

## ABSTRACT

### Perceptual Change and Alcohol Use During Couples' Conflicts

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The current project sought to understand why previous studies have sometimes failed to find associations between alcohol and conflict behavior, how alcohol use is associated with relationship conflict, and whether alcohol and relationship functioning variables are associated with a new variable regarding perceptual changes during conflict interaction. To address these issues, a broad sample of alcohol consumers were recruited to increase drinking variability and to develop a new instrument measuring the extent to which couples experience perceptual change during conflict interaction. Perceptual change occurs when a person modifies the way he or she is thinking or feeling about a conflict interaction and is theoretically important for understanding conflict behavior (Gottman, 1998, 1999; Gottman, Swanson, & Jurray, 1999). The current project included three studies. Study 1 was an exploratory study asking participants to give open-ended responses to questions on perceptual change and used to create a new measure. Study 2 analyzed the new measure, tested the factor structure identified in Study 1, and revised the positive perceptual change instrument using Item Response Theory. Finally, Study 3

implemented recruitment techniques to obtain a sample of alcohol consumers with a wide range of drinking behaviors, and tested convergent validity of the new instrument. In the present studies, problematic alcohol use was found to correlate negatively with relationship satisfaction and correlate positively with adversarial communication, negative emotion, and perceived threat. More positive perceptual change predicted greater collaborative communication and perceived partner soft emotions and fewer perceived partner flat emotions. In addition, results demonstrated that the extent of perceptual change, regardless of change in valence, predicted less satisfaction and more adversarial engagement, angry and sad emotions, and perceived neglect. Overall, the results suggest the importance of including a sample of people with a full range of alcohol behaviors and that a new perceptual change instrument may be a promising measure to use in couples research.

Perceptual Change and Alcohol Use During Couples' Conflicts

by

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A Dissertation

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To my husband, Harry Fulghum  
My family, Dwayne, Darla, and Landen Backer  
Without you, none of this could be possible

## CHAPTER ONE

### Introduction

It is crucial to examine the relationship between alcohol use and conflict interaction among couples. The current project involved recruiting a sample of alcohol consumers to increase the variability of drinking behavior as well as creating a new measure of perceptual change to measure one's ability to make perceptual shifts during conflict interactions. This was done in order to understand why some previous studies have failed to find relationships between alcohol and conflict behavior, how alcohol is associated with relationship conflict, and whether alcohol and relationship functioning variables are associated with positive perceptual changes during conflict interaction.

As an initial step in the examination of the association between alcohol and couples' conflict interactions, the author recently conducted a pilot study (Backer-Fulghum, 2013) and found small correlations between relationship functioning variables and alcohol use variables. These small effects are consistent with previous research in the area of alcohol and couples' conflict (Levitt & Cooper, 2010). For example, Levitt and Cooper (2010) studied a small sample of 69 couples and found a small linear relationship between heavier alcohol use and negative partner behaviors (standardized coefficient = .06) and negative partner events the next day (standardized coefficient = .06). There are two possible explanations as to why some studies may fail to find effects. One reason for these small effects may be due to measuring static (i.e., non-changing) measures of perception rather than measuring perceptual change, which may produce larger effects. Perceptual change is defined as a change in valence or magnitude of

salient cognitive appraisals and emotions during conflict interactions. An example of perceptual change during a conflict interaction could be someone going from feelings of anger towards a partner to feelings of empathy. In other words, a perceptual change will occur when an individual changes the way he or she thinks or feels about a conflict. This change can be either positive or negative. The construct of perceptual change is similar to other constructs proposed by researchers in the field of couple's research (Gottman, 1998, 1999; Gottman, Swanson, & Jurray, 1999). Introducing alcohol into a conflict interaction may make it harder for couples to make perceptual changes due to the effects of alcohol on information processing.

A second explanation for why some studies find small effects may be due to failing to assess a sufficiently diverse range of drinking levels. In Backer-Fulghum's (2013) pilot study, alcohol variable scores fell toward the lower end of the scales with the majority of participants and their partners not consuming alcohol prior to the specified conflict interaction. Therefore, the sample may have had lower rates of alcohol use than might be found when targeting a sample of alcohol consumers, and that this in turn may have constrained the variance in alcohol use. In sum, it is essential to not only examine the effects of perceptual change on conflict interaction, but also recruit a sample of alcohol consumers with a wide range of drinking variability in order to better understand the link between alcohol and couples' conflict interactions.

#### *Alcohol Myopia Theory*

Perceptual change is an important variable for examining the relationship between alcohol and conflict behavior because of its theoretical ties to the theory of alcohol myopia (Steele & Josephs, 1990), which is a widely accepted and used theory in alcohol

research today (Leonard, 2013). According to myopia theory, alcohol impairs an individual's perceptions by inhibiting a person's ability to process all relevant information. This short-sighted information processing makes it difficult to think abstractly (Moss & Albery, 2009; Steele & Josephs, 1990). Alcohol myopia prevents a person from responding normally to imposing cues. Alcohol leads to "drunken excess" in situations where there is a high response conflict. A high response conflict is a response that has both strong impelling and strong inhibiting cues. A person who has consumed a large quantity of alcohol will be more likely to respond impulsively to salient, impelling cues and more likely to ignore peripheral cues that could help block or inhibit an impulsive response because of alcohol myopia. For example, a partner under the influence of alcohol, during a conflict interaction, should be less likely to notice an attempt at reconciliation made by the other partner. It is important to note that even though research tends to focus on negative outcomes of alcohol myopia (e.g., anger, aggression), outcomes may also be positive. For instance, Steele, Critchlow, and Lui (1985) examined the effect of alcohol on helping behavior and found that alcohol increased helping behavior when helping was salient or most relevant. Similarly, Lynn (1988) found that people who drank more at a restaurant gave larger tips. This suggests that alcohol myopia could also produce positive outcomes. However, in the context of a conflict interaction, where the most salient thoughts and emotions are negative, alcohol should produce more negative outcomes. In other words, because alcohol myopia impairs cognitive and attentional processes and makes people focus on the most salient information, perceptual change during a conflict interaction should be difficult.

In light of alcohol myopia theory, it is important to make distinctions between general trait measures and context specific measures as well as static measures of perception and measures of change in a perception. General trait measures assess characteristics or patterns observed over a period of time in a relationship, while context-specific measures assess a single target episode of conflict. According to Steele and Josephs (1990), it is important to consider the context of the situation because when the effects of alcohol are aggregated (e.g., when using general trait measures) without regards to context, the overall impact of alcohol is modest. In addition, it is also important to discriminate between static measures and measures of change. Static measures of perception assess an individual's perceptions at a single point in time or a person's typical perceptions averaged across a span of time. A measure of perceptual change would assess the extent to which a person reports that his or her perceptions have changed on a particular occasion or over a given span of time. The key difference between static measures of perception and changes in perception is that static measures do not assess the extent to which a perception has changed or fluctuated. Therefore, it is important to measure perceptual change because of its theoretical ties to alcohol myopia theory, which in turn helps explain the importance of how alcohol influences conflict interactions.

#### *Clarifying the Association between Alcohol and Couples' Interactions*

If alcohol predicts perceptual change, this would be significant because it helps clarify how alcohol influences conflict interactions. Although few studies have examined the effects alcohol has on conflict among couples, it is quite possible that alcohol would interfere with conflict interactions among couples (see Marshal, 2003 for a review of

these studies). However, this is not always found in the literature. For instance, past studies suggest two different hypotheses for the relationship between alcohol and couples. The family systems approach suggests that alcohol is beneficial and fosters warmth and intimacy. According to Steinglass (1985), an alcoholic family or couple is thought of as a behavioral system because it is organized around alcohol. One of the important forces of the family systems approach is family homeostasis, or stability. Because the couple is centered around alcohol, couple stability becomes dependent on alcohol-related phenomenon. Couples interaction patterns serve to continue alcohol use by rewarding drinking behaviors through subsequent interactions. Steinglass and his colleagues observed alcoholic family interactions and found that alcohol temporarily lowers daily stress among the family system through increased emotional expression and problem solving skills, which helps maintain stable and adaptive relationships (Steinglass, 1979a, 1979b; Steinglass, Davis, & Berenson, 1977; Steinglass, Weiner, & Mendelson, 1971). A recent study that demonstrates this was conducted by van der Rot, Russell, Moskowitz, and Young (2008) who found that drinking alcohol had positive effects on interpersonal interactions such that consuming alcohol an hour before a social interaction negatively predicted quarrelsomeness and negative emotions and positively predicted agreeableness and positive emotions. However, interpersonal interactions were not differentiated between romantic and non-romantic relationships, and thus it is unknown as to whether these effects were greater for one type of relationship over the other, or whether these effects were equally supportive of both types of interpersonal relationships. The second hypothesis is based on social learning theory, and suggests that alcohol is damaging and hurtful to the couple through conflict, violence, and deprivation

(Leonard & Eiden, 2007). According to McCrady (1982), social learning theorists typically view problem drinking as a learned behavior that is maintained by both positive reinforcement and avoidance of unpleasant consequences. Research suggests that alcoholic couples have poor communication and problem-solving skills and engage in fewer positive interactions (McCrady, 1982). According to Marshal (2003), the presence of alcohol in a marriage creates conflict, which is inadvertently reinforced by subsequent drinking. Moreover, research shows that as alcohol use increases, so do couples dissatisfaction, negative interactions, and violence (Marshal, 2003).

Past research shows support for both the social learning and family systems approach on alcoholism. For example, a recent diary study conducted by Levitt and Cooper (2010) used a sample of romantically involved university students and found evidence for both positive and negative effects of alcohol on relationship functioning. Specifically, they found that husbands' next day reports on intimacy significantly decreased as alcohol consumption increased, regardless of whether they drank with their partner or not. Similarly, wives' next day reports on intimacy also decreased as alcohol consumption increased, but only for those wives who did not drink with their partner. Wives who did drink with their husbands did not experience such a decline. This may suggest that drinking with a partner buffers some of the negative effects of drinking on intimacy, but only among wives. It is important to note that this study did not specifically look at communication behaviors during a conflict, and reports of the positive and negative outcomes of alcohol were completed the following day. Moreover, some of the reported positive effects were not statistically significant at the .05 significance level, thus findings may not be easily replicated. Therefore, this study

provides some initial evidence of possible positive and negative effects of alcohol, but does not directly address conflict or changes in perception during conflict.

The studies that have looked at alcohol and couples relationships typically focus on relationship functioning variables such as relationship satisfaction and intimacy (e.g., Jacob & Leonard, 1992; Leonard & Jacob, 1997; Leonard & Roberts, 1998a; Leonard & Roberts, 1998b; Levitt & Cooper, 2010; O'Farrell & Birchler, 1987) as well as marital violence (e.g., Leonard & Roberts, 1998a; Leonard & Quiqley, 1999; O'Farrell & Choquette, 1991; O'Farrell & Murphy, 1995). Even though some of these findings do not specifically examine couples interactions during conflict or measure perceptual change, they do give clues regarding how alcohol is likely related to couples interactions. For example, studies using large sample sizes find negative correlations between alcohol problems/heavy use and relationship satisfaction (Dumka & Roosa, 1993, 1995; Leonard, 1998b). Furthermore, research shows alcoholic couples report higher rates of violence than national norms (O'Farrell & Choquette, 1991), intoxicated men are more likely to verbally and physically abuse their partners (Coleman & Straus, 1983; Hutchinson, 1999; Kantor & Straus, 1989), and that alcohol increases interpersonal aggression in both men and women (Giancola et al., 2009). A few studies on the association between alcohol and conflict interaction further illustrate its significance by administering alcohol, albeit not specifically looking at changes in perception. For example, in an experimental laboratory study, Leonard and Roberts (1998a) found that husbands reported more negativity ( $d = .62$ ) and problem-solving behaviors ( $d = .61$ ) during conflict interactions when administered alcohol compared to placebo and control conditions. In a similar experimental study, MacDonald, Zanna, and Holmes (2000) found that undergraduate

male participants, randomly assigned to a drinking condition and primed with thoughts of a recent relationship conflict, reported more negative emotions and negative perceptions of their partners' feelings. This would likely fit within the framework of alcohol myopia theory. That is, once negative thoughts were primed, they did not disappear. These two experimental studies play an especially important role in helping understand the function of alcohol in a sample of participants administered alcohol, albeit not a direct test of perceptual change, since they provide strong evidence for the unfavorable consequences of alcohol consumption on couples' conflict interactions.

