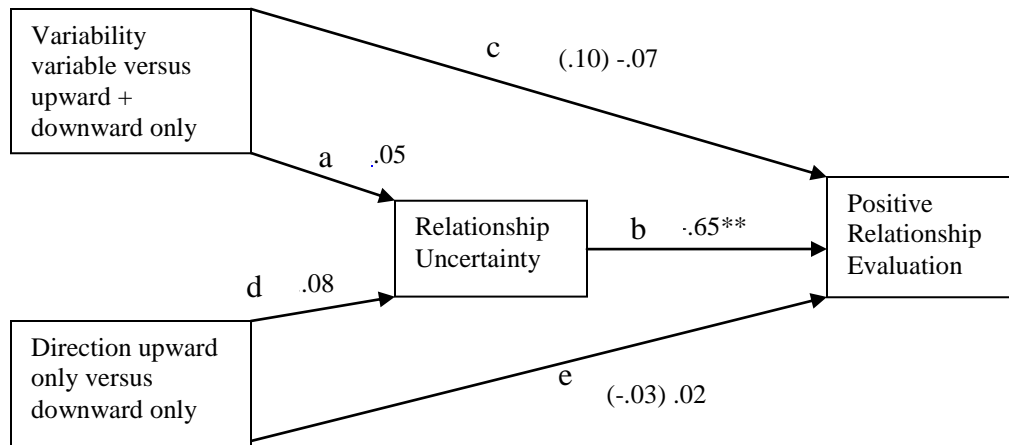
Perceived overall variability of information from RSCs was directly assessed in Study 2 with items asking participants to what extent they thought the comparisons provided them with variable information. I used this composite as an additional check on the variability manipulation.

I subjected the perceived overall variability composite to a one-way ANOVA with comparison information type as the independent variable. Consistent with the variability of comparison rating results, individuals in the variable condition rated the comparisons as more variable ($M = 5.84$; $SD = 1.71$) than respondents in the upward ($M = 4.03$; $SD = 1.89$) and downward conditions ($M = 4.06$, $SD = 1.97$), $F(2,161) = 17.29$, $p < .001$. As predicted, planned contrast analyses indicated that the variable condition differed significantly from both the upward, $F(1,158) = 25.52$, $p < .001$ and downward, $F(1,158) = 25.55$, $p < .001$, conditions and that the upward and downward conditions did not differ significantly from each other, $F(1,158) = .009$, $p = .92$.

Variability and Direction of Information, Relationship Uncertainty and Evaluation.

The first goal of Study 2 was to replicate findings from Study 1 regarding variability and direction of comparisons information influences on relationship uncertainty and evaluation. As was the case in Study 1, I began by conducting SEM analyses to test the path model depicted in Figure 1. Variability (dummy-coded as the variable condition versus the non-variable, upward and downward conditions) and direction (dummy-coded upward versus downward condition) were included as predictors, relationship uncertainty was included as a mediator, and relationship evaluation was included as the outcome variable. As shown in Figure 6 (numbers in parentheses show direct effects of variability and directionality on relationship evaluation), results did not support predictions. Only the association between variability of comparison information and relationship evaluation (link b, $\beta = -.65$, $p < .001$) was significant in the predicted direction, so that more uncertainty was associated with decreased relationship evaluation. None of the other links were significant, p 's $> .25$.

Figure 6: Path Model Depicting Tests of the Variability and Directionality Hypotheses in Study 2



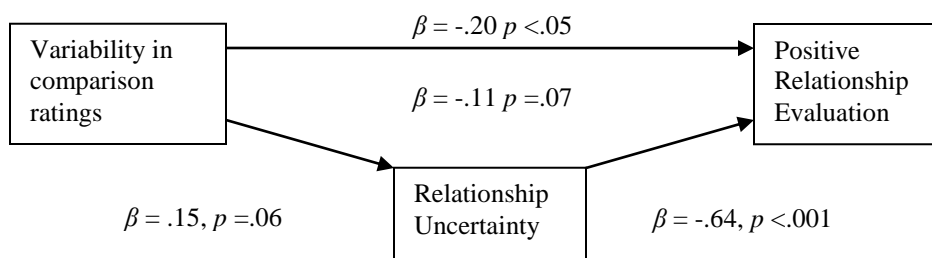
Given that neither the variability nor direction effects were significant, I utilized the same analysis strategy from Study 1. I examined whether self-report ratings of variability and direction affected relationship uncertainty and evaluation with separate regression analyses.

Variability of Comparison Information

To test the prediction that relationship uncertainty would mediate the effect of variability of RSC information on relationship evaluation, I first examined the effect of variability on relationship evaluation by regressing relationship evaluation on to variability of RSC ratings. I used variability in comparison ratings rather than participants' perceived overall variability ratings to remain consistent with the analysis strategy used in Study 1. Results (as shown in Figure 7) supported predictions, in that as participants made more variable ratings, they reported less positive relationship evaluation, $\beta = -.20$, $t(1,160) = -2.58$, $p < .05$. Next, I analyzed the indirect (mediated) effect of variability of RSC ratings on relationship evaluation, through relationship uncertainty. I followed suggestions by MacKinnon and colleagues (MacKinnon et al., 2002; 2004) and began by regressing relationship uncertainty on to variability of RSC ratings. Results indicated that the more variable the participants rated the RSCs, the more relationship uncertainty they reported, $\beta = .15$, $t(1,160) = 1.87$, $p = .06$. Then I regressed

relationship evaluation on to relationship uncertainty and variability in comparison ratings. Results indicated that while variability was no longer a significant predictor of relationship evaluation, $\beta = -.11$, $t(1, 160) = -1.78$, $p = .07$, uncertainty remained a significant predictor of relationship evaluation, $\beta = -.64$, $t(1, 160) = -10.53$, $p < .001$. Finally, to test the significance of the indirect effect, I calculated the cross product of the effect of direction of RSCs on relationship uncertainty and the effect of uncertainty on relationship evaluation. Then I divided the cross product of the effects by the cross product of their standard errors, which gave me the significance of the indirect effect, $Z = -23.35$, which was compared to the critical values table provided by MacKinnon et al., (2002). Comparison to the critical values table indicated that the indirect effect was significant ($CL_{.99} = -1.11$), $p > .01$. Thus, results supported the hypothesis that relationship uncertainty mediates the association between variability of RSC ratings and relationship evaluation.

Figure 7: Results from Variability Hypothesis, Study 2



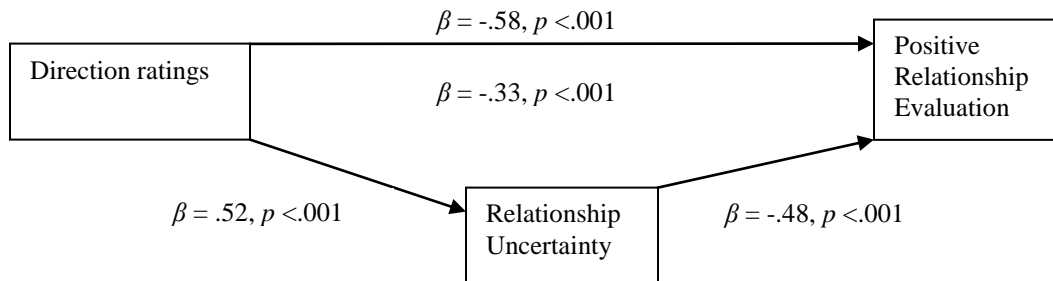
I also looked at whether self-reported overall variability produced analogous effects. It did not, for it was not significantly associated with relationship uncertainty, $r(161) = .07$, $p = .37$, or evaluation $r(161) = -.09$, $p = .25$. Thus, even though the manipulation of variability influenced both of these measures, they did not operate in the same fashion.

