SOCIAL ANXIETY AND COMMUNICATION IN INTIMATE RELATIONSHIPS:
IDENTIFYING CORE CHALLENGES WHILE NAVIGATING
CONFLICT AND SEEKING SUPPORT

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ABSTRACT

Social anxiety disorder (SAD) is one of the most prevalent psychological

disorders and one that is particularly disruptive of social relationships. Socially

anxious individuals often have trouble forming and maintaining intimate relationships,

as evidenced by a high divorce rate and low relationship satisfaction within existing

relationships. However, little is known about the specific reasons why relationships

involving socially anxious individuals suffer. Initial research suggests that such

relationships may be characterized by lower levels of emotional intimacy and

difficulties managing and resolving conflict.

The current study aimed to detect specific problems socially anxious individuals

have communicating with their partners during conflict and support-seeking

conversations. Male (n = 50) and female (n = 57) undergraduates ("actors") and their

intimate partners ("partners") completed two videotaped conversations in our

laboratory. One conversation featured a topic of conflict within the relationship,

whereas the other focused on a personal problem experienced by the actor. Outcomes

of interest included level of engagement and expressiveness of the actor, presence of

positive (e.g., humor) and negative (e.g., withdrawal) communication behavior by the

actor, feelings of satisfaction and closeness of both partners, and emotions experienced

by both partners. We hypothesized that social anxiety would be associated with lower

levels of engagement and expressiveness overall, but especially during conflict.

Further, we hypothesized that those higher on social anxiety would demonstrate more

negative communication behavior (such as expressing hostility toward their partners) during conflict.

Results provided some evidence that socially anxious individuals were less engaged and expressive when speaking with their partners. However, there was no evidence that they used more negative communication behaviors. Our hypothesis that social anxiety would be associated with greater difficulty during conflict had minimal support; rather, conversations in which the actor elicited support appeared to be the most difficult for socially anxious individuals, particularly when emotional experience was considered. Clinical implications and ideas for further research are explored.

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important to me outside the home. Every day I get to spend in your presence is a

privilege.

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INTRODUCTION

Social Anxiety and Communication in Intimate Relationships: Identifying Core

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Social anxiety disorder (SAD) is a chronic and often debilitating psychiatric

disorder characterized by the fear or avoidance of one or more social or

performance situations (American Psychiatric Association, 2000). Since its

inclusion as a mental illness in the *Diagnostic and Statistical Manual of Mental*

Disorders in 1980 (American Psychiatric Association, 1980), researchers have

increasingly emphasized the interpersonal nature of the disorder (Alden, 2001;

Alden & Taylor, 2004). The self-presentational model, for example, posits that social

anxiety stems from the desire to make a particular impression on others, doubt that

one will be unable to do so, and the fear that relationships with others will be

devalued (Leary, 2001; Schlenker & Leary, 1982). Indeed, socially anxious

individuals may be acutely aware of what they are missing when they succumb to

the seductive pulls of anxiety-motivated avoidance. Like most people, they crave

the sense of belonging, intimacy, and social support that interaction with others

provides (Alden, 2001; Baumeister & Leary, 1995; Leary, 2001).

The interpersonal lives of socially anxious people are clearly impaired.

Children with SAD are more likely to report feeling lonely (Beidel, Turner, & Morris,

1999), and adults with SAD form fewer close relationships and report higher levels

of interpersonal stress within the relationships they do form (Davila & Beck, 2002;

Rodebaugh, 2009). Those with SAD are also more likely than their non-anxious

counterparts and those with other anxiety disorders to be single or divorced (Wittchen & Fehm, 2001; Wittchen, Fuetsch, Sonntag, Muller, & Liebowitz, 2000). Unmarried socially anxious individuals are less likely to be in a dating relationship, and over half report difficulties dating (Montgomery, Haemmerlie, & Edwards, 1991). When socially anxious people do become involved in intimate relationships, they report mild to moderate levels of impairment (Schneier et al., 1994).

The effects of interpersonal isolation on mental and physical health (e.g., Ruberman, Weinblatt, Goldberg, & Chaudhary, 1984; Seeman, 1996) prompt great concern for the welfare of socially anxious people. Some of the most emotionally painful consequences of social anxiety, including loneliness, depression, and dissatisfaction with life are sometimes described as obvious consequences of a disorder that disrupts close social bonds and interpersonal functioning (Hart, Turk, Heimberg, & Liebowitz, 1999; Sparrevohn & Rapee, 2009). Great effort has been made to examine the nuances of interpersonal behavior among socially anxious people, often with the hope that targeted clinical applications may be developed to promote healthy interpersonal functioning.

The current study focuses on intimate relationships. Such relationships can provide a unique source of social support that promotes physical and emotional health over time (Glenn, 1975; Holt-Lunstad, Birmingham, & Jones, 2008). Within this domain, a high research priority concerns the communication patterns of socially anxious individuals with their partners, particularly as they seek support and attempt to resolve conflicts. Successful navigation of these circumstances is critical for the development of intimacy, relationship satisfaction, and relationship

longevity for couples in general (Eğeci & Gençöz, 2006; Gottman & Levenson, 2000;

Julien et al., 2003). Meanwhile, they require expressing emotion, disclosing intimate

information, and asserting oneself, behaviors that are typically difficult for socially

anxious individuals (Alden & Taylor, 2004). As detailed below, the current study

examines two central aspects of communication within these contexts, including the

level of engagement or expressiveness and problem solving behavior.