### *Perceptual Change and Relationship Outcomes*

If alcohol is related to perceptual change, and in turn, perceptual change is related to relationship outcomes, then creating a new measure of perceptual change may help explain how alcohol and perceptual change are predictive of relationship outcomes. Researchers who study couples' conflicts often posit that perceptual changes are important (Gottman, 1998, 1999; Gottman et al., 1999). One way to measure these types of changes in one's feelings and thoughts is by using a method of observation called behavioral sequential analysis. Behavioral sequential analysis conceptualizes behavior as sequences in terms of probabilities and the reduction of uncertainty when predicting interactional patterns (see Bakeman & Gottman, 1986; Bakeman & Quera, 1995; Gottman & Roy, 1990), and is a method for measuring how partners influence each other's behavior (Margolin & Wampold, 1981). This type of analysis allows investigators to examine how couples change their behaviors during a conflict interaction. For example, behavioral sequential analysis shows that unhappy couples tend to engage in long sequences of negative reciprocity (i.e., the likelihood that a partner's behavior

will be negative given that the other partner's behavior was previously negative), while happy couples engage in higher rates of problem-solving and positive behaviors (Fitzpatrick, 1988; Gottman, 1994, 1998; Margolin & Wampold, 1981). This could be shown as the probability of a positive response following an initial positive response (i.e. positive reciprocity), or as the probability of a positive response following a negative response (i.e., behavioral change). Consistent with this idea, Jacob and Leonard (1992) used behavioral sequential analysis and found that alcoholic husbands were more likely to respond negatively and less likely to respond positively to their wives' problem solving behaviors compared to nonalcoholic husbands. This shows that although wives were using problem-solving behaviors during a conflict, the alcoholic husbands remained negative and did not change their negative behaviors to reflect more positive behaviors. Surprisingly, they also found that alcoholic husbands were less likely to respond to wives' negativity with their own negativity (i.e., negative reciprocity) than nonalcoholic couples (Jacob & Leonard, 1992). Although this study focuses on behavior, rather than perceptions, it does suggest the possibility that alcohol may make it more difficult for a person to change his or her perceptions.

One particular context in which perceptual change could be important is in response to repair attempts. According to Gottman (1979, 1998) most married couples express both negative emotions and attempts at reconciliation during a conflict interaction. Satisfied couples are more likely to focus on the repair attempt, while dissatisfied couples are more likely to focus on the negative emotion. For dissatisfied couples, making perceptual change after a repair attempt would be difficult and unlikely. On the other hand, satisfied couples are more likely to notice the repair attempt and make

changes to their perceptions. Introducing alcohol into a conflict interaction may further impact an already negative situation by making it harder for a person to notice a repair attempt or accept a partner's influence, and thus less likely to change his or her behavior during a conflict interaction. Moreover, perceptual change is important because it is theoretically expected to be related to relationship satisfaction, communication behavior, emotions, and couples' underlying concerns. When people make positive changes in their perceptions, they will experience fewer negative emotions and concerns about perceived threat and perceived neglect, as well as communicate more positively. This, in turn, could lead to more overall conflict resolution and higher relationship satisfaction.

#### *Overview*

In summary, the purpose of the current project is to examine the relationship between alcohol use and couples conflict interactions. One way to do this is by using a broad sample of alcohol consumers to increase the variability of drinking behaviors during conflict interactions. The second way to examine this complex relationship is to develop a new instrument of positive perceptual change during conflict interactions among couples. This is significant for three reasons: (1) myopia theory helps explain the association between alcohol use and couples' conflict interaction, (2) there is a need to clarify the relationship between alcohol and conflict behavior, and (3) conflict behavior is important for relationship outcomes. The process of creating a measure of positive perceptual change and broadening the range of alcohol use in a sample of couples will allow researchers to better understand the relationship between alcohol and conflict interaction among couples. It was hypothesized that alcohol use would be associated with less positive perceptual change and relationship satisfaction and more adversarial

engagement, negative emotion, and perceived threat and neglect. In addition, positive perceptual change was theoretically expected to be related to relationship satisfaction, communication behavior, emotions, and couples' underlying concerns. Specifically, it is hypothesized that people who make more positive perceptual changes would be more satisfied and have more collaborative communication during conflict interactions, as well as experience fewer negative emotions and concerns about perceived threat and perceived neglect.

## CHAPTER TWO

### Study 1

#### *Overview*

Study 1 was an exploratory study that asked participants to give open-ended responses to questions on perceptual change during a specific conflict interaction. Data was gathered on the different types of areas of perceptual change that people naturally identify. Participants were asked to describe a perceptual change, what triggered it, and how long it took to occur. These responses were collected and positive areas of perceptual change were used to create a new instrument of positive perceptual change with a theoretically meaningful factor structure.

#### *Methods*

##### *Participants*

Study 1 included data from 209 U.S. participants (women = 157, men = 50, did not respond = 2) from Amazon's Mechanical Turk (MTurk). The questionnaire was available to participants who were United States citizens and responses were included in data analysis if participants reported they were adults who had at some point in time been in a romantic relationship. Each participant was compensated \$0.50 to complete the exploratory questionnaire. Participants' ages ranged from 18 to 69 ( $M = 33.00$ ,  $SD = 10.96$ ). Among participants, 75.0% were Caucasian, 9.0% were African American, 6.7% were Hispanic, 5.3% were Asian, 0.5% were Native American, 2.4% were other, and

1.0% chose not to respond. In addition, 46.8% were married, 6.7% were engaged and living together, 2.9% were engaged, but not living together, 20.6% were living together, but not engaged, 12.9% were dating, 6.2% were single, 2.9% indicated other, and 1% chose not to respond. Annual family income ranged from less than \$20,000 (U.S currency) to more than \$100,000.

### *Procedures*

Participants signed up for this study through Amazon's Mechanical Turk (MTurk) website. The listing of the study included a brief description of the study, the estimated length of time to complete the study, and the compensation amount. Participants were provided with an informed consent form, which they had to agree to in order to participate in the study. By agreeing to the informed consent, participants were able to access the questionnaire. Participants were asked to describe two separate occurrences of conflict with their romantic partner during which they experienced perceptual change. Participants were asked to describe the perceptual change, what triggered it, and how long it took to occur. Once data was collected, a coding system was developed to classify open-ended responses. This was used to identify dimensions and indicators of perceptual change. The survey took approximately 10 minutes to complete. Participants' data were anonymous to the researcher, and MTurk only retained the participants' identity for compensation purposes. Upon completion, participants received \$0.50.

### *Measures*

Participants were given open-ended questions asking to describe specific instances of perceptual change that occurred during a conflict interaction with their

romantic partner. In order to assess the different types of perceptual change people experience naturally, the questionnaire was divided into two parts. The first section was designed to provide definitions and instructions on how to complete the questionnaire, as well as to ensure that participants clearly understood them. This first part was only used to ensure participants understood what was meant by perceptual change, and was not used as a measure of perceptual change. To do this, participants received definitions for a set of terms pertaining to perceptual change during conflict interaction (i.e., transformation experience, initial feeling, initial thoughts, new feeling, and new thoughts). Participants were then tested over their understanding of these terms and had to provide correct answers before they were able to proceed to the second part of the questionnaire. The term “transformation experience” replaced “perceptual change” to aid in participant understanding. The following explanation was provided:

A transformation experience is simply an experience where a person changes what he or she is feeling during a conflict with another person. That is, a person has an initial feeling, and then the feeling changes, and the person has a new feeling. There are three things you need to know about a transformation experience.

1. The new feeling could be either more positive or more negative than the initial feeling. For example, if the initial feeling is mild annoyance, the new feeling could be tender compassion (a more positive feeling), and it could be hopeless despair (a more negative feeling).
2. In some situations, the new feeling could simply be a change in the intensity of the original feeling. For example, if the initial feeling is anger, the new feeling could be feeling not angry, or it could be feeling extremely angry.
3. A transformation experience could occur instantaneously, or it could gradually over a long span of time.

Next, participants were prompted to read two stories on perceptual change, one about a woman and her dog and the other about a father and his son. These stories included

examples of perceptual change and specifically asked participants to identify the character's thoughts and feelings before and after the perceptual change. In addition, participants were asked to identify what triggered the perceptual change. This was done to ensure participants clearly understood the directions and instructions above. For the first story, participants were shown the following:

One afternoon, Mary was in her kitchen baking cookies. Just when Mary took the cookies out of the oven, the phone rang. She quickly put the tray of cookies on the counter and went into the other room to grab the phone.

Once Mary left the room, her dog, Spot, came into the kitchen to get a drink of water. As he was approaching his water dish, he suddenly stopped. There was a wonderful smell coming from above him. Spot stood on his hind legs and inspected this delicious smell. As he did this, he stuck his nose in the cookies and then knocked the entire pan onto the floor.

Mary heard the crash from the other room and quickly ran into the kitchen. Mary angrily looked at the mess on the floor and then at Spot licking cooking crumbs off his nose. "That stupid dog ruined all my cookies" she thought to herself. "That dog is irresponsible, lazy, and determined to misbehave. I ought to punish him to teach him a lesson."

Mary then sat down on the floor to clean up the mess, and Spot cautiously approached his owner. He softly whimpered and licked her face. The wet, messy kiss from Spot made Mary laugh. Mary shook her finger at the dog and jokingly said, "You're such a bad boy, Spot!" Spot made a happy bark and Mary gave him a hug.

On the following page, participants were asked a series of questions that tested their understanding of perceptual change in the above example.

1. In this story, what was Mary's INITIAL feeling toward her dog, Spot?
  - a. Sad
  - b. Relieved
  - c. *Angry*
  - d. Affectionate

2. At the point when Mary was having her INITIAL feeling, what was Mary likely thinking?
  - a. "Awwww, Spot's so adorable! How can I be mad at him?"
  - b. "I wonder who was on the phone" I never got the change to answer it."
  - c. "What a mess Spot made! That dog has a behavior problem."
  - d. "I can't wait to try one of my cookies! They smell so good!"
  
3. What was Mary's NEW feeling?
  - a. Sad
  - b. Relieved
  - c. Angry
  - d. Affectionate
  
4. At the point when Mary had her NEW feeling, what was Mary likely thinking?
  - a. "Awwww, Spot's so adorable! How can I be mad at him?"
  - b. "I wonder who was on the phone" I never got the change to answer it."
  - c. "What a mess Spot made! That dog has a behavior problem."
  - d. "I can't wait to try one of my cookies! They smell so good!"
  
5. What triggered the transformation experience?
  - a. The phone rang
  - b. Spot licked her
  - c. The cookies fell on the floor
  - d. Spot walked into the kitchen

For the second story, participants were shown the following:

CJ pulled up to his house late on Friday night. Moments ago, he accidentally veered off the road and hit a sign post while driving his father's car. Now, he slowly entered the house found his dad sitting in the front room.

"Um Dad..." began CJ. "Uh, I was in a little accident."

"Are you okay?"

"Yes, I'm fine." said CJ.

"How's the car? Is the car okay?" asked his father.

"Yeah. Sure. The car's fine. It wasn't that big of a deal," said CJ. "I mean there's really only a small scratch on the car. It's barely noticeable."

CJ's father was relieved to hear that CJ was okay and that the car had suffered minor damage. He told CJ he was happy he was not hurt. "Just be more careful next time," he told him.

The next morning, when CJ's father was taking out the trash, he stopped next to his car to take a look at the damage. He was expecting to find a small scratch. What he did not expect to find was the front end of his car smashed in with the bumper barely hanging on! CJ's father ran inside the house and yelled up at his son, "CJ! Get down here right now!"

CJ, half asleep, slumped down the stairs. "What?" he said half asleep.

CJ's father pulled CJ outside and pointed to the car. "That is *not* a 'little scratch,'" he yelled. "You have completely ruined my car! This is going to take a lot of money to fix!"

On the next page, participants were again asked a series of questions to test their understanding of perceptual change in this example.

1. In this story, what was the father's INITIAL feeling toward his son, CJ?
  - a. Sad
  - b. *Relieved*
  - c. Angry
  - d. Content
  
2. At the point when the father was having his INITIAL feeling, what was he likely thinking?
  - a. "Why is CJ coming in so late?"
  - b. "I really need to take out the trash."
  - c. *"I'm just glad CJ's not hurt!"*
  - d. "The car is ruined!"
  
3. What was the father's NEW feeling?
  - a. Sad
  - b. Relieved
  - c. *Angry*
  - d. Content

4. At the point when the father has his *NEW* feeling, what has he likely thinking?
  - a. “Why is CJ coming in so late?”
  - b. “I really need to take out the trash.”
  - c. “I’m just glad CJ’s not hurt!”
  - d. “*The car is ruined!*”
  
5. What triggered the transformation experience?
  - a. *When he saw the car was badly damaged*
  - b. When he realized CJ was not hurt
  - c. When CJ came home and said he had an accident
  - d. When he called CJ downstairs

After participants correctly answered the stories’ questions, the second part of the questionnaire was administered in two blocks. The second component of this procedure was an open-ended assessment of perceptual change that will later be used create a new instrument of perceptual change. In the first block, participants were given open-ended questions asking to describe instances of perceptual change (i.e., they indicated their initial thoughts and feelings and their new thoughts and feelings after the change) that occurred during a specific conflict interaction with their romantic partner.

In the first block, participants read the following instructions:

Think of a *real* conflict that you had with your *romantic partner* where you experienced a transformation experience. That is, think of a conflict where you had an initial feeling that changed to a new feeling.

Participants were then asked to answer the following questions:

1. In one sentence, describe the conflict.
2. What was the *INITIAL* feeling you had during this conflict?
3. At the point when you had this *INITIAL* feeling, what were you thinking?
4. What was the *NEW* feeling you had during this conflict?
5. At the point when you had the *NEW* feeling, what were you thinking?

6. What triggered the transformation experience?
7. How long did the transformation experience take to occur (e.g., immediately, after a few minutes, hours, days, weeks)?

In the second block, participants were instructed to think of another time when a perceptual change occurred, and asked the same set of questions as above.

### *Results*

To analyze the qualitative responses, an exploratory process was conducted to identify the different types of perceptual change based on participants' open-ended responses. As an initial step in data analysis, the open-ended questions were examined for measuring perceptual change. First, invalid responses (i.e., responses that were unintelligible or did not provide the answer being asked) were identified and omitted from the analysis. Overall, the method produced meaningful responses from participants. Below is an example of a typical meaningful response.