Direction of Comparison Information

To examine whether the perceived direction of comparison information would replicate effects from Study 1, I once again conducted a series of regression analyses. First, to test the effect of direction of comparison information on relationship evaluation I regressed relationship

evaluation on to comparison direction ratings. Results (as shown in Figure 8) supported predictions, in that as participants made ratings indicating that their relationship was better than the comparison relationships, they reported more positive relationship evaluation, $\beta = .58$, $t(1,160) = 8.95$, $p < .001$. Next, to examine whether relationship uncertainty mediated the association between directionality and relationship evaluation, I analyzed the indirect (mediated) effect of direction of comparison information on relationship evaluation, through relationship uncertainty. Once again, following suggestions by MacKinnon and colleagues (MacKinnon et al., 2002; 2004), I began by regressing relationship uncertainty on to direction of comparison ratings. Contrary to original predictions, results indicated that the more upward the participants rated the RSCs, the more relationship uncertainty they reported, $\beta = -.52$, $t(1,160) = -7.67$, $p < .001$. Then I regressed relationship evaluation on to relationship uncertainty and direction of comparison ratings and results indicated that both direction, $\beta = -.33$, $t(1, 160) = 5.02$, $p < .001$, and uncertainty $\beta = -.48$, $t(1, 160) = -7.33$, $p < .001$ remained significant predictors of relationship evaluation. Finally, to test the significance of the indirect effect, I calculated the cross product of the effect of direction of RSCs on relationship uncertainty and the effect of uncertainty on relationship evaluation. Then I divided the cross product of the effects by the cross product of their standard errors, which gave me the significance of the indirect effect, $Z = 125.00$, which was compared to the critical values table provided by MacKinnon et al.,(2002). Comparison to the critical values table indicated that the indirect effect was significant ($CL_{.99} = -1.11$), $p > .01$, and that results replicated Experiment 1 in that relationship uncertainty was a significant mediator of the association between comparison direction and relationship evaluation⁵.

Figure 8: Directionality Hypothesis Results, Study 2

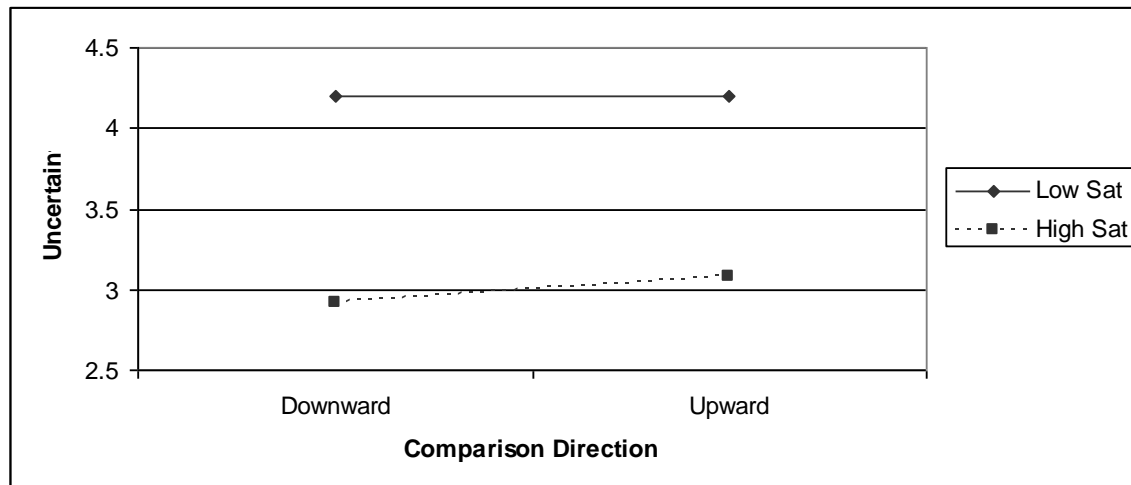


Initial Relationship Satisfaction as a Moderator of the Directionality Effect

As mentioned in the discussion of Study 1, I hypothesized that perhaps direction of RSC influences relationship uncertainty because participants who have satisfying relationships see upward comparisons as inconsistent with their own positive view of their relationship. In other words, I hypothesized that initial relationship satisfaction may moderate the effect of direction of comparison information on relationship uncertainty. To test this prediction, I regressed relationship uncertainty on to relationship satisfaction, comparison direction ratings, and the interaction of satisfaction and comparison direction ratings. Results indicated a significant main effect of initial relationship satisfaction, $\beta = -.75$, $t(3,160) = -10.19$, $p < .001$, and a non-significant main effect of comparison direction, $\beta = -.06$, $t(3,160) = -.83$, $p = .41$. More importantly, as predicted results indicated a significant interaction of initial relationship satisfaction and comparison direction ratings, $\beta = -.13$, $t(3,160) = -2.20$, $p < .05$. Figure 9 illustrates the influence of comparison direction on uncertainty for individuals 1 standard deviation above and below the mean of initial relationship satisfaction. Simple slopes tests (Aiken & West, 1991), supported predictions in that as participants rated the RSCs as more upward versus downward, relationship uncertainty increased but only for those who reported high initial satisfaction, $\beta = -.16$, $t(3,160) = -1.86$, $p = .06$, the simple slope for those who reported low initial satisfaction was not significant, $\beta = -.05$, $t(3,160) = .05$, $p = .55$. Thus, initially highly satisfied individuals are more reactive (i.e., show more uncertainty) when exposed to upward versus downward comparison information. Whereas, comparison direction does not influence relationship uncertainty for

those low in relationship satisfaction for who receiving information that other people's relationships are better than one's own is consistent with their own view of the relationship.

Figure 9: Relationship Uncertainty as a Function of the Interaction Between Initial Satisfaction and Comparison Direction.



Ironic Consequences Hypothesis

To examine the ironic consequences hypothesis, I created a sum of the number of comparisons that participants sought (with higher numbers indicating more comparisons sought). Looking at the descriptive statistics concerning number of comparisons sought indicated that the data were positively skewed (as indicated in Table 2, $M = 1.70$, $SD = 4.18$; Z skewness = 20.78). Therefore, following Hair, Anderson, Tatham, and Black's (1998) suggestion for dealing with significantly positively skewed data, I transformed these data by squaring them. Calculating the skewness for the transformed data indicated that they were still significantly skewed (Z skewness = 9.35), but significantly less so than the non-transformed data, therefore all analyses presented regarding number of social comparisons is based on the transformed data.

I hypothesized that insecurely attached respondents and individuals exposed to variable RSCs would seek more comparisons than those with secure attachment styles and exposed to non-variable RSCs, respectively. In addition, I expected attachment styles and variability to