1. In one sentence, describe the conflict.
  - a. *My husband yelled at me.*
2. What was the *INITIAL* feeling you had during this conflict?
  - a. *Hurt*
3. At the point when you had this *INITIAL* feeling, what were you thinking?
  - a. *Why is he yelling at me?*
4. What was the *NEW* feeling you had during this conflict?
  - a. *Understanding*
5. At the point when you had the *NEW* feeling, what were you thinking?
  - a. *I realized he had been through something difficult*

6. What triggered the transformation experience?
  - a. *He told me about it*
7. How long did the transformation experience take to occur (e.g., immediately, after a few minutes, hours, days, weeks)?
  - a. *A few minutes*

This is an example of a meaningful response because it describes a change in attribution that goes from blaming a partner to identifying mitigating factors (such as feelings of understanding) that excuse the partner from blame.

Next, participant responses were evaluated to identify the different types of perceptual change. This was done in a two-step process. In the first step, the primary investigator, along with three trained research assistants, went through multiple iterations of categories of perceptual change in order to identify a coding system that worked best. Specifically, the primary investigator and the trained research assistants read through each response set, and noted the different types of perceptual change that respondents identified (e.g., change that resulted from becoming more understanding, learning something new, or reflecting on their own or partner's behavior). These categories of perceptual change became the tentative categorization system used in coding individual responses. Research assistants and the primary investigator went through many iterations of categorization until a coding system was reached that classified the majority of responses with reasonable reliability. Each iteration consisted of research assistants using the tentative classification system to categorize a portion of responses. This was done in order to increase efficiency due to the large number of response sets. After research assistants categorized responses, they provided feedback to the primary investigator

about participant responses that did not fit into any one of the categories, categories that were unnecessary or redundant, and categories that were unclear or too vague. At this point, the primary investigator modified the classification system based on their feedback in order to better capture the data. Next, research assistants categorized another portion of the response sets based upon the modified categorization system, and provided additional feedback to the primary investigator, who once more modified the categorization system. The primary investigator and research assistants went through several of these iterations until they all agreed the categorization system was sufficient to classify all responses. This final categorization system (see Appendix A) was determined to fit the data best when, after using the categorization system to classify each person's response, the coders had no valid responses left uncategorized. It is important to note that participants gave open-ended responses identifying both self and partner behavior change (see Appendix A for partner behavior change indicators). For the current project, codes were created for partner behavior change to fully capture the responses of participants, but these codes were not used in later stages of the project due to it being beyond the scope of the present study.

The second-step, in the two-step process, involved identifying a specific set of items that could potentially measure change in either the positive direction or the negative direction. The categories of perceptual change, found in Appendix A, were reduced to include only items that measure positive perceptual change. Specifically, four items were dropped that asked only about negative change and one item was dropped because it did not measure change. These perceptual change items are found in Table 1

and are written using neutral wording and second person pronouns, which simplified transforming the list to a questionnaire.

Table 1

*Perceptual Change Items*

- 
1. You learned something new, that you had not known before, about your partner's side of the story or your partner's experience
  2. Your view of the situation changed after you reflected on your own behavior and/or actions
  3. You saw your partner in a different way after he/she expressed an emotion
  4. You considered the costs and/or benefits of being upset or angry about something
  5. You considered the possibility that your initial judgment might have been unfair or hasty.
  6. With the passage of time, there was a change in the importance of the issue or a change in how much you thought about it.
  7. You made a change in your standards for your relationship, or you made a change in the things you expect your partner to do.
  8. You decided to forgive your partner.
  9. You saw your partner in a different way after learning new information from someone other than your partner.
  10. Your view of the situation changed after you reflected on your partner's behavior and/or actions.
  11. There was a change in your level of interest in the conflict (you became more or less interested in the conflict).
  12. You noticed that there was a change in how well you were understanding your partner.
  13. You made an important decision that changed the way you thought about the conflict.
  14. You realized your feelings had changed.
  15. You considered your own behavior or action and decided the situation was not as bad as you had originally thought.
  16. You noticed that there was a change in your affection toward your partner (i.e., you became more or less affectionate or loving)
  17. You learned something new, that you had not known before, about your partner's intentions.
  18. You saw your partner in a different way after a circumstance outside your relationship helped explain his/her behavior.
  19. There was a change in your level of hope or a change in your belief that the problem could be resolved.
  20. A circumstance outside your relationship changed the importance of the issue.
-

## CHAPTER THREE

### Study 2

#### *Overview*

The purpose of Study 2 was to create a new questionnaire of positive perceptual change from the items created in Study 1, as well as to analyze the new instrument for unidimensionality and select the best items from the questionnaire. Revisions to the measure of perceptual change were done to maximize validity by using Item Response Theory (IRT). IRT analysis was conducted to identify which items provided the most unique information to create a shorter, more concise version of the perceptual change measure.

#### *Methods*

##### *Participants*

Study 2 included data from 207 participants (women = 135, men = 72) from Amazon's Mechanical Turk. The questionnaire was available to participants who were United States citizens, and responses were included in data analysis if participants reported they were adults in a current romantic relationship. Each participant was compensated \$0.50 to complete the questionnaire. Participant's ages ranged from 18 to 71 ( $M = 33.50$ ,  $SD = 10.43$ ). Among participants, 78.3% were Caucasian, 8.2% were African American, 5.3% were Hispanic, 5.3% were Asian, 1.0% were Native American, and 1.9% were other. Among these individuals, 21.3% were single, never married,

47.3% were married, 25.1% were cohabitating, 0.5% were widowed, and 5.9% were divorced. Highest level of education ranged from less than high school to professional degree (average level of education = 2-4 year college degree). Annual family income ranged from less than \$10,000 to over \$300,000 (average annual family income = \$40,000 - \$50,000).

### *Procedures*

Procedures were similar to those in Study 1. Participants remained anonymous to the researcher throughout the course of completion. For Study 2, participants signed up on MTurk's website where they read and agreed to an informed consent form. The survey took approximately 30 minutes to complete. Participants were asked to identify a recent conflict interaction they had with their romantic partner and answer questions on perceptual change during that interaction. Upon completion of the survey, participants received compensation of \$0.50.

### *Measures*

Participants were asked to complete the new positive perceptual change instrument that was developed based on the results in Study 1 (see Appendix B). The items, given in Table 1, were turned into items on a questionnaire that were expected to measure positive perceptual change. The question, "Did the following occur?" was placed prior to the text of each item listed in Table 1, thereby turning each item into a question. Each of these items were rated on the following scale: 1 = "No, this did NOT occur", 2 = "Yes, there was a small change", 2 = "Yes, there was a moderate change", and 3 = "Yes, there was a big change." Next, for each item listed in Table 1, an

additional question was created to provide information on the direction of change. An example of a typical question was: “Did this change make things better or worse?” Each of these items were rated on the following scale: 1 = “*Better*,” 2 = “*Worse*,” 3 = “*Had no effect*,” and 4 = “*Situation did not occur*.” An example of how the positive perceptual change items were created into questionnaire format is shown below: Did the following occur? You noticed that there was a change in your affection toward your partner (i.e., you became more or less affectionate or loving).

1. No, this did NOT occur
2. Yes, there was a small change
3. Yes, there was a moderate change
4. Yes, there was a big change

Did this change make things better or worse?

1. Better
2. Worse
3. Had no effect
4. Situation did not occur

In order to measure positive change, a positive change variable was created and scored as a zero if no change occurred or if the change was not described as being positive. It was scored as a 1 if the participant indicated that it was a small change, a 2 if the change was moderate, and a 3 if the change was large. Although the main purpose of Study 2 was to examine positive perceptual change, response options were left open for participants to respond with negative change. However, negative change was not used in the IRT analysis to select items for a measure of positive perceptual change.

### *Results*

As an initial step in data analysis, dimensionality was examined for the new positive perceptual change instrument. Alpha reliability for the 20 items listed in Table 1

for positive change was .89 and a Scree Plot and Parallel Analysis were conducted to determine how many latent variables or factors to retain. One way to interpret a Scree Plot is to find the point where the eigenvalues start to level off, and that point is the number of factors to retain (Cattell, 1966; Roberson, Elliott, Change & Hill, 2014). In Parallel Analysis, original data is randomized to create a new Scree Plot, which is then compared to the original data to see where the plots cross. The point where the random data eigenvalues exceed the eigenvalues from the original data is the number of factors to retain (Hayton, Allen, & Scarpello, 2004; Roberson et al., 2014). As can be seen from Figure 1, there is some initial evidence for a single dimension of perceptual change from the Scree Plot. Item Response Theory (IRT) analysis was conducted to identify which items provided the most unique information to create a shorter, more concise version of perceptual change.

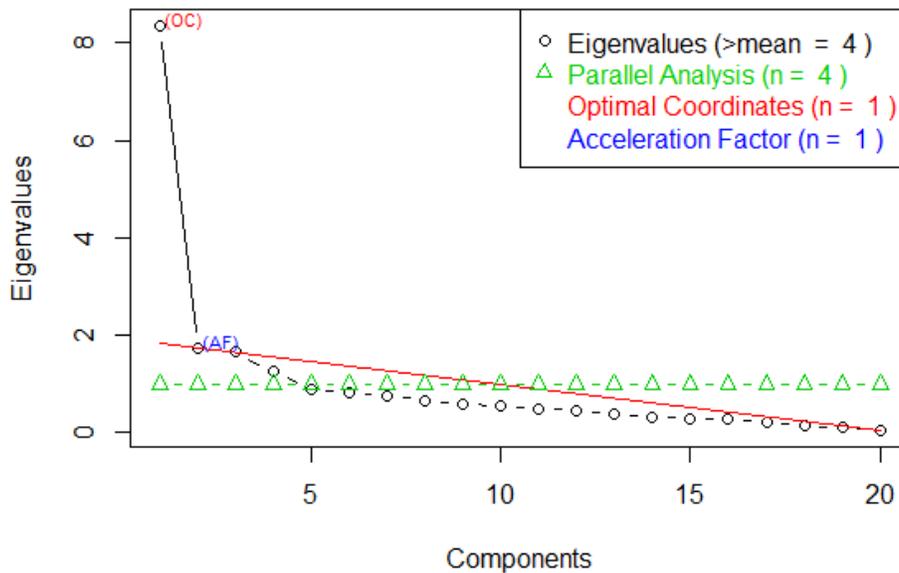
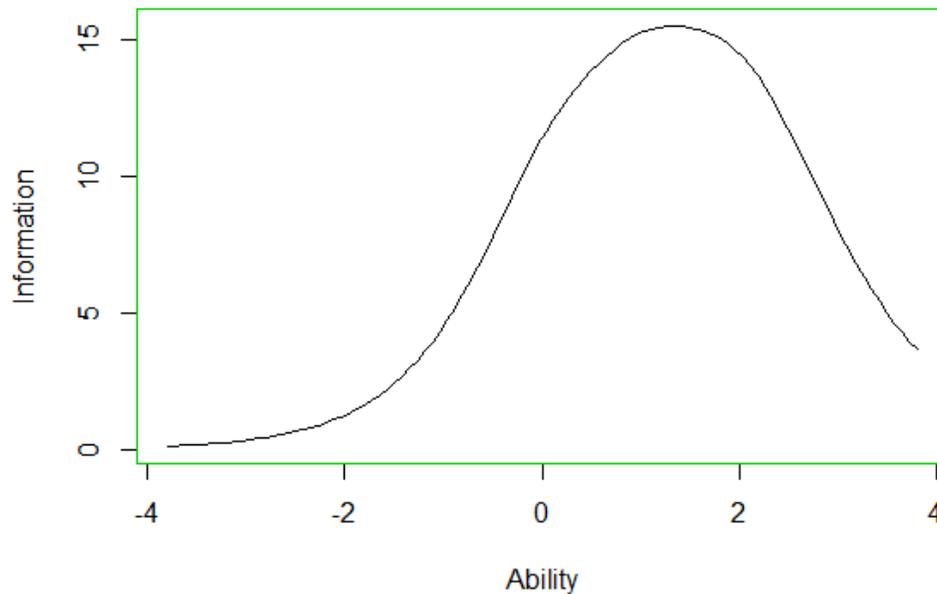


Figure 1. Scree Plot and Parallel Analysis for 20-Item Positive Change Instrument

Next, a Graded Response Model (GRM; Samejima, 1969) was used to test the model. GRMs are often used in an item response model for ordered categorical responses such as the items in the perceptual change instrument. Each item in the GRM is characterized by a discrimination parameter and  $K_i - 1$  category threshold parameters, where  $K_i$  is the number of categories in the response scale on item  $i$ . Computing the conditional probability for the GRM requires a two-step process, in which the first step is to compute the operating characteristic curves and the second step is to compute the category response curves (Matteucci & Stracqualuris, 2006).

Item information curves and test information functions suggest that the GRM provided adequate information for people with higher positive perceptual change scores (see Figures 2 and 3).



*Figure 2.* Test Information Function for 20-Item Positive Change Instrument

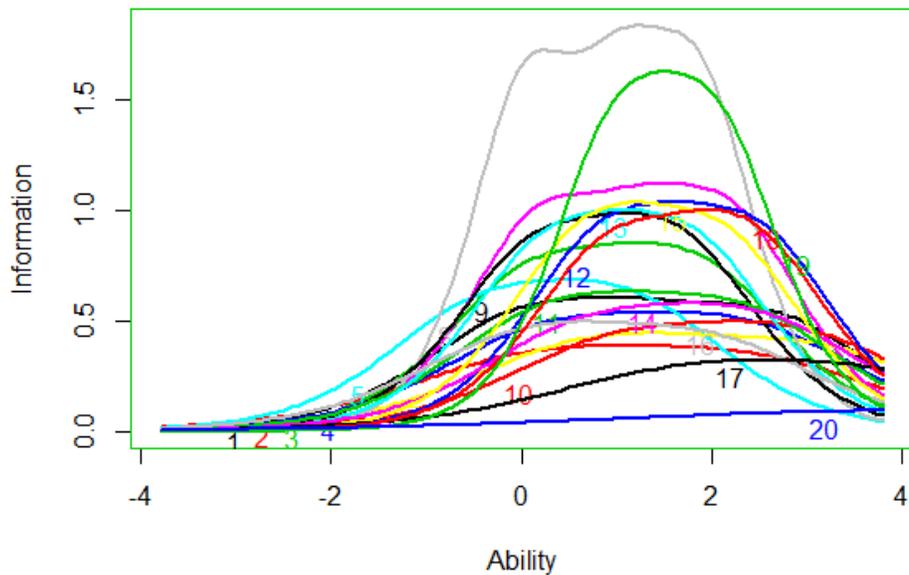


Figure 3. Item Information Curves for 20-Item Positive Change Instrument

The term “positive perceptual change scores” is synonymous with what is typically called “ability” in IRT, but this new term is used because it is a more accurate description of what is being modeled in the present study. Higher scores represent more positive perceptual change, while lower scores represent an absence of positive change. Results of the discrimination parameters and thresholds for each item of the 20-item perceptual change instrument are displayed in Table 2.

According to Gummelt, Anestis, and Carbonell (2012), discrimination parameters specify the sensitivity of an item to changes in the overall latent construct, positive perceptual change. Sensitivity is the degree to which a response reflects differences between other responses. That is, item discrimination indicated how well each item differentiated between those individuals with lower scores on positive change and those with higher scores on positive change. Item thresholds specified which items were more sensitive across the range of positive perceptual change (Gummelt et al., 2012). For

Table 2

*Thresholds and Discriminations for 20-Item Positive Change Instrument*

Items	Threshold 0-1	Threshold 1-2	Threshold 2-3	Discrimination
Item1	-0.03	1.17	2.63	1.42
Item2	-0.01	1.12	2.50	1.12
Item3	0.06	1.11	1.94	1.67
Item4	0.20	1.41	2.51	1.32
Item5	-0.46	0.53	1.23	1.48
Item6	0.18	1.28	2.22	1.94
Item7	0.55	1.52	3.11	1.20
Item8	0.05	1.05	1.86	2.51
Item9	0.10	1.06	1.72	1.79
Item10	0.99	2.28	3.04	1.27
Item11	0.22	1.24	2.39	1.43
Item12	0.81	1.65	2.53	1.84
Item 13	0.23	1.06	1.85	1.80
Item 14	0.65	1.76	2.61	1.37
Item 15	0.61	1.24	2.16	1.83
Item 16	-0.05	0.60	1.98	1.27
Item 17	1.60	2.52	3.65	1.02
Item 18	0.91	1.92	2.48	1.81
Item 19	0.94	1.52	2.10	2.29
Item 20	3.21	5.65	6.12	0.56

example, the first column in Table 2 illustrates which items were more sensitive at the absence of positive change (i.e., a score of 0) to small amounts of positive change (i.e., a score of 1), while the third column shows which items were more sensitive from moderate levels of positive change (i.e., a score of 2) to high levels of positive change (i.e., a score of 3). It is important to note that none of the items discriminated well at the lower end. Given that the instrument was created to measure positive change and many participants reported zero positive change for items, this was not surprising. Items 1, 6, 8, 12, 18, and 19 were retained because they demonstrated the greatest amounts of discrimination for participants who scored above a zero on positive change. Items 17 and

20 were dropped because of poor item stability or low discrimination scores. Because of evidence suggesting that selected items were sufficiently reliable across the upper levels of perceptual change, the other 12 items were dropped in order to keep the scale as brief as possible and to remove items that were unnecessary or superfluous.

For the next step in data analysis, descriptive statistics were computed for the 6-item version of the positive perceptual change measure ( $M = 0.52$ ,  $SD = 0.56$ ). The assumption for unidimensionality was tested and a Scree Plot and parallel analysis were conducted for the positive perceptual change measure and illustrated in Figure 4.

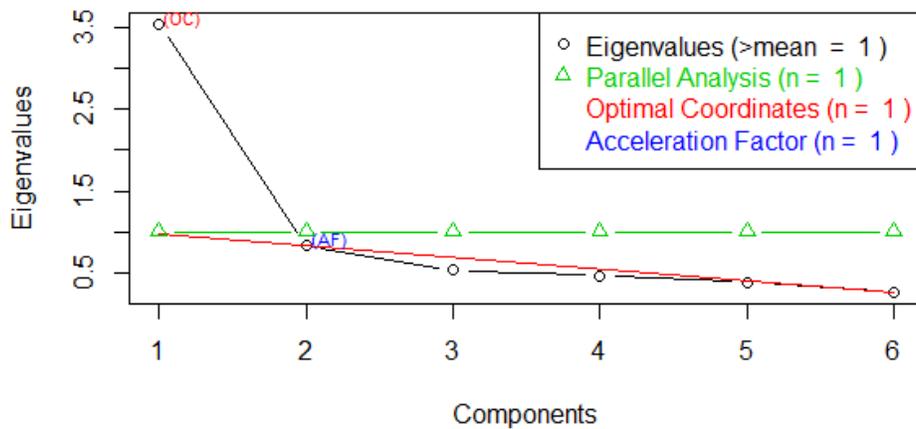


Figure 4. Scree Plot and Parallel Analysis for 6-Item Positive Change Instrument

Results of the discrimination parameters and thresholds for each item of the 6-item measure of positive perceptual change are displayed in Table 3. All items appeared to be sensitive at the upper range or for those with higher scores on positive change.

Table 3

*Thresholds and Discriminations for 6-Item Positive Change Instrument*

Items	Threshold 1-2	Threshold 2-3	Threshold 3-4	Discrimination
Your view of the situation changed after you reflected on your own behavior	0.015	1.488	3.319	1.062
Your view of the situation changed after you reflected on your partner's behavior	0.249	1.552	2.641	1.549
You noticed there was a change in how well you were understanding your partner	0.104	1.173	2.023	2.252
You noticed there was a change in your affection toward your partner	0.848	1.689	2.579	1.997
You learned something new, that you had not known before, about your partner's intentions	0.906	1.885	2.415	2.145
You saw your partner in a different way after a circumstance outside your relationship helped explain his/her behavior	1.001	1.582	2.167	2.428

## CHAPTER FOUR

### Study 3

#### *Overview*

The main purpose of Study 3 was to test the relationship between drinking behavior and perceptual change in a sample of people with a wide range of drinking behaviors. First, Study 3 cross-validated the one-dimensional factor structure of the positive perceptual change instrument identified in Study 2. Second, the current study examined different ways this new measure could be conceptualized. One way to conceptualize perceptual change is to define it as the extent of positive change, which would be consistent with how perceptual change was conceptualized in Study 2, and would involve using a scale that ranges from higher positive change to zero positive change. Another way to conceptualized perceptual change is to define it as the valence of change. This would involve using a scale that ranges from positive change at one end to negative change at the other end, and in this case, the mid-point of the scale would be no change. A third way to conceptualize perceptual change is to define it as the valence of change and to assume that valence has the potential for curvilinear effects. This was done by squaring the total valence in order to measure the extent of change, which is similar to how curvilinear effects are tested in growth curve modeling. In growth curve modeling, time and time-squared are entered into regression equations to measure rate of change and acceleration in change respectively (Raudenbush & Bryk, 2002). It may be important to explore the possibility of curvilinear effects in order to examine whether

positive change is better or worse than no change. On the one hand, in order to make a positive change, there presumably needs to be a problem in the relationship. Indeed, there may be some cases where people do not make a change because they were lacking a problem in the first place. On the other hand, having the ability to make a positive change might be important for relationship functioning, and therefore, people making positive changes might be better off than people making no changes. If this were the case, curvilinear effects for conflict behavior may be found, while curvilinear effects for relationship satisfaction would not.

The relationship between perceptual change and alcohol use was examined, as well as the relationship between alcohol and other relationship functioning variables (i.e., satisfaction, communication, emotion, and underlying concerns). As mentioned previously and consistent with myopia theory, it was hypothesized that problematic alcohol use would be negatively correlated with perceptual change. In addition, because of the robust findings suggesting the negative relationship between alcohol use problems and relationship satisfaction (Dumka & Roosa, 1993, 1995; Leonard, 1998b), it was predicted that problematic alcohol use would also be negatively correlated with relationship satisfaction.

Alcohol use variables should also be theoretically related to three other relationship functioning variables. First, it may be useful to consider how conflict communication variables are related to alcohol use. Communication can either be adversarial or collaborative. Adversarial engagement is a type of negative communication that involves criticism and defensiveness, while collaborative engagement is a type of positive communication that involves listening and

constructively sharing opinions (Sanford, 2010a). Second, it may be beneficial to consider how different types of emotions are associated with alcohol use. Previous research identifies three different types of negative emotion that may occur during episodes of conflict termed hard, soft, and flat emotion (Sanford, 2007a; Sanford, 2007b; Sanford & Rowatt, 2004). Hard emotion includes feelings of anger, annoyance, and irritation, and is typically associated with asserting power and control. Soft emotion includes feelings of sadness and hurt, and is typically associated feelings of vulnerability. Flat emotion includes feelings of apathy and indifference, and is characterized by a lack of engagement. Finally, it may be useful to consider how one's underlying concerns are related to alcohol use. Sanford (2010b) identified two constructs measuring underlying concern termed perceived threat and perceived neglect. Perceived threat is defined as the extent to which a person feels criticized or blamed during relationship conflict, while perceived neglect is defined as the extent to which a person feels forgotten or overlooked. Consistent with past research suggesting that alcoholic couples demonstrate more negative behavior such as criticism and hostility during conflict interactions (Billings, Kessler, Gomberg, & Weiner, 1979; Haber & Jacob, 1997; Jacob & Leonard, 1992; Jacob, Ritchey, Cvitkovic, & Blane, 1981; Marshall, 2003), and less positive behavior (Billings et al., 1979; Haber & Jacob, 1997; Jacob et al., 1981; O'Farrell & Birchler, 1987), it was predicted that problematic alcohol use would be positively correlated with adversarial engagement, negative emotions, and perceived threat and neglect.

Convergent validity of the perceptual change variables was conducted by examining the relationship between perceptual change and the relationship functioning variables mentioned above. First, it was predicted that positive change would be

positively correlated with relationship satisfaction and collaborative engagement. This hypothesis is consistent with methodologies using behavioral sequential analysis showing satisfied couples engage in more positive reciprocity and validation sequences than dissatisfied couples (Revenstorf, Vogel, Wegener, Halweg, & Schindler, 1980). It was also predicted that positive perceptual change would be positively correlated with perceived partner soft emotions. Soft emotions, which are characterized by expressions of vulnerability, and a desire to obtain relationship-focused goals (Sanford, 2007a) may be beneficial emotions for a person to see in a partner, and may influence the way he or she perceives the conflict. In addition, it was hypothesized that positive change would correlate negatively with underlying concerns. Shifting one's perceptions of a conflict from feelings of negativity to positivity should also decrease the amount of perceived threat and neglect in the conflict. Finally, an exploratory analysis was conducted to examine other possibilities for measuring perceptual change by running a series of regression equations to examine both linear and curvilinear effects of perceptual change on relationship functioning variables.

### *Methods*

#### *Participants*

For the present study, 303 U.S. participants, who were currently in a romantic relationship, were included in data analysis (women = 176, men = 127) from Amazon's Mechanical Turk (MTurk). Participant's ages ranged from 19 to 67 ( $M = 33.71$ ,  $SD = 9.81$ ). Among participants, 81.2% were Caucasian, 5.0% were African American, 7.6% were Hispanic, 4.0% were Asian, 0.3% Native American, and 2.0% were other. Among

these individuals, 32.3% were dating and in committed relationships, 5.0% were engaged, 15.5% were cohabitating or in a domestic relationship, and 47.2% were married. Highest level of education ranged from less than high school to professional degree (average level of education = 2-4 year college degree). Annual family income ranged from less than \$10,000 to over \$500,000 (average annual family income = \$50,000 - \$60,000).

### *Procedures*

Study 3 used a two stage recruitment procedure. In the first phase, participants were recruited for an unpaid screening questionnaire on alcohol use. From that pool of people, individuals were selected in order to produce a sufficient representation across a range of drinking levels. In addition, only participants who were currently in a romantic relationship and were over the age of 18 were invited to participate in the second phase of the study. For the first phase, approximately 3,600 people were screened and the Alcohol Use Disorders Identification Test (AUDIT) was used to measure alcohol use.

Participant's scores ranged from 1 – 33 ( $M = 10.84$ ,  $SD = 7.03$ ).