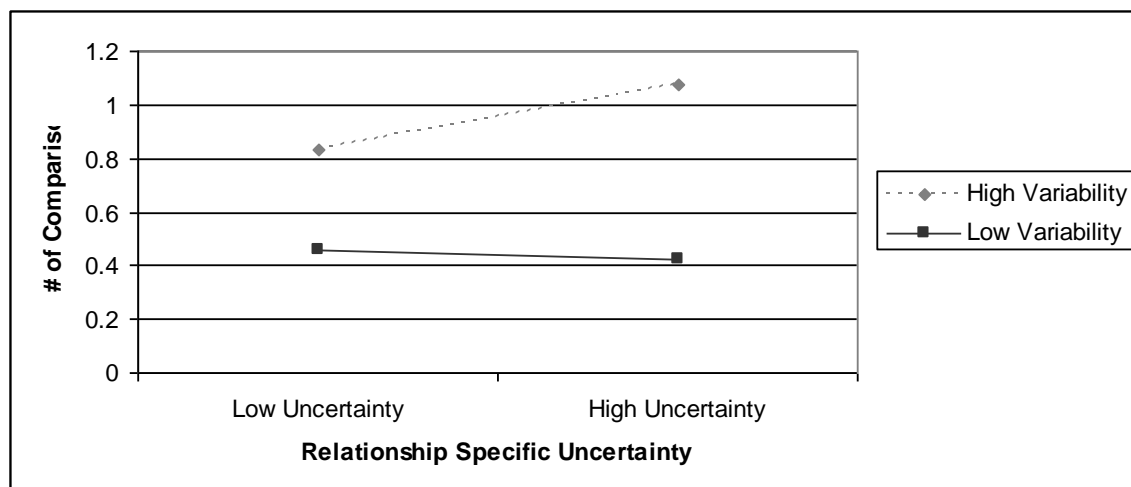
interact so that those with insecure attachments and who were exposed to variable comparisons would seek the most comparisons. To test these hypotheses, I centered scores on the attachment style questionnaire and variability of comparison ratings, then conducted a regression analysis with variability of comparison ratings, relationship attachment style, and their interaction predicting number of comparisons sought. Results indicated a significant main effect of variability of comparison information, $\beta = .24$, $t(3,160) = 3.08$, $p > .01$, indicating that as predicted, when variability of comparison information increased, participants sought more comparisons. Contrary to predictions, neither the main effect of attachment style, $\beta = .003$, $t(3,160) = .03$, $p = .97$, nor the interaction of attachment style and variability were significant, $\beta = .09$, $t(3,160) = 1.12$, $p = .26$.

As mentioned before, I thought that perhaps attachment styles would be too global of a construct to be predictive of the very specific information seeking I am examining in this study. Thus, I also included a measure of relationship specific uncertainty and re-ran the previous analyses substituting relationship specific uncertainty for attachment styles⁶. In order to test these hypotheses, I first centered scores on the relationship specific uncertainty questionnaire. Then I conducted a regression analysis with variability of comparison direction, relationship specific uncertainty, and their interaction predicting number of comparisons sought. Supporting predictions, results indicated a significant main effect of variability of comparison information, $\beta = .24$, $t(3,160) = 3.08$, $p > .01$. When variability of comparison information increased, participants sought more comparisons. Contrary to predictions, the main effect of current relationship uncertainty was not significant, $\beta = .11$, $t(3,160) = 1.41$, $p = .16$. However, the interaction of current relationship uncertainty and variability was marginally significant, $\beta = -.14$, $t(3,160) = -1.86$, $p = .06$.

Figure 10 illustrates the influence of variability of comparison information on number of comparisons sought for individuals 1 standard deviation above and below the mean of relationship specific uncertainty. As predicted, simple slopes tests (Aiken & West, 1991),

indicated that as participants rated the RSCs as more variable RSC seeking increased significantly for those who reported high relationship specific uncertainty, ($\beta = .25$, $t(3,160) = 2.39$, $p > .05$), the simple slope for those who reported low relationship specific uncertainty was not significant, ($\beta = -.03$, $t(3,160) = -.29$, $p = .78$). This finding indicates that as participants reported higher relationship specific uncertainty and as they viewed the comparisons as more variable, they sought more comparisons.

Figure 10: Number of Comparisons as a Function of Relationship Specific Uncertainty and Variability of Comparison Information.



Number of Comparisons and Relationship Uncertainty

The Ironic Consequences hypothesis part C was that increased comparison seeking would have an ironic consequence in that the more comparisons participants sought, the more uncertainty they would feel. Therefore, I conducted a correlation analysis examining the association between number of comparisons and relationship uncertainty. Results indicated a trend in the predicted direction, in that as comparison seeking increased so too did relationship uncertainty, $r(161) = .14$, $p = .09$.

Chapter 4: General Discussion

This project investigates potential mechanisms that might explain why individuals who tend to chronically compare their relationships with others evaluate their relationships in a negative light. I proposed that these negative evaluations are due to both the direction and variability of comparison information that people may receive. To test the directionality and variability hypotheses, I examined how making upward, downward, or variable comparisons altered relationship evaluations. In addition to testing the potential mechanisms that might underlie these negative evaluations, I also examined the consequences of making such comparisons. Specifically, individuals tend to make comparisons as a means to reduce their current uncertainty about their relationships. I proposed that when individuals seek out comparisons that are variable in nature, rather than reducing uncertainty, these comparisons ironically increase it (*Ironic Consequences Hypothesis*). Below, I describe the extent to which the two studies supported each of these predictions.

Directionality Hypothesis

Numerous studies indicate that individuals who make upward comparisons versus downward comparisons form more negative evaluations (Aspinwall & Taylor, 1993; Brickman & Bulman, 1977; Marsh & Parker, 1984; Pyszczynski et al., 1985; Wills, 1981; Wilson & Benner, 1971). It may be that individuals high in chronic RSC tendencies form negative relationship evaluations because they make more upward than downward comparisons. Thus, according to the directionality hypothesis: the direction of RSCs would predict relationship evaluation, in that exposure to upward versus downward comparisons would lead to more negative relationship evaluations. I also predicted that because participants in these conditions were receiving consistent (i.e., non-variable) information about whether their relationship was either better or worse than others, that direction of RSC information would not predict relationship uncertainty.

SEM analysis conducted in both Study 1 and 2 revealed that direction of the RSCs had no effect on participants' relationship evaluations. This finding may have occurred, despite the

fact that Study 2 used a stronger manipulation, because participants still saw the upward RSCs as being on par with their own relationships. Indeed, Murray and colleagues (Murray, Bellavia, Rose, & Griffin, 2003; Murray, Holmes, Macdonald, & Ellsworth, 1998) find that people are motivated to see their relationships in a positive light. Thus participants may have been motivated to perceive upward comparisons as being on par with their own relationships as the upward comparisons were examples of extremely positive relationships. Therefore, these analyses were actually comparing exposure to downward RSCs to what respondents perceived as lateral (or equally valenced) RSCs.

The difference between downward and lateral comparisons is less extreme than the difference between downward and upward comparisons, which may explain why the categorical split of direction did not influence relationship evaluation as predicted. Although lateral comparisons are seen as more upward than downward comparisons, they are not seen as more positive than one's own relationship. Upward comparisons traditionally lead to negative evaluation because they point out how one does not measure up to other people. Lateral comparisons may indicate that one's relationship is on par with other really good relationships and is therefore unlikely to lower relationship evaluation. Thus, perhaps the difference in the downward versus upward comparison (lateral comparison) group did not predict relationship evaluation, because both groups were evaluating their relationships rather positively.

One way to examine the full spectrum of comparison direction is to rely on participants' own ratings of RSCs direction. These ratings are useful because they tap respondents' reactions to each individual comparison. When these ratings were employed, the results in both Studies 1 and 2 partially supported the directionality hypothesis. In support of Directionality Hypothesis A, participants who rated the comparison information as more upward (i.e. rated their own relationship as worse than the RSCs) reported significantly less positive relationship evaluation. Contrary to Directionality Hypothesis B, relationship uncertainty was a significant mediator of the association between RSC direction and relationship evaluation. Across the two

studies, perceiving comparisons as more upward than downward led to relationship uncertainty, which in turn led to more negative relationship evaluations.

I had originally proposed that exposure to non-variable comparison information would not influence uncertainty because participants were receiving consistent information that their relationship was better or worse than other people's relationships. One reason why perceiving comparisons to be more upward than downward may lead to increased uncertainty, however, is that participants may have viewed the upward comparison as inconsistent with their own initial view of their relationship. Participants in both studies were involved in relatively happy relationships. Therefore, it is possible that having consistently perceived the comparison information as indicating that one's relationship is worse than other people's relationships was inconsistent with their own relationship evaluation. Even though participants did not see the upward RSCs as purely upward, I would argue that these lateral comparisons could still be inconsistent with one's expectations. This inconsistency could explain why individuals in the upward comparison condition reported more uncertainty than those in the downward comparison condition. In contrast, finding out that one's relationship is better than other people's relationship is consistent with one's expectations and does not increase relationship uncertainty.