Participants signed up for the short screening survey on MTurk's website. The listing for the study included a brief description of the study and the compensation amount if one were to qualify (\$1.50). Participants' data was anonymous to the researcher, and MTurk only retained participants' identity for compensation purposes. Once participants signed up for the short screening questionnaire, they read and agreed to an informed consent document. Since one of the goals of Study 3 was to recruit a sample with high variance in drinking, participants were split into three categories of alcohol users (i.e., non-problem drinkers, a medium level of alcohol problems, and a high level of alcohol problems) based on suggested cut-off scores from Babor, Higgins-Biddle,

Saunders, and Monteiro (2001) Alcohol Use Disorders Identification Test (see Appendix C). Once a category became full, participants falling in that category were no longer invited to participate in the second part of Study 3. People that did not qualify, or chose not to participate, did not continue on to the actual study. People that did qualify for the second part of the study were told they had an opportunity to participate in a study on couples' conflict interactions for \$1.50. They were also told that this study would take approximately 30 minutes to complete.

People that qualified and chose to participate in the second part of the study were directed to a link to the couples' conflict interaction study. From here, participants read and agreed to another informed consent document. Next, participants were asked to respond to questions about a current conflict interaction they had with their romantic partner. Each participant was asked to describe a recent conflict interaction with their romantic partner and asked to complete various questionnaire items on their conflict behavior. Participants also filled out the new positive perceptual change instrument and responded to questions asking about alcohol consumption during the specific conflict episode they described earlier.

#### *Alcohol Use Measures in Screening Questionnaire*

*Alcohol use.* Saunders, Aasland, Babor, de la Fuente, and Grant's (1993) Alcohol Use Disorders Identification Test (AUDIT) was used to measure alcohol consumption, alcohol dependence, and alcohol-related problems (see Study 3 Questionnaire on page 80). The maximum score on the AUDIT is 40. Consistent with the suggestions of Babor et al.'s (2001), the following cut-offs were used: a score of 7 or below = non-problem

drinkers, a score of 8-15 = a medium level of alcohol problems, and scores 16 and above = a high level of alcohol problems. These cutoff scores were only used to determine who was invited to participate in the study. In the current study, Cronbach's alpha was .90 for the AUDIT.

### *Measures for Main Alcohol Use and Conflict Interaction Study*

*Perceptual change.* Positive perceptual change was assessed using the 6-item instrument developed in Study 2. For the preset study, the primary investigator was also interested in exploring other possibilities of measuring perceptual change. A slightly different variable was created for measuring the valence of perceptual change. The valence change variable was scored as a zero if "no change occurred" or participants indicated the change "had no effect". If the change was reported as making the conflict "worse" it was scored as a -1 if the participant indicated that it was a small change, a -2 if it was a medium change, and a -3 if it was a large change. If the change was reported as making the conflict "better" it was scored as a 1 if the participant indicated a small change, a 2 if it was a medium change, and 3 if the change was large. In the current study, Cronbach's alpha was .84 for positive perceptual change and .82 for the valence change variable.

*Relationship satisfaction.* The Couple's Satisfaction Index (CSI; Funk & Rogge, 2007) is a 16-item measure assessing overall relationship satisfaction. The measure was developed using item response theory analysis to select discriminating items from a pool of items drawn from several existing measures. The CSI demonstrates strong convergent validity with other measures of satisfaction (Funk & Rogge, 2007). Sample items

include: “My relationship with my partner makes me happy” and “I have a warm and comfortable relationship with my partner.” In the present study, Cronbach’s alpha was .98.

*Communication behavior.* The Conflict Communication Inventory (Sanford, 2010a) was used to examine both partners’ adversarial and collaborative engagement during a specific conflict interaction that participants identified at the beginning of the study. Adversarial engagement consists of 14 items assessing negative communication such as expressions of criticism, hostility, and defensiveness. Collaborative engagement consists of 14 items assessing positive communication such as showing understanding for one’s partner and sharing personal emotions, desires, and opinions. Sample items from the adversarial engagement scale include: “I criticized my partner” and “My partner defended his or her position.” Sample items from the collaborative engagement scale include: “I carefully listened so I could understand my partner” and “My partner politely talked about his or her feelings.” Scores on these two scales are highly correlated with observer ratings and predict future behavior nearly as well as ratings obtained from observers (Sanford, 2010a). Alpha reliabilities for these two subscales of communication behavior are high. In the current study, Cronbach’s alpha was .90 for adversarial engagement and .91 for collaborative engagement.

*Emotion.* The Couple’s Emotion Rating Form (CERF, Sanford, 2007a) was used to examine hard, soft, and flat emotion during relationship conflict. Hard emotion consists of four items that measure feelings of anger, annoyance, and irritation, while soft emotion consists of four items that measure feelings of sadness, hurt, and concern. Flat

emotion consists of four items that measure feelings of indifference, disengagement, and boredom. The CERF was developed and validated in a series of studies (see Sanford, 2007a, 2007b; Sanford & Rowatt, 2004) that show the CERF fits an expected factor structure, corresponds with observer ratings of expressed emotion, and show that changes in emotion predict corresponding changes in communication behavior, cognition, and conflict resolution (Sanford & Grace, 2011). In the present study, Cronbach's alpha for self emotion was .90, .77, and .85 for hard, soft, and flat emotion, while alpha for perceived partner emotion was .90, .79, and .83, respectively.

*Underlying concerns.* The Couples Underlying Concern Inventory (Sanford, 2010b) is a 16-item questionnaire that measures perceived neglect and perceived threat during a conflict interaction. The instrument demonstrated appropriate factor structure, convergent, and divergent validity (Sanford, 2010b). The perceived neglect scale consisted of items such as "I felt overlooked" or "My partner seemed uncommitted," and the perceived threat scale consisted of items such as "I felt accused" or "My partner seemed demanding." In the current study, Cronbach's alpha was .88 for threat and .87 for neglect.

*Alcohol quantity prior to conflict interaction.* To measure a participant's alcohol quantity prior to a conflict, participants were asked, "How many drinks did YOU have within 4 hours prior to the conflict?" Response anchors were: 0 ("I do not drink" or "I did not drink within 4 hours prior to the conflict"), 1 ("1 drink"), 2 ("2 drinks"), 3 ("3 drinks"), 4 ("4 drinks"), 5 ("5 drinks"), 6 ("6 drinks"), 7 ("7 drinks"), 8 ("8 drinks"), and 9 ("9 or more drinks"). To measure a participant's partner's alcohol quantity prior to a

conflict, participants were asked, “How many drinks did YOUR PARTNER have within 4 hours prior to the conflict?” and the following response anchors were: 0 (“*My partner does not drink*” or “*My partner did not drink within 4 hours prior to the conflict*”), 1 (“*1 drink*”), 2 (“*2 drinks*”), 3 (“*3 drinks*”), 4 (“*4 drinks*”), 5 (“*5 drinks*”), 6 (“*6 drinks*”), 7 (“*7 drinks*”), 8 (“*8 drinks*”), and to 9 (“*9 or more drinks*”).

*Perception of intoxication during conflict interaction.* To measure perception of in intoxication during a conflict interaction, participants were asked, “To what extent did you perceive YOURSELF as affected by alcohol during the conflict?” Response anchors were used as follows: 0 = *I do not drink or I did not drink the day of the conflict*, 1 = *I experienced **no** noticeable effects from drinking*, 2 = *I experienced slightly noticeable effects from drinking, but was not intoxicated*, 3 = *I experienced some noticeable effects from drinking, but was not intoxicated*, 4 = *I was slightly intoxicated from drinking*, 5 = *I was intoxicated from drinking*, and 6 = *I was extremely intoxicated from drinking*. To measure a participant’s partner’s perception of intoxication during a conflict interaction, participants were asked, “To what extent did you perceive YOUR PARTNER as affected by alcohol during the conflict?” Response anchors were 0 = *My partner does not drink or My partner did not drink the day of the conflict*, 1 = *My partner experienced no noticeable effects from drinking*, 2 = *My partner experienced slightly noticeable effects from drinking, but was not intoxicated*, 3 = *My partner experienced some noticeable effects from drinking, but was not intoxicated*, 4 = *My partner was slightly intoxicated from drinking*, 5 = *My partner was intoxicated from drinking*, and 6 = *My partner was extremely intoxicated from drinking*.

*Common forms of abuse.* Common forms of abuse were measured using 8 items (4 items measuring partner abuse and 4 items measuring participant abuse) from the Conflict Tactics Scale – Short Form (CTS2S; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) that measured the most common forms of abuse. Participants were asked to rate how often violent acts occurred on an 8-point scale (1 = *once in the past year*, 2 = *twice in the past year*, 3 = *3-5 times in the past year*, 4 = *6-10 times in the past year*, 5 = *11-20 times in the past year*, 6 = *more than 20 times in the past year*, 7 = *Not in the past year, but it did happen before*, and 8 = *This has never happened*). Partner abuse included items such as, “I insulted or swore or shouted or yelled at my partner” and “I had a sprain, bruise, or small cut, or felt pain the next day because of a fights with my partner.” Participant abuse included items such as, “My partner pushed, shoved, or slapped me” and “My partner destroyed something belonging to me or threatened to hit me.” In the present study, Cronbach’s alpha was relatively low ( $\alpha = .64$ ) for partner abuse and .71 for participant abuse.

### *Results*

As an initial step in data analysis, descriptive statistics, including frequencies, means, and standard deviations were computed for each variable. As shown in Table 4, the positive perceptual change score demonstrates that people, on average, reported some positive change during conflict interactions and were relatively satisfied in their relationship.

As a next step in data analysis, the factor structure for the positive perceptual change instrument was cross validated by conducting a one dimensional Confirmatory Factor Analysis (CFA) model. This model was tested using LISREL 9.1 (Jöreskog &

Sörbom, 2005). This model included one factor, positive perceptual change, with six indicators each. All correlations between error variances were fixed at zero. The current study evaluated the fit of the model by using a two-index strategy (Hu & Bentler, 1999) with a cut-off of .95 for the Comparative Fit Index (CFI) and a cut-off of .09 for the Standardized Root Mean Squared Residual (SRMR).

Table 4

*Means and Standard Deviations of Relationship Functioning and Alcohol Use Variables*

Variable	N	Mean	Standard Deviation	Range
AUDIT	303	10.84	7.03	1 – 33
Alcohol Quantity	301	5.19	2.94	1 – 10
Partner Alcohol Quantity	301	5.92	3.18	1 – 10
Alcohol Intoxication	301	4.04	1.92	1 – 7
Partner Alcohol Intoxication	301	4.66	1.97	1 – 7
Positive Perceptual Change	301	0.77	0.75	0 – 3
Perceptual Change Valence	301	0.57	0.94	-3 – 3
Extent of Change	301	1.22	1.83	0 – 9
Relationship Satisfaction	292	75.29	17.82	16 – 97
Adversarial Engagement	301	3.53	0.83	1 – 5
Collaborative Engagement	301	2.32	0.78	1 – 5
Partner Hard Emotion	298	3.89	1.01	1 – 5
Partner Soft Emotion	298	3.05	1.03	1 – 5
Partner Flat Emotion	298	1.98	0.91	1 – 5
Hard Emotion	295	3.81	0.98	1 – 5
Soft Emotion	295	3.40	1.02	1 – 5
Flat Emotion	295	1.74	0.82	1 – 5
Threat	293	3.28	1.00	1 – 5
Neglect	293	2.52	1.00	1 – 5

*Note:* AUDIT = Alcohol Use Disorders Identification Test

The model produced adequate fit, but did not quite make the cutoff for the SRMR (chi-square ( $df = 9$ ) = 84.84,  $p < .001$ ; CFI = .95; SRMR = .11). In addition, the fit for the

valence change items (i.e., one variable measuring both poles of perceptual change) were also evaluated. This model produced a good fit (chi-square ( $df = 9$ ) = 52.97,  $p < .001$ ; CFI = .96; RMSR = .08). All the standardized factor loadings were strong and ranged between .53 and .80. The standardized parameter estimates for this model are shown in Table 5. Further analysis of the valence change items will be discussed shortly.

Table 5  
*Confirmatory Factor Analysis Standardized Factor Loadings*

Item	Positive Perceptual Change	Valence Change
1. Your view of the situation changed after you reflected on your own behavior	.74	.53
2. Your view of the situation changed after you reflected on your partner's behavior	.85	.77
3. You noticed there was a change in how well you were understanding your partner	.81	.78
4. You noticed there was a change in your affection toward your partner	.77	.80
5. You learned something new, that you had known before, about your partner's intentions	.75	.71
6. You saw your partner in a different way after a circumstance outside your relationship helped explain his/her behavior	.79	.70

To test the relationship between positive perceptual change and alcohol use, correlations between positive perceptual change and the alcohol use variables were computed (see Table 6). In contrast to the hypothesis, people with more alcohol use problems reported more positive change than less problematic drinkers ( $r = .13, p = .02$ ).

Table 6

*Correlations Between Perceptual Change and Alcohol Use Variables*

Variable	AUDIT	Quantity	Partner Quantity	Intoxication	Partner Intoxication
Positive Change	.132*	.017	-.036	.120*	-.065
Change Valence	.104	.013	-.055	.114*	-.097
Extent of Change	.053	.054	-.025	.077	.002
Abuser	.31***	-.04	-.03	.02	-.03
Abused	.31***	-.02	-.02	-.02	-.02
Relationship Satisfaction	-.19***	.10	-.08	.10	-.08
Adversarial	.20***	.01	-.05	.12	.05
Collaborative	-.06	-.04	.03	-.08	-.04
Partner Hard Emotion	.21***	.02	.02	.04	.04
Partner Soft Emotion	.19***	.12*	.08	.12*	.04
Partner Flat Emotion	.09	-.09	-.09	-.14	-.14
Hard Emotion	.03	-.02	-.02	.01	.08
Soft Emotion	-.07	.07	.04	.05	.08
Flat Emotion	.19**	-.10	-.07	-.11	-.12*
Threat	.15**	-.07	.03	-.05	.07
Neglect	-.04	-.01	-.07	-.04	-.03

*Note:* AUDIT = Alcohol Use Disorders Identification Test.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

In addition, positive perceptual change was positively correlated with self-perception of intoxication during the conflict ( $r = .12, p = .04$ ). Overall, these results suggest no support for the hypothesis that alcohol use would decrease positive perceptual change.

As a next step in data analysis, correlations between relationship functioning variables (including the intimate partner violence variables) and alcohol use were computed. As shown in Table 6, the AUDIT and its subscales were significantly associated with both reports of being abused (correlations ranging from .15 - .35) and abusing one's spouse (correlations ranging from .15 - .36). Furthermore, alcohol use was shown to have a small to moderate correlation with relationship satisfaction, adversarial engagement, perceived partner hard and soft emotion, one's one flat emotion, and an underlying concern of threat. Overall, these findings suggest problematic alcohol use has negative effects on relationship functioning variables.

To test convergent validity of the new positive perceptual change instrument, correlations between the positive perceptual change variable and relationship functioning variables were computed (see Table 7). As predicted, positive perceptual change was positively associated with collaborative engagement, perceived partner soft emotion, and relationship satisfaction. Contrary to predictions, positive change was not significantly correlated with perceived threat.

In order to explore the different ways the new perceptual change variable could be conceptualized, a valence change and extent of change variable were examined. As previously mentioned, the valence change variable measured positive change at one end and negative change at the other. A second variable was created by squaring the valence change variable to measure the extent of change, regardless of the direction of change or

valence. As an initial step in the exploratory data analysis, descriptive statistics, including frequencies, means, and standard deviations were computed for both variables (see Table 4). The valence change variable shows that people, on average, reported more positive change than negative change during conflict interactions, while the extent of change variable indicates that on average people demonstrate relatively little change (regardless of direction) during conflict interactions.

As a next step in data analysis, the relationship between the perceptual change variables and alcohol use were examined (see Table 6). Similar to the positive change variable, change in valence was positively correlated with self-perception of intoxication during the conflict ( $r = .11, p = .05$ ), while extent of change was not significantly associated with any of the alcohol use variables. Once more, this suggests no support for the hypothesis that alcohol use decreases positive change.

To test the associations between the perceptual change variables and the other relationship functioning variables correlations were examined. As seen in Table 7, change in valence was positively correlated with collaborative engagement, perceived partner soft emotion, and relationship satisfaction, as well as negatively associated with perceived partner flat emotion, one's own hard emotions, and perceived neglect. Extent of change was positively correlated with adversarial engagement, perceived partner soft emotion, one's own hard and soft emotion, and perceived neglect as well as negatively correlated with relationship satisfaction.

Table 7

*Correlations Between Perceptual Change and Relationship Functioning Variables*

Variable	Adversarial Engagement	Collaborative Engagement	Partner			Self			Threat	Neglect	Relationship Satisfaction
			Hard	Soft	Flat	Hard	Soft	Flat			
Positive Change	.05	.15*	.05	.42***	-.07	-.09	.08	.03	-.00	-.13*	.26***
Change Valence	-.03	.19***	.02	.36***	-.13*	-.17**	-.07	.00	-.08	-.27***	.36***
Extent of Change	.14*	-.09	.06	.11*	.10	.12*	.26***	-.05	.07	.22**	-.14*

\* $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

In order to better understand the associations between perceptual change and relationship functioning variables, a series of regression equations were conducted to examine both the linear and curvilinear effects of perceptual change on relationship functioning variables. Each regression equation took the following form:

$$Y_i = a + b_1 X_i + b_2 X_i^2$$

where

$Y_i$  is the score of the relationship functioning outcome variable

$a$  is the  $Y$  intercept

$b_1$  is the linear component or valence change

$X_i$  is the value of the predictor

$b_2$  is the curvilinear component or extent of change

As can be seen from Table 8, several relationship functioning variables were significantly predicted by perceptual change. For example, more positive perceptual change predicted more relationship satisfaction. Furthermore, the extent of change, regardless of valence predicted less relationship satisfaction. Figure 5 illustrates the curvilinear effects of perceptual change on relationship functioning variables. As shown in the first graph in Figure 5, there is a slight increase in relationship satisfaction for lower levels of positive change and a slight decrease in satisfaction for higher levels of positive change. On the other hand, negative change continually shows a decrease in satisfactions suggesting that negative perceptual change has a more adverse effect on relationship satisfaction.

Table 8

*Standardized Beta Weights for Perceptual Change Variables Predicting Relationship Functioning Variables*

Variable	Valence Change	Extent of Change
Relationship Satisfaction	.37***	-.17**
Adversarial Engagement	-.05	.13*
Collaborative Engagement	.20***	-.11
Perceived Threat	-.08	.08
Perceived Neglect	-.29***	.24***
Hard Emotion	-.18**	.14*
Soft Emotion	-.09	.27***
Flat Emotion	.01	-.05
Partner Hard Emotion	.01	.06
Partner Soft Emotion	.36**	.09
Partner Flat Emotion	-.14*	.11

\* $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

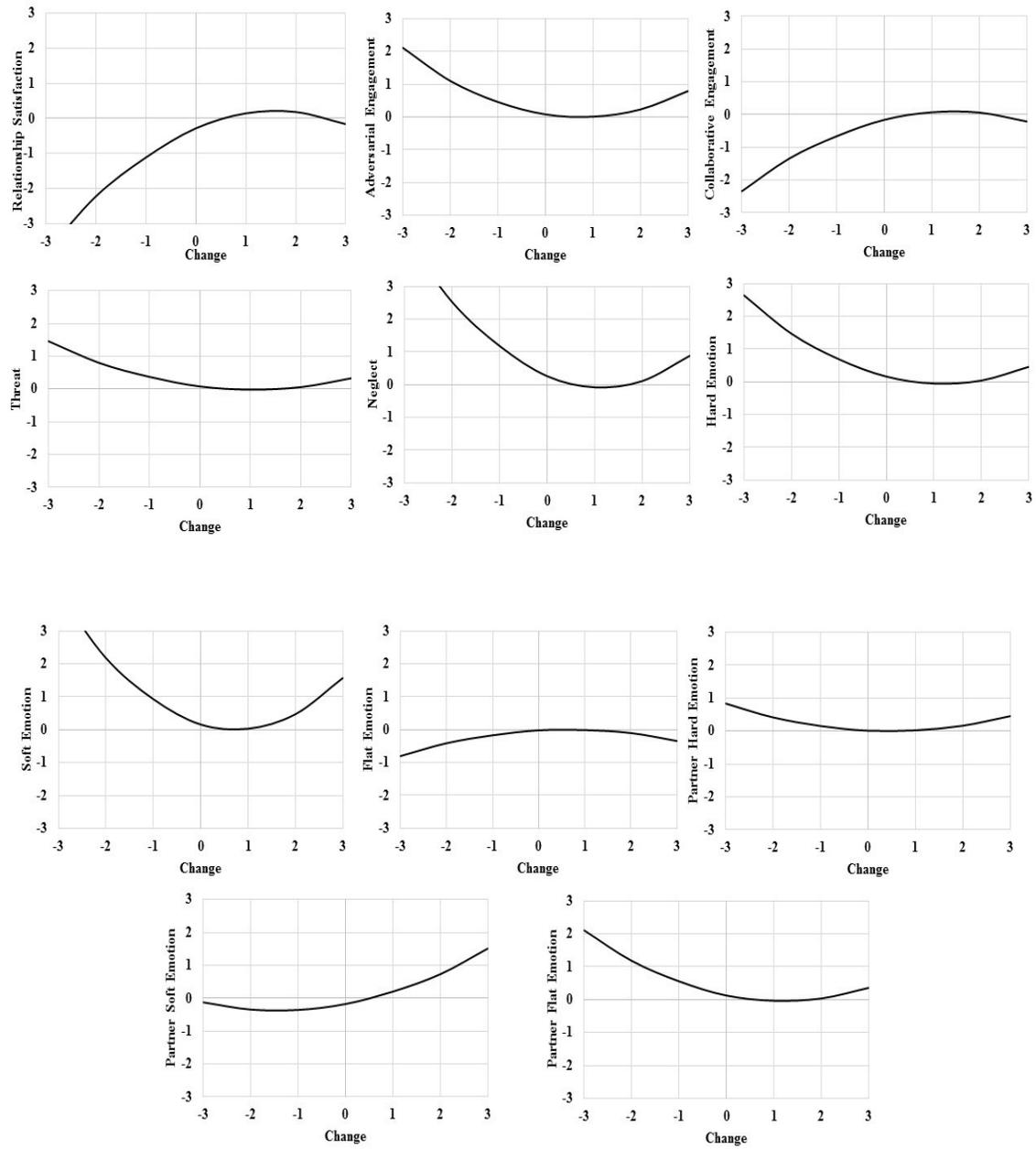


Figure 5. Extent of perceptual change for relationship function variables.

## CHAPTER FIVE

### Discussion

This project sought to understand why previous studies have sometimes failed to find associations between alcohol use and conflict behavior, how alcohol is associated with relationship conflict, and whether alcohol and other relationship functioning variables are associated with a new variable regarding perceptual change during conflict interaction. First, the question as to why previous studies sometimes fail to find results was examined. For the current project, two explanations were considered: 1) previous samples failed to include a full range of alcohol consumers, or 2) previous studies failed to assess perceptual change. The current findings point to the second explanation and suggest the importance of including a sample of people with a wide range of drinking behaviors. Second, the relationship between problematic alcohol use and relationship conflict was tested. Problematic alcohol use, as measured by the AUDIT, was negatively correlated with relationship satisfaction and positively correlated with adversarial engagement, partner hard and soft emotion, own flat emotion, and perceived threat. Finally, the new perceptual change variable was evaluated. Although results suggested that alcohol use had opposite associations with perceptual change than expected, results regarding linear and curvilinear associations between perceptual change and relationship functioning variables found significant relationships between perceptual change variables and conflict behavior, suggesting the importance of having a perceptual change instrument to use in couples' research.

*Previous Studies Failing to Find Associations Between Alcohol Use and Relationship Conflict*

The current project sought to answer the question as to why past studies have sometimes failed to find relationships between alcohol use and conflict behavior. The present studies suggest these null findings may be due to failing to include a large and full range of drinking levels. One important factor to consider when examining the effects of alcohol on conflict is the nature of the sample. The current set of studies suggest that sample variance is important, which is consistent with other researchers who have called attention to how sample characteristics are important such as sample size and sample variance.

One factor to consider when examining the relationship between alcohol and marital interactions is sample size. According to a comprehensive review of alcohol use and marital functioning, Marshal (2003) found that previous studies tend to have a wide range of sample sizes with a median sample size of less than one hundred participants. Such small sample sizes may threaten validity and may not have enough power to detect meaningful effects (Marshal, 2003; Shadish, Cook, & Campbell, 2002). Consistent with this, studies that use small samples have reported small associations between alcohol use and marital satisfaction (Jacob, Dunn, & Leonard, 1983), while studies that use large sample sizes (Ns ranged from 174 to 1,214) have had more success at finding more robust associations between alcohol use and relationship satisfaction (Dumka & Roosa, 1993, 1995; Leonard & Roberts, 1998b; Leonard & Senchak, 1993; Zweben, 1986). Study 3 addressed this issue by including a relatively large sample of approximately 300 participants.

A second important factor to consider when examining the relationship between alcohol use and couples' conflict interactions is obtaining a sufficiently diverse sample of problematic alcohol consumers or sample variance. Recently, Backer-Fulghum (2013) used an internet sample consisting of couples and found only small associations between alcohol use and conflict behaviors. One reason for these small effects may be due to the fact that the sample used had low rates of alcohol use. In fact, research shows studies that have failed to sample a wide range of alcohol consumers have also failed to find significant correlations between alcohol use and satisfaction (Halford & Osgarby, 1993; Katz, Arias, Beach, Brody, & Roman, 1995) suggesting that these studies likely did not capture enough variability in alcohol use.

For the current project, Study 3 targeted a sample of alcohol consumers with a wide range of drinking levels to maximize the variance in drinking behavior. To do this, a recruitment technique was used to split participants into three alcohol use categories (see Babor et al., 2001). This screening process resulted in a diverse sample of alcohol consumers, ranging from nonproblematic to severely problematic alcohol consumers. Contrary to studies that found nonsignificant correlations between alcohol use and relationship satisfaction (Halford & Osgarby, 1993; Katz et al., 1995), Study 3 found a significant negative correlation between AUDIT scores and relationship satisfaction. ( $r = -.19, p < .001$ ). Overall, this suggests the importance of including a sample with a wide range of drinking levels in order to have enough power to detect meaningful relationships. Additional associations between alcohol and couples' conflict interactions will be discussed shortly.