Study 2 examined whether perceiving information as inconsistent with one's initial relationship evaluation may explain why upward comparisons were associated with increased relationship uncertainty. I hypothesized and found that initial relationship satisfaction moderated the effect of perceived direction of comparison information on relationship evaluation. Specifically, results indicated that participants who reported high levels of initial relationship satisfaction reported more uncertainty when they viewed the RSCs as more upward than downward. For respondents who reported relatively low initial relationship satisfaction, relationship uncertainty was not significantly different as a function of perceived comparison direction. These data indicate that upward comparisons may increase uncertainty because they are inconsistent with respondents' positive views of their relationships.

Variability Hypothesis

I proposed that in addition to direction of comparison information, variability of information may also play a role in explaining the chronic RSC tendency process. Specifically, the variability hypothesis stated that variability in comparison information would lead to increases in relationship uncertainty which would in turn lead to more negative relationship evaluation. SEM analysis conducted in both Study 1 and 2 revealed that variability of the social comparisons had no effect on participants' relationship evaluations. In addition, SEM analysis in Study 1 showed a significant negative association between variability of comparison information and uncertainty, which was in the opposite direction of what was predicted. Perhaps, similarly to respondents in the upward comparison condition, participants in the variable information condition saw the upward comparisons as lateral rather than upward. If this were the case, then participants in the variable condition would be seeing information indicating that their relationship is better than the downward comparisons and on par with really positive relationships. Thus, they may have reported more certainty than respondents in the upward and downward condition because they received information confirming that they were involved in a really good relationship. It is important to acknowledge that this finding was not replicated in Study 2, where results indicated a non-significant positive association between variability and relationship uncertainty. Thus, it is impossible to know whether this was an erroneous finding, or whether participants in the variable condition really were convinced that their relationships were good. The finding that variability did not predict relationship evaluation was especially surprising in Study 2, in which the manipulation of variability was successfully strengthened. Overall, these analyses seem to indicate that variability of RSCs is not an important factor in the RSC process. However, because the manipulation failed in Study 1, I thought it was important to examine individual differences in perceived variability of comparison information before concluding that variability was not a factor in the RSC process. Specifically, I examined how

participants' perceptions of variability (as indicated by variability in rating the RSCs they saw) influenced relationship uncertainty and evaluation.

Although manipulated variability did not work as predicted, participants' variability in comparison ratings did operate as predicted across the two Studies. In both Study 1 and 2, participants' variability in RSC ratings was negatively associated with relationship evaluation. In addition, across both studies, relationship uncertainty mediated the effect of variability of RSC ratings on relationship evaluation. In that as participants made more variable ratings, they reported increased uncertainty which in turn lead to more negative relationship evaluation.

Interestingly, even though perceived variability (as indicated by variability in RSC ratings) appears to be an important part of the RSC process, global assessments of perceived variability are not adequate predictors of relationship outcomes. Recall that perception of overall variability was directly assessed in Study 2 by asking participants to what extent they thought the RSCs provided information on different kinds of relationships. Perceived overall variability was only marginally associated with participants' variability in RSC ratings, and was not significantly associated with relationship uncertainty or evaluation. Taken together these results support the idea that variability of comparison information does play an important role in the RSC process, however, it appears that a very fine grained measure of perceived variability is needed to predict relationship outcomes.

Directionality and Variability Hypotheses: Implications and Future Directions

SEM Analyses. In both studies, overall SEM analyses did not support predictions in that neither variability nor direction of comparison information significantly influenced relationship evaluation. However, there were other significant findings that emerged from the SEM analysis. First, a significant negative association between relationship uncertainty and relationship evaluation emerged in both studies. These results supported predictions and imply that people who experience doubts about whether their relationship will meet their needs in the future also view their relationship in a more negative light. Second, a significant negative association

between variability of comparison information and relationship uncertainty emerged in Study 1. This finding did not support predictions, in that originally I predicted that individuals exposed to more variable information would report increased uncertainty. As mentioned previously, this association may imply that the variable information actually provided convincing information that participants were involved in really good relationship. However, conclusive statements can not be made about this effect given that it did not replicate in Study 2.

Moderators of Perceptions of Comparison Information. Across the two studies presented here, the manipulation of comparison direction and variability failed. An obvious question that results from these findings is; can perceptions of comparison information be manipulated? Although, it is impossible to say for sure, I believe it is possible to manipulate comparison direction and variability, however it is really important to take into consideration individual differences in information perception. In future research, it will be important to consider various potential moderators that could influence the way in which people perceive the comparison information. For example, relationship length could play a role in how people respond to the comparison information. One possibility is that people are more reactive to comparisons when they are beginning a new relationship and therefore effects would temper the longer people have been involved in their relationship. A second possibility is that the association between relationship length and perceptions of comparison information could be a curvilinear relationship, in that that people are reactive to comparison information in the beginning of the relationship and at later time periods when their own views of the relationship are solidified and therefore inconsistent information is threatening.

Another factor that could moderate perceptions of comparison information is participants' motivations for the relationship. One may perceive comparison information very differently when motivated to enhance their view of the relationship than if they were motivated to accurately evaluate the relationship. Thus, in future studies it would be beneficial to examine how relationship motivations influence reactions to various types of comparison information.

A final factor that should be considered in future RSC research is the length of time in which it takes these effects to unfold. The studies presented here transpired over a rather short period of time, in that participants were exposed to all of the comparison information within a very short amount of time and then immediately completed measures of relationship uncertainty and evaluation. It is unclear whether this study procedure realistically portrays exposure to comparisons in daily living. It is possible that people are exposed to many comparisons all at once, for example at a wedding where relationships are quite salient. However, it is also possible that it could take days, weeks, or maybe even months for people to be exposed to the same number of comparisons that participants were exposed to in the current studies. Thus, in future studies it will be important to consider how many comparisons participants are exposed to in a particular amount of time, and whether that amount of exposure accurately reflects the daily comparison process.

A second way in which timing may play a role in the RSC process, is in terms of the length of time it takes people to process the comparison information and have that information influence relationship evaluation. Perhaps one of the reasons why the comparison information manipulations were not successful in influencing relationship evaluation in these studies is that the study truncated the procedure and therefore participants did not have enough time to process the comparison information and have it influence their evaluation ratings. If this were the case, it makes sense that the discreet categories of comparison information would not work whereas individual differences in perceptions of comparison information did predict relationship evaluation. If enough time was allowed for the process to completely unfold, perhaps all participants exposed to variable comparison information (rather than just those predisposed to view the comparisons as variable) would have shown more negative relationship evaluation. It is difficult to know exactly how long it takes for these processes to unfold, however to understanding the impact of RSCs on relationship evaluation, timing of the process will be an important area of future inquiry.

Directionality and Uncertainty. Even though the directionality manipulation was not successful in these two studies, the self-report data reveal a truly novel finding - relationship uncertainty mediated the effect of direction of comparison information on relationship evaluation. Previous research indicates that uncertainty acts as a moderator in the comparison process (Bui & Pelham, 1999; Butzer & Kruijer, 2006). However, to my knowledge, this is the first research examining uncertainty as an explanation for why upward comparisons lead to negative evaluation. Furthermore, this effect occurred more if respondents were high rather than low in initial relationship satisfaction. Upon reflection, this finding makes sense. People who are high in initial relationship satisfaction are probably pretty certain about their relationships and thus do not compare often. When they are forced to see upward comparisons, this information is inconsistent with their own view of the relationship and thus produces uncertainty. In contrast, individuals low in relationship satisfaction find the upward comparison information to be consistent with their self views and do not experience this uncertainty. These results are exciting because they imply that uncertainty may play a larger role in the comparison process than indicated in past research. In future studies, it will be important to consider uncertainty both as a moderator and mediator in the social comparison process.

Importance of Multiple Comparisons. Most importantly, these studies highlight the importance of examining participants' responses to multiple comparisons, in variable directions. The traditional social comparison paradigm is to expose participants to either upward or downward comparison information and then assess the dependent measure of interest (Aspinwall & Taylor, 1993; Buunk et al., 1990; Lyubomirsky & Ross, 1997; Medes, Blascovich, Major, & Seery, 2001). However, as I mentioned before, it is unlikely that this paradigm reflects real world comparison situations, in that people are exposed to lots of comparisons in various directions in daily life. The research presented here differed from the standard comparison protocol in that I exposed participants to (Study 1) or allowed them to seek (Study 2) lots of comparisons in various directions (in the variable comparison conditions). If it is true that in daily

life people are exposed to lots of comparisons in various directions (which admittedly is still an empirical question) then it is imperative that social comparison researchers adopt new methods of exposing participants to comparison information. By being so restrictive in the information they present to their participants, researchers have been missing a larger part of the comparison process. The studies presented here provide evidence that variability in information is an important, yet never examined, piece of the puzzle. While previous methods have been fruitful in helping researchers understand in the simplest terms what happens when people are exposed to comparisons, it appears that real world comparison processes are more complex and new paradigms should be developed to reflect this complexity.

Limitations. Despite the strengths of these studies and the important contributions to social comparison research, there are some major limitations to this work that must be acknowledged. First, I was unable to successfully manipulate comparison direction and variability, thus I was forced to rely on self-reported perceptions of the comparison information. Reliance on self-reports brings with it a number of limitations, the largest of which is the inability to discuss issues of causality. One cannot conclude from these data that variability causes uncertainty, and uncertainty causes negative relationship evaluations. Although the variability and directionality effects in study 1 held even when controlling for time 1 measures of relationship uncertainty and evaluation, in order to discuss the direction of these effects, future research must find a way to successfully manipulate comparison information.

An additional limitation is that perceptions of direction and variability of comparison information were assessed by the same measure, thus I could not examine the directionality and variability hypothesis simultaneously. As a result, I cannot make statements about the relative contribution of each. In future research it will be important to examine these factors independently to assess their relative influences on the RSC process. In addition, because I determined the number and type of comparison information participants were exposed to, rather than measured chronic RSC tendencies, the type of information that individuals are exposed to

in daily life is still an empirical question. I have hypothesized that the directionality hypothesis alone can not explain the RSC process because it is unlikely that chronic comparers are exposed to primarily comparisons in one direction. However, the research here can not speak to this issue as exposure to variable comparison information was manipulated rather than measured. Therefore, although it is likely that chronic comparers are exposed to variable comparisons in their daily life, without measuring exposure, these studies can not address this question. Thus, to fully understand the contributions of directionality and variability of comparison information in the RSC process, future research is needed examining the type of comparison information that comparers are exposed to on a daily basis.

Ironic Consequences Hypothesis.

Study 2 builds on Study 1 by investigating the potential ironic consequences of the RSC seeking process. Recall that Festinger (1954) argues that people seek comparison information to alleviate feelings of uncertainty; I am saying that when people receive variable comparison information that this process has ironic consequences in that uncertainty is actually increased. Thus, I predicted that uncertain versus certain individuals would seek more comparison information in hopes of alleviating their uncertainty, but when they perceived the information as variable, increases in comparison seeking would lead to increases rather than decreases in uncertainty.

I tested this hypothesis utilizing both attachment styles and relationship specific uncertainty as indicators of trait relationship uncertainty. Contrary to predictions, attachment style and variability did not interact to predict RSC seeking. The data revealed only a main effect of variability, such that the more variable participants rated the comparisons, the more comparisons they sought. This result is not surprising given that attachment styles reflects global relationship uncertainty and thus might not be highly applicable to one specific relationship. Indeed, the results were more promising when I conducted the analyses using the relationship specific uncertainty measure. In these analyses, results supported predictions. First

a main effect of variability was found, such that viewing comparisons as more variable led to more social comparison seeking. Second, relationship specific uncertainty and variability interacted to predict social comparison seeking. Variability of comparison information increased comparison seeking for individuals who reported high relationship specific uncertainty, whereas variability of comparison information did not influence comparisons seeking for those who reported low levels of relationship uncertainty. Therefore, it appears that variability influences comparison seeking in that the more variable comparisons are perceived the more comparisons are sought. In addition, it appears that this effect is especially strong for individuals who experience initially high levels of relationship uncertainty.

The final test of the ironic consequences hypothesis was to examine whether increased comparison seeking lead to increases in relationship uncertainty. Thus, I examined the association between comparison seeking and relationship uncertainty. Results suggested a trend in the predicted direction in that as participants sought more comparisons they also reported increased relationship uncertainty. Thus, the data indicate that the process of seeking comparisons to reduce uncertainty may have the ironic effect of increasing it.

Implications of the Ironic Consequences Findings.

The results from testing the ironic consequences hypothesis have important implications for understanding the RSC process, as well as social comparison theorizing in general. Findings from Study 2 provided some evidence that individuals who are feeling uncertain versus certain seek more comparison information. It is important to acknowledge that contrary to predictions, attachment styles did not predict comparison seeking. Although attachments styles tend to correlate with chronic RSC tendencies (Smith LeBeau & Buckingham, 2007), I have argued that this construct was too broad of a construct to be a good predictor of specific comparison seeking behavior examined in this study. However, when relationship specific uncertainty was substituted for attachment styles, an interesting finding emerged in that relationship specific uncertainty interacted with variability of comparison information. These

results indicated that initial levels of uncertainty may not directly influence comparison seeking, however, high levels of uncertainty paired with variable information leads to a significant increase in information seeking. Thus, these results provide additional evidence illustrating the need to examine variable comparison information in the RSC process. If participants were only allowed to seek comparisons in one direction, then I would have had to conclude that initial relationship uncertainty is not a significant predictor of comparison seeking.

Importantly, follow-up analyses indicated a trend in that as comparison seeking increases so too does relationship uncertainty. These results indicate that increased RSC seeking can have ironic consequences in the form of increased uncertainty, which in turn leads to negative relationship evaluation. This piece of evidence is important and interesting as it implies that the RSC process may be a negative cycle in that individuals who feel uncertain will seek more comparison information, which increases their uncertainty which in turn leads to negative relationship evaluations. Moreover, these results highlight the important of examining both predictors of comparison seeking and the consequences of receiving such information for truly understanding the RSC process.

To my knowledge, Study 2 is the first to examine the entire comparison process; starting with factors that may spark comparison seeking and ending with consequences that result after comparisons are made. Previous research either examined factors that increase or decrease comparison seeking, or have exposed participants to comparison information and examined the influence of comparison information on relevant dependent measures. The important implications of Study 2 in terms of the potentially ironic consequences of the RSC process would not have been discovered had I not examined the entire comparison seeking process. Although allowing for the examination of both predictors of RSC seeking and outcomes influenced by comparison information, one weakness of Study 2 is that all measures were collected in one time period. Future research utilizing longitudinal methods would be fruitful for fully

understanding how the RSC process unfold over time and would provide stronger evidence for the causal nature of the process (Collins, Graham & Flaherty, 1998).

Conclusion

In conclusion, this work reminds us that if Robbins is correct and the “quality of your life is the quality of your relationships”, then people need to be careful in terms of how they evaluate their relationship quality. In this paper, I examined 3 different hypotheses concerning how people’s relationship evaluation strategy might alter their opinions about their relationship. First by testing the directionality hypothesis and variability hypotheses, I found that people who perceived comparisons as either upward or variable report increased relationship uncertainty and more negative relationship evaluation. In addition, by testing the ironic consequences hypothesis, I found that exposure to variable RSCS may have the potential to exacerbate rather than alleviate one’s feelings of uncertainty. Thus, it appears that reliance on RSCs for relationship evaluation leads to increases in uncertainty and decreases in relationship evaluation, which could eventually lead to the dissolving of the relationship.