Although the current project suggested the importance of assessing perceptual change to better understand the relationship between alcohol use and conflict interactions, the current set of studies failed to find support for this hypothesis. Contrary to predictions, Study 3 found perceptual change variables to be positively correlated with AUDIT scores ( $r = .13, p = .02$ ) and a context-specific measure of alcohol intoxication ( $r = .12, p = .04$ ). However, this does not necessarily suggest that people with more problematic drinking make more positive perceptual changes during conflict interaction. In fact, exploratory analyses regarding curvilinear effects of perceptual change suggest increasing levels of positive change are associated with more negativity. Thus, it is not clear whether “positive” change is actually “positive.” However, it is also important to note that although the majority of research on alcohol myopia focuses on negative outcomes, some studies have also found positive effects (Lynn, 1988; Steele et al., 1985). For example, Steele and colleagues (1985) found that when helping behavior was salient, alcohol use increased helping behavior. These studies suggest that if positive behavior is salient, than alcohol use may produce positive outcomes. Because myopia theory states that alcohol use impairs cognitive and attentional processes, and make people focus on the most salient information, positive perceptual change may occur if the situation surrounding the environment is also positive.

### *Alcohol Use and Relationship Conflict*

The current project contributes to the literature on alcohol use and couples conflict in several ways. First, results suggest the potential importance of using trait-like measures of alcohol use compared to event-specific measures. Study 3 found several significant associations between AUDIT scores and conflict behaviors, while few

significant correlations were found using event-specific measures. This was somewhat surprising given that past research finds that the overall impact of alcohol is modest when using general trait measures (Steele & Josephs, 1990). One reason for this lack of results may be due to the possibility that drinking traits are more important than event specific drinking. Several studies that use continuous measures of alcohol use and alcohol problems report significant negative correlations between alcohol problems and relationship satisfaction (Dumka & Roosa, 1993, 1995; Leonard & Roberts, 1998b; Leonard & Senchak, 1993; Zweben, 1986). Because of the attentional and memory impairment that is associated with heavy drinking (Fernández-Serrano, Pérez-García, Verdejo- García, 2011), heavy alcohol users may misremember or be less reliable at reporting their perceptions of an event in which they were drinking. Another reason for a lack of results may be due to problems with instrument validity. Given that the event-specific measures were new, single item questions, their validity is unknown, and thus, cannot be provided.

Although there is an overwhelming amount of evidence for supporting the negative effects of alcohol use on relationship functioning, there is some support for possible positive effects. Indeed, positive outcomes are consistent with alcohol and couples' interaction theories (McCrary, 1982; Steinglass, 1985) and research (Levitt & Cooper, 2010; Marshal, 2003). According to the family systems approach, alcohol use may be beneficial to a marriage and foster warmth and intimacy. Along these lines, Levitt and Cooper (2010) found that couples who drink together report greater feelings of closeness and intimacy compared to couples who drink apart. Similarly, Steinglass and colleagues found robust evidence suggesting that alcohol use among couples may

temporarily relieve daily stress through more emotional expression and problem-solving abilities, which in turn may help maintain stable and adaptive marital relationships (Steinglass, 1979a, 1979b; Steinglass et al., 1977, Steinglass et al., 1971). Consistent with the idea that alcohol use may have positive outcomes, the current project found that perceived partner soft emotion was positively correlated with AUDIT scores ( $r = .19, p < .001$ ), alcohol quantity ( $r = .12, p = .04$ ), and alcohol intoxication ( $r = .12, p = .04$ ). Soft emotion is a type of emotion that includes feelings of hurt, sadness, and concern, and is typically associated with expressions of vulnerability and a desire to gain emotion-focused goals (Sanford, 2007). Although soft emotions may sound like a negative outcome, these types of emotions play an important role in couples' therapy (Greenberg & Christensen, 1998; Johnson & Greenberg, 1988). A positive association between alcohol use and perceiving one's partner as being upset or sad may be adaptive for a relationship through emotional expression by the alcohol user. However, at this time, such a relationship has not been directly tested.

Regarding the negative effects of alcohol, the current project found that AUDIT scores were positively correlated with intimate partner violence. Specifically, high AUDIT scores were associated with reports of both being abused and being the one who abuses. This is consistent with the past research that finds alcoholic couples report higher levels of violence compared to the national norm (O'Farrell & Choquette, 1991), and that being intoxicated is associated with being more verbally and physically violent toward their partners (Coleman & Straus, 1983; Hutchinson, 1999; Kantor & Straus, 1989). The present study also found that higher scores on the AUDIT were related to adversarial engagement, apathetic emotions, perceiving one's partner as angry and/or sad, having a

greater underlying concern of their partners' threatening behavior, both being abused and being the one to abuse, and less relationship satisfaction.

### *Perceptual Change and Conflict Interaction*

Measuring perceptual change is important for understanding how couples interact during conflict (Gottman, 1998, 1999; Gottman et al., 1999). Perceptual change is different from static measures of perception and measures of observed behavior (i.e., behavioral sequential analysis). For instance, static measures of perception can be informative, but they do not measure changes in perception. Furthermore, behavioral sequential analysis may come close to measuring perceptual changes, but it does not fully capture the construct, nor does it measure perceptual change in the most feasible way. Behavioral sequential analysis is based on measuring observed behavior, while perceptual change is based on measuring changes in perception. Behavioral sequential analysis typically uses an observational methodology, which can be both expensive and time consuming. Furthermore, it is not clear whether these results would replicate in a more naturalistic setting. Because behavioral sequential analysis takes place in the laboratory, it is not possible to measure change that might occur hours, days, or weeks later. Compared to behavioral sequential analysis, the current project created a new self-report measure of perceptual change that assessed the extent to which an individual shifts his or her perception during a particular conflict interaction.

It was important to create a measure of perceptual change in order to examine the effects between positive perceptual change and conflict behavior. Study 1 demonstrated that participants, when given open-ended questions about episodes of conflict, were able to identify and report on different areas of perceptual change. It was useful to assess

people's spontaneous responses to open-ended questions on perceptual change in order to eliminate the risk of developing an instrument that assesses a procrustean set of categories as well as to capture how people naturally experience perceptual change. Furthermore, independent coders were able to categorize these areas into a single factor measuring positive perceptual change. Study 2 analyzed the new instrument and revised it using IRT. Study 3 recruited a sample of alcohol consumers with a wide range of drinking levels, and tested the validity of the new perceptual change instrument. Confirmatory Factor Analysis indicated that the specified model (with a one-dimension factor structure) fit the data well. Convergent validity was demonstrated by showing that perceptual change was significantly associated with more collaborative engagement and perceived partner soft emotions. In addition, exploratory quadratic equations were computed in order to test both linear and curvilinear effects of perceptual change on relationship functioning variables. Linear effects showed that more positive perceptual change predicted more relationship satisfaction, while the extent of change (i.e., curvilinear effects), regardless of valence, predicted less relationship satisfaction. In addition, more positive change predicted less perceived neglect and hard emotions, while curvilinear effects demonstrated that regardless of valence, change predicted more perceived neglect and hard emotions during conflict interactions.

### *Limitations*

It is important to note that these three studies relied exclusively upon self-report data collected over the Internet. A notable limitation of Internet-based questionnaires is that it is not possible to control the environment in which these assessments were taken. Therefore, it is not possible to know if participants completed the surveys independently

or what type of state they were in while completing the assessment. A second limitation of these studies is that they were cross-sectional in design. Therefore, causality should not be assumed. In addition, these three studies could not address longitudinal questions about how perceptual change and alcohol use may change over time. Regarding Study 3, it is important to note that very little was found concerning the association between perceptual change and problematic alcohol use. One explanation for this may be due to the attentional and memory deficits associated with alcohol consumption. It is possible that heavy drinkers were consuming so much alcohol that their recall, perceptions, and interpretations of a specific episode of conflict was likely skewed. This adds to the idea that trait-like measures of alcohol use may be more useful for predicting conflict outcomes than event-specific measures. Indeed, the present investigation found the AUDIT (a trait measure of alcohol use) demonstrated the expected associations with outcomes like physical abuse. Another limitation of the current project is that it relied on nonclinical samples. This is important since there may be stronger associations between perceptual change and alcohol use in clinical settings. However, as it stands, additional research is needed to clarify this type of relationship and thus, results do not generalize to clinical populations.

### *Conclusion*

Notwithstanding these limitations, the results of this study generally support the validity of the new perceptual change measure. Past research suggests that perceptual change is important for examining couples' conflict interactions (Gottman, 1998, 1999; Gottman, et al. 1999). Indeed, the results of the current studies found that more positive perceptual change predicted more positive communication and perceived partner soft

emotions and less partner flat emotions. In addition, results demonstrated that the extent of perceptual change, regardless of change in valence, predicted less satisfaction and more adversarial engagement, angry and sad emotions, and perceived neglect. Overall, the results of the present studies suggest that the new perceptual change instrument may be a promising measure to use in couples' conflict interaction research.

## APPENDICES

## APPENDIX A

### Indicators of Perceptual Change

#### *Partner Behavior Change Indicators*

1. My partner become more compliant (my partner did what I wanted him/her to do)
2. My partner became more empathetic or understanding
3. My partner's emotions became more positive
4. My partner's emotions became more negative
5. My partner made amends or apologized
6. My partner became affectionate
7. My partner took it too far, he/she did not know when to stop
8. My partner said something funny, used humor
9. My partner listened to what I had to say
10. My partner communicated or talked about the problem
11. My partner withdrew from the conflict
12. My partner's behavior did not change or he/she continued what they were doing
13. My partner became violent or abusive

#### *Indications of Perceptual Change*

1. My partner disclosed new information to me by telling me his/her side of the story
2. My partner's previous behavior became clear through his/her subsequent expression of emotions
3. My partner's previous behavior became clear through his/her subsequent behavior or actions
4. My partner's previous behavior became clear after considering his/her intentions
5. New information came to me through someone other than my partner

6. An outside force made the situations better
7. An outside force made the situation worse
8. The conflict was forgotten
9. The conflict resolved itself
10. I became more empathetic or understanding
11. My expectations or standards changed
12. I weighed the cost-benefit of the situation
13. My emotions became more positive
14. My emotions became more negative
15. I became affectionate
16. My view changed after reflecting on my own behavior
17. I decided my initial judgment was unfair or hasty
18. I reflected on my **partner's** behavior or actions and decided that it was not as bad as I originally thought
19. I reflected on my **partner's** behavior or actions and decided it was worse than I originally thought
20. I reflected on my **own** behavior or actions and decided that it was not as bad as I originally thought
21. I reflected on my **own** behavior or actions and decided it was worse than I originally thought
22. I forgave my partner
23. I lost hope or motivation that things would change
24. I made a decision or took charge of the situation
25. I became apathetic or disinterested in the conflict

## APPENDIX B

### Study 1 Perceptual Change Instrument

- 1a. Did the following occur? You learned something new, that you had not known before, about your partner's side of the story or your partner's experience.
- No, this did NOT occur
  - Yes, there was a small change in the way you thought about the conflict
  - Yes, there was a moderate change in the way you thought about the conflict
  - Yes, there was a big change in the way you thought about the conflict
- 1b. Did the new information you learned make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 2a. Did the following occur? Your view of the situation changed after you reflected on your own behavior and/or actions.
- No, this did NOT occur
  - Yes, there was a small change
  - Yes, there was a moderate change
  - Yes, there was a big change
- 2b. Did your reflection of your own behavior or actions make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 3a. Did the following occur? You saw your partner in a different way after he/she expressed an emotion?
- No, this did NOT occur
  - Yes, there was a small change in the way you thought about the conflict
  - Yes, there was a moderate change in the way you thought about the conflict
  - Yes, there was a big change in the way you thought about the conflict

- 3b. Did this new perspective make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 4a. Did the following occur? You considered the costs and/or benefits of being upset or angry about something?
- No, this did NOT occur
  - Yes, there was a small change in the way you thought about the conflict
  - Yes, there was a moderate change in the way you thought about the conflict
  - Yes, there was a big change in the way you thought about the conflict
- 4b. Did your consideration of the costs and/or benefits makes things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 5a. Did the following occur? You considered the possibility that your initial judgment might have been unfair or hasty.
- No, this did NOT occur
  - Yes, there was a small change in the way you thought about the conflict
  - Yes, there was a moderate change in the way you thought about the conflict
  - Yes, there was a big change in the way you thought about the conflict
- 5b. Did your consideration of this possibility makes things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 6a. Did the following occur? With the passage of time, there was a change in the importance of the issue or a change in how much you thought about it.
- No, this did NOT occur
  - Yes, there was a small change
  - Yes, there was a moderate change
  - Yes, there was a big change

6b. Did this change make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

7a. Did the following occur? You made a change in your standards for your relationship, or you made a change in the things you expect your partner to do.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

7b. Did this change make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

8a. Did the following occur? You decided to forgive your partner.

- No, this did NOT occur
- Yes, there was a small change in the way you thought about the conflict
- Yes, there was a moderate change in the way you thought about the conflict
- Yes, there was a big change in the way you thought about the conflict

8b. Did this decision make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

9a. Did the following occur? You saw your partner in a different way after learning new information from someone other than your partner.