Footnotes

1. Length of current relationship in Experiment 1 broke down to < 3 months $N=16$, 3-6 months $N= 52$, 7-9 months $N= 26$, 10-12 months $N= 22$, > 12 months $N= 64$, not reported $N= 1$.
2. Numerous studies indicate that both trait and state self esteem may moderate the social comparison process (Buunk et al, 1990, Study 1: for a review see Wood & Lockwood, 1999). To examine this possibility, both trait and state self-esteem were assessed. Trait self-esteem was measured at Time 1, using Rosenberg's (1965) self-esteem inventory ($\alpha = .89$). This measure asks participants to rate the extent to which they agree (*1-strongly agree* to *4-strongly disagree*). Heatherton and Polivy's (1991) state self-esteem scale ($\alpha = .92$) was administered at Time 2 to measure short-lived changes in self-esteem. This measure asks individuals to rate (1= *not at all* to 5= *extremely*) the extent to which they feel this way RIGHT NOW. The items for these two scales appear in Appendix F. Analyses revealed that neither trait nor state self-esteem moderated any of the effects. Specifically, trait and state self-esteem, were examined separately as potential moderators of the association between variability of comparison information and relationship evaluation. When the relevant moderator, variability of comparison variability of ratings and their interaction were included in a regression to predict relationship evaluation at time 2, all of the main effects were significant, but none the interactions were significant ($p > .55$). Thus, it appears that neither state nor trait self-esteem moderated the influence of variability of comparison information on relationship evaluation.
3. Regression analysis testing the variability and directionality hypotheses were re-run controlling for relationship length and all patterns of results held. Relationship length was not a significant predictor of relationship evaluation over and above variability or direction of comparison information.
4. Length of current relationship in Experiment 2 broke down to < 3 months $N=41$, 3-6 months $N= 49$, 7-9 months $N= 19$, 10-12 months $N= 8$, > 12 months $N= 50$, not reported $N= 2$.

5. Regression analysis testing the variability and directionality hypotheses were re-run controlling for relationship length and all patterns of results held. Relationship length was not a significant predictor of relationship evaluation over and above variability or direction of comparison information.
6. Due to experimenter error, the measure of relationship specific uncertainty was completed after participants received the comparison information type manipulation. However, comparison information condition did not influence scores on this measure, $F(2, 161) = 1.27, p = .28$. Thus, I felt it was appropriate to continue to use the measure as a predictor of comparison seeking as originally intended.

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Appendix A

Relationship Insecurity

1. I feel very secure in my relationship
2. X is a rather mysterious person.
3. I often wonder how much X really cares for me.
4. Sometimes, I wish I didn't care so much for X.
5. I worry that X doesn't care as much for me as I do for X.
6. I have great difficulty trying to figure out X.
7. I have imagined conversations I would have with X.
8. I try to plan out what I want to say before talking to X.
9. X pays enough attention to me.
10. I feel uneasy if X is making friends with someone of the opposite sex.
11. I need X more than X needs me.
12. X has been the cause of some of my worst depressions.
13. My relationship with X is stable and quietly satisfying.
14. There is little conflict between X and myself.
15. I worry about losing X's affection.

Appendix B
Investment Model Scale.

Satisfaction

1. I feel satisfied with our relationship.
2. My relationship is much better than others' relationships.
3. My relationship is close to ideal.
4. Our relationship makes me very happy.
5. Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

Quality of Alternative Relationships

6. The people other than my partner with whom I might become involved are very appealing.
7. My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.)
8. If I weren't dating my partner, I would do fine- I would find another appealing person to date.
9. My alternatives are attractive to me (dating another, spending time with friends or on my own, etc.)
10. My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship.

Investment

11. I have put a great deal into our relationship that I would lose if the relationship were to end.
12. Many aspects of my life have become linked to my partner (recreational activities, etc.) and I would lose all of this if we were to break up.
13. I feel very involved in our relationship - like I have put a great deal into it.
14. My relationships with friends and family members would be complicated if my partner and I were to break up (e.g., partner is friends with people I care about).
15. Compared to other people I know, I have invested a great deal in my relationship with my partner.
16. I want our relationship to last for a very long time.

Commitment Level

17. I am committed to maintain my relationship with my partner.
18. I would not feel very upset if our relationship were to end in the near future.
19. It is likely that I will date someone other than my partner within the next year.
20. I feel very attached to our relationship - very strongly linked to my partner.
21. I want our relationship to last forever.
22. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

Appendix C
PAIR Intimacy Scale

1. My partner listens to me when I need someone to talk to.
2. I can state my feelings without him/her getting defensive.
3. I often feel distant from my partner.
4. My partner can really understand my hurts and joys.
5. I feel neglected at times by my partner.
6. I sometimes feel lonely when we're together.
7. We enjoy spending time with other couples.
8. We usually "keep to ourselves."
9. We have few friends in common
10. Having time together with friends is an important part of our shared activities.
11. Many of my partner's closest friends are also my closest friends.
12. My partner disapproves of some of my friends.
13. I am satisfied with our sex life.
14. I feel our sexual activity is just routine.
15. I am able to tell my partner when I want sexual intercourse.
16. I "hold back" my sexual interests because my partner makes me feel uncomfortable.
17. Sexual expression is an essential part of our relationship.
18. My partner seems disinterested in sex.
19. My partner helps me clarify my thoughts.
20. When it comes to having a serious discussion, it seems that we have little in common.
21. I feel "put down" in a serious conversation with my partner.
22. I feel it is useless to discuss some things with my partner.
23. My partner frequently tries to change my ideas.
24. We have an endless number of things to talk about.
25. We enjoy the same recreational activities.
26. I share in few of my partner's interests.
27. We like playing together.
28. We enjoy the out-of-doors together.
29. We seldom find time to do fun things together.
30. I feel we share some of the same interests.
31. My partner has all of the qualities I've always wanted in a mate.
32. There are times when I do not feel a great deal of love and affection for my partner.
33. Every new thing I have learned about my partner has pleased me.
34. My partner and I understand each other completely.
35. I don't think anyone could possibly be happier than my partner and I when we are with one another.
36. I have some needs that are not being met by my relationship.

Appendix D
Comparison Information

Downward Comparisons

1. My relationship is little more than sex right now. (10 words)
2. My relationship is routine, comfortable, old, and almost nonexistent. We will not be together much longer. (17 words)
3. My boyfriend is a little boy and we are probably not going to last much longer. (17 words)
4. My relationship is a little rocky at the moment and could be better, but we're working on things. (19 words)
5. My relationship is open, the woman I am with would rather we were exclusive but I do not want it that way. (23 words)
6. It began as a romantic relationship that wasn't going to be serious. It turned serious and we now live together in a state of frustration and boredom. (28 words)
7. My relationship consists of constantly trying to overcome obstacles and it is rocky because he is gone a lot. I also feel that he is untrustworthy because of his drug use. (32 words)
8. Lately there has been less time for one another, I don't think we'll last long because of this. I know he has important priorities in his life that I cannot compete with. (33 words)
9. I tend to complain a lot more than my husband about our relationship. I need more attention than he provides. I also feel that he needs to open up to me more. (33 words)
10. Our relationship is exclusive, but yet I tend to find myself wanting to be with someone else because of the many drawbacks in our relationship. My boyfriend is controlling and mentally abusive. (34 words)
11. My relationship with my partner is not doing so well right now and I am very hurt because of it but I do hope that it will get better as days go by. (34 words)
12. My current relationship is in a dead period. We live in two different towns, not near each other and we have a rather age gap between us (25 and 32) which creates some problems and discussion. (37 words)
13. We spend a lot of time together however I do most of the talking. Sometimes he acts very distant and I do not know what's going on in his head. We have little arguments every now and then. (39 words)
14. My boyfriend is lazy and he has no motivation to do anything. He won't come around my family and doesn't make any effort to be a part of my life. He is verbally abusive to me and is selfish. (40 words)
15. We are high school sweethearts, spent a month in Australia living together this summer but things have gotten more difficult now that we are with each other everyday at college. We find that we have some trust issues. (40 words)
16. We both have independent lifestyles, with individual priorities. He generally dictates the nature of the relationship, and often this upsets me. He can be very moody-- sometimes cold, sometimes very warm. Generally, I'm warm towards him and get upset. (40 words)
17. We fight a lot when we're drunk but it always gets resolved. Lots of sexual tension and release. She needs a lot more time from me than I need from her so I compromise more but feel resentful about it. (41 words)
18. My partner and I have been together for 3 years. I think we are slowly finding out that we are not meant to be together, but are trying to work it out because of our daughter. Our relationship has nothing to do with love or passion. (47 words)
19. We care about each other a lot but I feel as though I have put more into it than he has. I would have something large missing if he was gone, but I am sure I could find a better match for my life long mate. (47 words)
20. My boyfriend and I met working together last year and our relationship has been nice but a little unstable. He depends on me for a lot and I do a lot for him. I have cheated on him several times but he won't break up with me. (48 words)