- No, this did NOT occur
- Yes, there was a small change in the way you thought about the conflict
- Yes, there was a moderate change in the way you thought about the conflict
- Yes, there was a big change in the way you thought about the conflict

- 9b. Did the new information you learned make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 10a. Did the following occur? Your view of the situation changed after you reflected on your partner's behavior and/or actions.
- No, this did NOT occur
  - Yes, there was a small change
  - Yes, there was a moderate change
  - Yes, there was a big change
- 10b. Did this reflection make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 11a. Did the following occur? There was a change in your level of interest in the conflict (you became more or less interested in the conflict).
- No, this did NOT occur
  - Yes, there was a small change
  - Yes, there was a moderate change
  - Yes, there was a big change
- 11b. Did this change make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 12a. Did the following occur? You noticed that there was a change in how well you were understanding your partner.
- No, this did NOT occur
  - Yes, there was a small change
  - Yes, there was a moderate change
  - Yes, there was a big change

12b. Did this change make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

13a. Did the following occur? You made an important decision that changed the way you thought about the conflict.

- No, this did NOT occur
- Yes, there was a small change in the way you thought about the conflict
- Yes, there was a moderate change in the way you thought about the conflict
- Yes, there was a big change in the way you thought about the conflict

13b. Did this decision make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

14a. Did the following occur? You realized your feelings had changed.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

14b. Did this realization make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

15a. Did the following occur? You considered your own behavior or action and decided the situation was not as bad as you had originally thought.

- No, this did NOT occur
- Yes, there was a small change in the way you thought about the conflict
- Yes, there was a moderate change in the way you thought about the conflict
- Yes, there was a big change in the way you thought about the conflict

- 15b. Did this consideration make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 16a. Did the following occur? You noticed that there was a change in your affection toward your partner (i.e., you became more or less affectionate or loving)
- No, this did NOT occur
  - Yes, there was a small change
  - Yes, there was a moderate change
  - Yes, there was a big change
- 16b. Did this change make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 17a. Did the following occur? You learned something new, that you had not known before, about your partner's intentions.
- No, this did NOT occur
  - Yes, there was a small change in the way you thought about the conflict
  - Yes, there was a moderate change in the way you thought about the conflict
  - Yes, there was a big change in the way you thought about the conflict
- 17b. Did this new perspective make things better or worse?
- Better
  - Worse
  - Had no effect
  - Situation did not occur
- 18a. Did the following occur? You saw your partner in a different way after a circumstance outside your relationship helped explain his/her behavior.
- No, this did NOT occur
  - Yes, there was a small change in the way you thought about the conflict
  - Yes, there was a moderate change in the way you thought about the conflict
  - Yes, there was a big change in the way you thought about the conflict

18b. Did this new perspective make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

19a. Did the following occur? There was a change in your level of hope or a change in your belief that the problem could be resolved.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

19b. Did this change make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

20a. Did the following occur? A circumstance outside your relationship changed the importance of the issue.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

20b. Did the new information you learned make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

## APPENDIX C

### Study 3 Screening Questionnaire

#### *The Alcohol Use Disorders Identification Test – Self-Report Version*

Please circle the answer that best describes each question.

How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year
Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year

## APPENDIX D

### Study 3 Questionnaire

#### **Instructions**

All couples experience conflict from time to time. To complete this survey, you need to think about a single, specific episode of conflict in your relationship in which alcohol was consumed (i.e., you and your partner consumed alcohol, just you consumed alcohol, or just your partner consumed alcohol). It could be something current or something from the past. The conflict could be anything from a minor disagreement or simple misunderstanding to a big argument. This survey will ask you questions about the single, specific conflict that involved alcohol you select.

**Now, think about a single, specific conflict interaction with your partner in which alcohol was consumed by you and your partner, just you, or just your partner.**

Write a description of the conflict below:

---

Approximately how long ago did the specific interaction take place?

- a. Today
- b. Yesterday
- c. Within the last week
- d. Within the last two weeks
- e. Within the last month
- f. Within the last three months
- g. Within the last six months
- h. Within the last year
- i. Longer than a year ago

### *Perceptual Change Questionnaire*

This page will list different types of CHANGES that sometimes occur in relationships during conflicts. Rate the extent to which each type of change occurred in your relationship during the conflict you just identified. This page is only asking about changes, and NOT about situations were something (either good or bad) stayed the way it was.

Did the following occur? Your view of the situation changed after you reflected on your own behavior and/or actions.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

Did your reflection of your own behavior or actions make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

Did the following occur? Your view of the situation changed after you reflected on your partner's behavior and/or actions.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

Did this reflection make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

Did the following occur? You noticed that there was a change in how well you were understanding your partner.

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

Did this change make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

Did the following occur? You noticed that there was a change in your affection (love) toward your partner?

- No, this did NOT occur
- Yes, there was a small change
- Yes, there was a moderate change
- Yes, there was a big change

Did this change make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

Did the following occur? You learned something new, that you had not known before, about your partner's intentions.

- No, this did NOT occur
- Yes, there was a small change in the way you thought about the conflict
- Yes, there was a moderate change in the way you thought about the conflict
- Yes, there was a big change in the way you thought about the conflict

Did this new perspective make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

Did the following occur? You saw your partner in a different way after a circumstance outside your relationship helped explain his/her behavior.

- No, this did NOT occur
- Yes, there was a small change in the way you thought about the conflict
- Yes, there was a moderate change in the way you thought about the conflict
- Yes, there was a big change in the way you thought about the conflict

Did this new perspective make things better or worse?

- Better
- Worse
- Had no effect
- Situation did not occur

*Context-Specific Alcohol Use Questions*

The following questions pertain to alcohol use 4 hours prior to the conflict interaction you described earlier.

How many drinks did YOU have within 4 hours prior to the conflict?

- 1 drink
- 2 drinks
- 3 drinks
- 4 drinks
- 5 drinks
- 6 drinks
- 7 drinks
- 8 drinks
- 9 or more drinks
- I do not drink or I did not drink within 4 hours prior to the conflict

How many drinks did YOUR PARTNER have within 4 hours prior to the conflict?

- 1 drink
- 2 drinks
- 3 drinks
- 4 drinks
- 5 drinks
- 6 drinks
- 7 drinks
- 8 drinks
- 9 or more drinks
- My partner does not drink or my partner did not drink within 4 hours prior to the conflict

To what extent did you perceive YOURSELF as affected by alcohol during the conflict?

- I experienced no noticeable effects from drinking
- I experienced slightly noticeable effects from drinking, but was not intoxicated
- I experienced some noticeable effects from drinking, but was not intoxicated
- I was slightly intoxicated from drinking
- I was intoxicated from drinking
- I was extremely intoxicated from drinking
- I do not drink or I did not drink the day of the conflict

To what extent did you perceive YOUR PARTNER as affected by alcohol during the conflict?

- My partner experienced no noticeable effects from drinking
- My partner experienced slightly noticeable effects from drinking, but was not intoxicated
- My partner experienced some noticeable effects from drinking, but was not intoxicated
- My partner was slightly intoxicated from drinking
- My partner was intoxicated from drinking
- My partner was extremely intoxicated from drinking
- My partner does not drink or my partner did not drink the day of the conflict

*Conflict Communication Inventory (CCI; Sanford, 2010a)*

Listed below are things people often do when there is a conflict in a relationship. To what extent did YOUR PARTNER do these things during the interaction?

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
My partner said something mean.	1	2	3	4	5
My partner made me feel that my viewpoint was valuable.	1	2	3	4	5
My partner raised his/her voice.	1	2	3	4	5
My partner was considerate toward me.	1	2	3	4	5
My partner told me I was doing something to cause the problem.	1	2	3	4	5
My partner said something kind.	1	2	3	4	5
My partner argued	1	2	3	4	5
My partner agreed with me.	1	2	3	4	5

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
My partner defended his/her position	1	2	3	4	5
My partner politely talked about his/her feelings	1	2	3	4	5
My partner corrected my statements.	1	2	3	4	5
My partner carefully listened so he/she could understand me	1	2	3	4	5
My partner criticized me.	1	2	3	4	5
My partner discussed the issue calmly.	1	2	3	4	5

Listed below are things people often do when there is a conflict in a relationship. To what extent did YOU do these things during the interaction?

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
I said something mean.	1	2	3	4	5
I made my partner feel that his/her viewpoint was valuable.	1	2	3	4	5
I raised my voice.	1	2	3	4	5
I was considerate toward my partner.	1	2	3	4	5
I told my partner he/she was doing something to cause the problem.	1	2	3	4	5
I said something kind.	1	2	3	4	5
I argued.	1	2	3	4	5
I agreed with my partner.	1	2	3	4	5
I defended my position	1	2	3	4	5
I politely talked about my feelings.	1	2	3	4	5
I corrected my partner's statements that were not true.	1	2	3	4	5
I carefully listened so I could understand my partner.	1	2	3	4	5
I criticized my partner.	1	2	3	4	5
I discussed the issue calmly.	1	2	3	4	5

*Couple's Emotion Rating Form (CERF; Sanford, 2007a)*

At the time of your conflict interaction, how did you perceive YOUR PARTNER'S feelings? Rate the extent to which your partner appeared to be feeling each of the following feelings.

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
My partner appeared to be feeling angry.	1	2	3	4	5
My partner appeared to be feeling sad.	1	2	3	4	5
My partner appeared to be feeling bored.	1	2	3	4	5
My partner appeared to be feeling annoyed.	1	2	3	4	5
My partner appeared to be feeling hurt.	1	2	3	4	5
My partner appeared to be feeling uninterested.	1	2	3	4	5
My partner appeared to be feeling irritated.	1	2	3	4	5
My partner appeared to be feeling concerned.	1	2	3	4	5
My partner appeared to be feeling indifferent.	1	2	3	4	5
My partner appeared to be feeling aggravated.	1	2	3	4	5
My partner appeared to be feeling disappointed.	1	2	3	4	5
My partner appeared to be feeling disengaged.	1	2	3	4	5

At the time of your conflict interaction, how were YOU feeling? Rate the extent to which you felt each of the following feelings?

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
I felt <u>angry</u> .	1	2	3	4	5
I felt <u>sad</u> .	1	2	3	4	5
I felt <u>bored</u> .	1	2	3	4	5
I felt <u>annoyed</u> .	1	2	3	4	5
I felt <u>hurt</u> .	1	2	3	4	5
I felt <u>uninterested</u> .	1	2	3	4	5

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
I felt <u>irritated</u> .	1	2	3	4	5
I felt <u>concerned</u> .	1	2	3	4	5
I felt <u>indifferent</u> .	1	2	3	4	5
I felt <u>aggravated</u> .	1	2	3	4	5
I felt <u>disappointed</u> .	1	2	3	4	5
I felt <u>disengaged</u> .	1	2	3	4	5

*Couples Underlying Concern Inventory (CUCI; Sanford, 2010b)*

These questions ask about your own experience and about how you perceived your partner. Rate the extent to which each statement describes YOUR experience during the interaction.

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
I felt <u>criticized</u> .	1	2	3	4	5
I felt <u>neglected</u> .	1	2	3	4	5
I felt <u>blamed</u> .	1	2	3	4	5
I felt <u>forgotten</u> .	1	2	3	4	5

Rate the extent to which each statement describes how you perceived YOUR PARTNER during the interaction.

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
My partner seemed <u>judgmental</u> .	1	2	3	4	5
My partner seemed <u>uncommitted</u> .	1	2	3	4	5
My partner seemed <u>demanding</u> .	1	2	3	4	5
My partner seemed <u>unconcerned</u> .	1	2	3	4	5

Rate the extent to which each statement describes YOUR experience during the interaction.

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
I felt <u>accused</u> .	1	2	3	4	5
I felt <u>invisible</u> .	1	2	3	4	5
I felt <u>misjudged</u> .	1	2	3	4	5
I felt <u>overlooked</u> .	1	2	3	4	5

Rate the extent to which each statement describes how you perceived YOUR PARTNER during the interaction.

	Disagree Strongly	Disagree	Agree Somewhat	Agree	Agree Strongly
My partner seemed <u>controlling</u> .	1	2	3	4	5
My partner seemed <u>disloyal</u> .	1	2	3	4	5
My partner seemed <u>imposing</u> .	1	2	3	4	5
My partner seemed <u>inattentive</u> .	1	2	3	4	5

*Adapted from the Conflict Tactics Scale – Short Form (CTS2S; Straus et al., 1996)*

No matter how well a couple gets a long, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences. Please mark how many times you did each of these things in the past year, and how many times your partner did them in the past year.

	This has never happened	Not in the past year, but it did happen before	Once in the past year	Twice in the past year	3-5 times in the past year	6-10 times in the past year	11-20 times in the past year	More than 20 times in the past year
I insulted or swore or shouted or yelled at my partner	1	2	3	4	5	6	7	8
My partner insulted or swore or shouted or yelled at me	1	2	3	4	5	6	7	8
I had a sprain, bruise, or small cut, or felt pain the next day because of a fight with my partner	1	2	3	4	5	6	7	8
My partner had a sprain, bruise, or small cut or felt pain the next day because of a fight with me	1	2	3	4	5	6	7	8
I pushed, shoved, or slapped my partner	1	2	3	4	5	6	7	8
My partner pushed, shoved, or slapped me	1	2	3	4	5	6	7	8
I destroyed something belonging to my partner or threatened to hit my partner	1	2	3	4	5	6	7	8
My partner destroyed something belonging to me or threatened to hit me	1	2	3	4	5	6	7	8

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