21. We've been dating ever since high school. He is now living 19 hours away, so things are hard with communication and not being able to see each other. He worries about what I'm doing since I'm in college and I worry constantly about him since he's far away. (49 words)
22. My relationship is exclusive though it feels more like casually dating. Though we connect on similar levels and share the same recreational behaviors, I don't feel that we are emotionally as close as others in relationships. I am not very concerned with our relationship's future at the present time. (50 words)
23. My relationship is a mess. We still talk but I recently found out he still sleeps with his daughter's mother occasionally. He told me they were over but his ex called and told me they were not. I am scared that he put me at risk by sleeping with the both of us. (54 words)
24. We fight a lot for control and when we drink together is when most of them start. We have physically fought, that will never happen again. He knows exactly what it takes to push every single one of my buttons and I know his so we push them all the time just to aggravate each other. (57 words)
25. My boyfriend and I dated exclusively for two years. A year into the relationship we started to argue constantly. He was also very jealous and this placed stress on my relationships with friends and family. Now our relationship is very casual, technically we are both allowed to see other people but neither of us want that. (57 words).
26. It is hard for us to maintain our relationship because he is currently in the Navy and has been traveling since we met. We've been together for 8 months but have only seen each other for about 3 of those months. He will be leaving soon for another deployment and I do not plan on waiting around. (58 words)
27. There are a lot of complicated factors in my relationship such as the fact that we live in different states, my parents don't approve of our relationship, and he has a child so we don't tend to see each other often. We try to block out the reasons that say it shouldn't work but maybe we should just accept reality. (61 words)
28. As of right now we are doing well, however, we go through these times where he says he needs space, and it makes things difficult especially since he lives in New York and I already rarely see him as it is. When I do see him, the very beginning is great and then after a few days, he acts different. (61 words)
29. I love my boyfriend very much but he cheated on me while we were engaged. We broke up the minute I found out. He says he has made a mistake, and because of how our relationship has been, I forgave him, but he still has to rebuild my trust. We are currently together but only see each other, twice a month. (62 words)
30. Since the very first week I've been dating my boyfriend, I've had the impression that this relationship would not last very long. It's been 8 months and we're living together, but we fight often. At this point, were more like friends then lovers, we stay together as a couple, probably because each of us would be rather lonely without the other. (62 words)

Upward Comparisons

1. I feel that we are soul mates. He is my best friend. (13 words).
2. My relationship is amazing. We both care more about the other person than we do for ourselves. (18 words)
3. In my relationship we are completely in love: emotionally, physically and mentally. We just connect, we are best friends too. (21 words)
4. We are living together and have been for almost 7 years. We are very close and consider each other our best friend. (23 words)
5. My relationship is very good. I feel I can totally trust her and I've never felt as connected to anyone in my life. (24 words)
6. I knew within the first few months of my relationship that I wanted to marry him. I am very satisfied in all areas of my relationship. (27 words)

7. My partner and I are very happy together. We just enjoy happy times together. We always look forward to seeing each other, and for me, our relationship is the light of my life. (34 words)
8. My boyfriend and I are extremely close. We hang out with friends, and we also make time for just us. We both are committed to making our relationship work no matter what it takes. (35 words)
9. My relationship is great we spend as much time as we can together and always have fun. We barely argue! Were pretty much always happy. We want to spend the rest of our lives together. (36 words)
10. My boyfriend and I were friends for 7 years before we started dating. I have never been this happy before and comfortable in my life. I can see us settling down after college. (36 words)
11. We are in a very serious relationship. We have talked about marriage and children. We have talked about getting married in the next few years and having children after years of marriage. We want to spend the rest or our lives together.(43 words)
12. We've been dating for over a year. I am able to tell him things that I can tell no one else. I sometimes feel like he is the only person who always understands. I feel completely satisfied in my relationship with him. (43 words)
13. My relationship with my partner is very strong and loving. We make an effort to keep constant communication going. I have never loved someone as much as I love her. I couldn't imagine being with anyone else. We were made for each other. (44 words)
14. My boyfriend and I have an ideal perfect relationship. We get into arguments just like everyone else but we always come up with a resolution so that the problems don't reoccur. He is always there for me, no matter what, and he means more to me than anything. (49 words)
15. Our relationship is great. It is like destiny put us together. We love spending time with each other. One will do anything for the other one. We love and respect each other. We picture ourselves together in the future and with children. Each cannot live without the other. (49 words)
16. Our relationship is one built on a foundation of love and trust. He has become my best friend, someone I can always turn to. I know he would do anything in his power to make me happy. Our relationship is only becoming more solid as time goes on. (49 words)
17. I have a relationship that I would describe as very involved. We do a lot of things together. We enjoy spending time with other couples more than our single friends. We are very close with each other's family. I wouldn't know what to do if we ever broke up. (50 words)
18. My partner and I disclose our deepest secrets with each other. I feel more comfortable talking to him than anyone. His love for me is obvious through his actions and his words. Even his closest friends and family note how much he cares for me. I love him unconditionally. (50 words)
19. Our relationship is great, we are living together now (we had been dating long distance for a while), and now we get to see each other a lot. We have lots of things that we do together like watching tv, & movies, going hiking, and going to see live music. (51 words)
20. My current relationship is near perfect. My boyfriend and I spend a lot of time together and never argue. We enjoy spending time alone cuddling on the couch. I love him very dearly and would feel like a part of me would be missing if we were to part ways. (51 words)
21. My current relationship is just what I have always wanted. He is always there for anything I need no matter what it is or when I need it. I can tell him ANYTHING. He shows he loves me all the time. I am not sure I could be any happier. (51 words)
22. The relationship I am in right now is unbelievably perfect, we mesh so well together our personalities compliment each others so well. We are now inseparable. I never thought a guy would treat me so well, especially compared to the other guys I have dated. We are perfect for each other. (52 words)

23. Our relationship is something that I can count on. It is an amazing constant in my life. Our relationship is my rock when I am upset. I can go to him and know he will be there. I can share anything with him and he will always be there for me. (52 words)
24. We have been together 3 years. He's always been there for me, he knows everything about me and I know everything about him. We do everything together and always find something fun to do. He likes my friends and I like his and our families get along. He's everything to me. (52 words)
25. We were best friends before we started dating, and we continue to be best friends as we are dating, our entire relationship is built on our friendship, trust and communication. We treat each other as we would a best friend, and it works out great. Nothing better than dating your best friend. (53 words)
26. We are very much in love ... all aspects of being in love, we enjoy spending time together no matter what we are doing. I get butterflies at the weirdest times because I feel so much for him. We can go on trips and have so much fun, and work well together. (53 words)
27. My partner and I have been dating for three years now. I love every second of it! Not only is he my boyfriend, but he is my best friend. He knows everything and anything about me. We see each other often and when we do it is always great. I love him. (53 words)
28. My relationship is close to my ideal. We finally live in the same place after three years of distance. He inspires me. We love each other and feel connected, we do our best to make the other feel bigger than the sum of our parts by being respectful, kind, grateful, and humble. (53 words)
29. My relationship is a long distance one but we are very much in love with each other. We are completely comfortable with each other and have talked about the future. We have both invested much of ourselves in the relationship and would each lose a great deal if the relationship were to end. (54 words)
30. We've been together for 1.5 years successfully. There's hardly a time when we don't get along. We enjoy spending time with friends on the weekend but during the week we spend a lot of quality time alone. We encourage each other with our goals and being the best person that we can be. (54 words)

Appendix E
Momentary Relationship Insecurity

1. Right now, at this moment I am unsure how I feel about my relationship.
2. Right now, at this moment I am concerned about my relationship.
3. Right now, at this moment I am confident in how I feel about my relationship.
4. Right now, at this moment I am NOT concerned about my relationship.
5. Right now, at this moment I feel insecure in my relationship.
6. Right now, at this moment I feel secure in my relationship.

Appendix F
Self-Esteem Scales

Rosenberg Self-Esteem Scale

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

State Self-Esteem Scale

1. I feel confident about my abilities.
2. I am worried about whether I am regarded as a success or failure.
3. I feel satisfied with the way my body looks right now.
4. I feel frustrated or rattled about my performance.
5. I feel that I am having trouble understanding things that I read.
6. I feel that others respect and admire me.
7. I am dissatisfied with my weight.
8. I feel self-conscious.
9. I feel as smart as others.
10. I feel displeased with myself.
11. I feel good about myself.
12. I am pleased with my appearance right now.
13. I am worried about what other people think of me.
14. I feel confident that I understand things.
15. I feel inferior to others at this moment.
16. I feel unattractive.
17. I feel concerned about the impression I am making.
18. I feel that I have less scholastic ability right now than others.
19. I feel like I'm not doing well.
20. I am worried about looking foolish.

Appendix G
Experiences in Close Relationships Scale

1. I often worry that my partner doesn't really love me.
2. I tell my partner just about everything.
3. I find it relatively easy to get close to my partner.
4. I often worry that my partner will not stay with me.
5. I find it difficult to allow myself to depend on my partner.
6. I find that my partner doesn't want to get as close as I would like.
7. I'm afraid that once my partner gets to know me, he or she won't like who I really am.
8. I do not often worry about feeling abandoned.
9. I worry that my partner won't care about me as much as I care about him or her.
10. My partner only seems to notice me when I'm angry.
11. My desire to be very close sometimes scares people away.
12. It makes me mad that I don't get the affection and support that I need from my partner.
13. I am nervous when partners get too close to me.
14. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
15. Sometimes my partner changes his or her feelings about me for no apparent reason.
16. I usually discuss my problems and concerns with my partner.
17. I feel comfortable sharing my private thoughts and feelings with my partner.
18. When I show my feelings for my partner, I'm afraid that he or she will not feel the same about me.
19. I'm afraid that I will lose my partner's love.
20. I don't feel comfortable opening up to my partner.
21. I rarely worry about my partner leaving me.
22. I prefer not to show my partner how I feel deep down.
23. I get uncomfortable when my partner wants to be very close.
24. My romantic partner makes me doubt myself.
25. I find it easy to depend on my partner.
26. When my partner is out of sight, I worry that he or she might become interested in someone else.
27. My partner really understands me and my needs.
28. It helps to turn to my partner in times of need.
29. I feel comfortable depending on my partner.
30. I worry a lot about relationships.
31. I am very comfortable being close to my partner.
32. I prefer not to be too close to my partner.
33. It's not difficult for me to get close to my partner.
34. I worry that I won't measure up to other people.
35. I talk things over with my partner.
36. It's easy for me to be affectionate with my partner.

Appendix H

Variability of Comparison Information Questions

1. How variable (e.g., some relationships were better than yours and some were worse) were the example relationship assessments?
2. To what extent do you feel that the example assessments were varied (some better than and some worse than your own relationship)?
3. Do you think that the relationship assessments that you saw provided you with a wide range of different types of relationships?

Appendix I
Relationship Specific Uncertainty

1. I am unsure how I feel about my current relationship.
2. I am concerned about my current relationship.
3. I am confident in how I feel about my current relationship.
4. I am NOT concerned about my current relationship.
5. I feel insecure in my current relationship.
6. I feel secure in my current relationship.

Appendix J

Table 1:
Study 1: Means, Standard Deviations, and Inter-correlations of all variables.

	1	2	3	4	5	6	7
Time 1 Measures							
1.Relationship Uncertainty	2.63(.93)	-	-	-	-	-	-
2.Relationship Evaluation	-.56***	.00(.59)	-	-	-	-	-
Time 2 Measures							
3.Relationship Uncertainty	.64***	-.62***	3.24(1.46)	-	-	-	-
4.Relationship Evaluation ⁺	-.52***	.75***	-.76***	-.00(.84)	-	-	-
5.Variability in Ratings	.22**	-.17*	.27***	-.28***	1.53(.87)	-	-
6.Directionality Ratings	.37***	-.35***	.46***	-.44***	.44***	3.99(1.97)	-
7.Length of Rel. (months)	-.16*	.30***	-.22**	.30***	-.08	-.19*	13.94(15.13)

Notes: Scale means and standard deviations are presented on the diagonal in the format of M(SD). ⁺ Because the relationship evaluation composite consists of measures rated on different scales, all measures were standardized and then the composite was created. * p <.05, ** p<.01, *** p<.001.

Appendix K

Table 2:
Study 2: Means, Standard Deviations, and Inter-correlations of all variables.

	1	2	3	4	5	6	7
1.Attachment Style	2.84(.94)	-	-	-	-	-	-
2.Rel Specific Uncertainty	.66***	3.80(2.31)	-	-	-	-	-
3.General Uncertainty	.72***	.93***	3.49(1.53)	-	-	-	-
4.# of Social Comparisons	.06	.12	.13	1.70(4.18)	-	-	-
5.Relationship Evaluation+	-.71***	-.66***	.65***	-.10	-.01(.79)	-	-
6.Variability in Ratings	.19*	.10	.15	.22**	-.20*	1.17(.97)	-
7.Directionality in Ratings	-.56***	-.47***	-.52***	-.14	.58***	-.33***	7.75(2.28)
8.Perceptions of Variability	.01	.06	.07	.12	-.09	.14	-.10
9.Length of Rel. (months)	-.40***	-.31***	-.31***	.09	.42***	-.02	.21*
10.Pre Satisfaction	-.74***	-.71***	-.74***	-.12	.78***	-.24**	-.03

Notes: Scale means and standard deviations are presented on the diagonal in the format of M(SD). + Because the relationship evaluation composite consists of measures rated on different scales, all measures were standardized and then the composite was created. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 (cont).

	8	9	10
1.Attachment Style	-	-	-
2.Rel Specific Uncertainty	-	-	-
3.General Uncertainty	-	-	-
4.# of Social Comparisons	-	-	-
5.Relationship Evaluation+	-	-	-
6.Variability in Ratings	-	-	-
7.Directionality in Ratings	-	-	-
8.Perceptions of Variability	4.68(2.03)	-	-
9.Length of Rel. (months)	-.13	11.59(13.22)	-
10.Pre Satisfaction	.67***	.39***	6.62(1.89)

Notes: Scale means and standard deviations are presented on the diagonal in the format of M(SD). + Because the relationship evaluation composite consists of measures rated on different scales, all measures were standardized and then the composite was created. * $p < .05$, ** $p < .01$, *** $p < .001$

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