Expressiveness and Engagement

One of the most central aspects of intimate partner communication concerns

the level of engagement and expressiveness that each partner demonstrates. Indeed,

partner responsiveness is a central organizing construct used to study closeness and

intimacy within the couples' literature (Gottman, 1982; Manne et al., 2004; Reis et

al., 2004). Research has demonstrated that disclosing personal information and

expressing emotion tend to feel good and foster feelings of closeness between

people (Alden & Bieling, 1998; Butler et al., 2003). The process of revealing private

aspects of the self, including one's emotions (whatever they may be), is critical in the

reciprocal sharing necessary to generate feelings of closeness and intimacy as two

people initiate and deepen their relationship (Laurenceau, Rivera, Schaffer, &

Pietromonaco, 2004; Morry, 2005; Reis & Shaver, 1988). Emotional expression can

facilitate accurate communication of feelings about one's partner and prompt the

resolution of problems before they become entrenched (Keltner & Haidt, 1999;

Kennedy-Moore & Watson, 2001).

It comes as no surprise, then, that relationships characterized by high levels

of emotional expression and self-disclosure—including moderate expressions of

negative emotion—tend to be the most satisfying (Kennedy-Moore & Watson, 2001; Laurenceau et al., 2004). In contrast, those relationships in which individuals suppress emotion result in reduced relationship satisfaction for both partners (Gottman & Levenson, 1988).

We are just beginning to understand how social anxiety influences engagement and expressiveness within intimate relationships. When communicating with strangers or casual acquaintances, socially anxious individuals often appear reticent and constrained; in addition, their communication is marked by both subtle and overt avoidance (Beidel et al., 1985; Leary, Knight, & Johnson, 1987; McNeil, Reis, & Turk, 1995; Walters & Hope, 1998). To this end, socially anxious individuals often employ "safety behaviors," such as avoiding eye contact, expressing little emotion, disclosing few details about oneself, and standing apart from a group (Alden & Taylor, 2004; Stopa & Clark, 1993). Safety behaviors function to conceal anxiety or aspects of the self such that the opportunity for rejection and other negative social outcomes is limited (Clark & Wells, 1995; Rapee & Heimberg, 1997). However, compelling research demonstrates that when socially anxious individuals engage in safety behaviors, they are less well received by their interaction partners (Alden & Bieling, 1998).

Whether the avoidant and constrained communication style of socially anxious individuals persists within the context of intimate relationships is not a given; neither is it a given that such behavior, if it exists, is maladaptive. Socially anxious individuals may act differently – including being more expressive and less guarded – when they are less fearful of negative social evaluation (Alden & Bieling,

1998) and when they are primarily motivated by the desire to maintain closeness rather than the desire to avoid rejection (Alden, 2001). Such conditions may describe the context of healthy intimate relationships, which are relatively stable, involve someone who sees us favorably (Murray, Holmes, & Griffin, 1996), and offer rewards of emotional and physical intimacy. However, the personal and intimate nature of such relationships may also lead an individual to feel *more* vulnerable, and as such, be particularly sensitive to rejection and the threat of negative evaluation (Leary, 2001). Further, given perceptions of low social support among socially anxious people (Torgrud et al., 2004), the risk of negative evaluation by one's partner may represent a threat to scarce social resources.

Initial research suggests that socially anxious individuals may indeed adopt a self-protective or avoidant communication style with their partners, although behavioral studies are minimal. According to self-report, communication by socially anxious individuals with their relationship partners can be characterized by lower levels of self-disclosure, low levels of assertion, and high conflict avoidance (Cuming & Rapee, 2010; Darcy, Davila, & Beck, 2005; Sparrevohn & Rapee, 2009). The sole behavioral study examining these aspects of communication (Wenzel, Graff-Dolezal, Macho, & Brendle, 2005) corroborated these self-reports, finding that socially anxious persons were less verbally and physically expressive when conversing with their partners in different types of conversations, including those about neutral, positive, and negative topics. Specifically, they initiated less conversation, smiled less, made less eye contact, and touched their partners less (Wenzel et al., 2005). To

date, no studies compare self-perceptions, partner perception, and behavioral data to each other.

The above findings may lead one to suppose that the relationships of those with social anxiety necessarily suffer because of a self-protective communication style. After all, relationships generally thrive when both partners share their feelings openly and reveal intimate details about themselves. Further, the lack of responsiveness among depressed persons – who share many features with those with high social anxiety – is thought to be quite maladaptive. Such deficits in communication have been integrated into an interpersonal model of depression that accounts for a cycle of interpersonal rejection and exacerbation of depressive symptoms (Coyne, 1976; Segrin & Abramson, 1994).

Nevertheless, there is some reason to consider that a lack of expressiveness among socially anxious individuals may have mixed implications. First, in many relationships, the withdrawal of one partner likely signifies a change from typical or expected patterns of behavior and may send an interpersonal message of indifference, hostility, or disengagement. In contrast, it is possible that intimate partners of socially anxious individuals recognize such behavior as part of an ongoing pattern. A general lack of expressiveness may even have been something that was seen as attractive by the partner when the two were first deciding whether to become involved intimately. Further, for socially anxious individuals, self-disclosure may elicit fears of embarrassment or rejection and may be associated with negative affect, which might contribute to negative partner interactions. A further consideration is that, by withholding certain emotions, such as negative

affect, socially anxious individuals effectively prevent themselves from engaging in negative behaviors, at least in the short term.

One study informs such speculation. Although the process of engaging in full self-disclosure and expressing negative emotions to one's partner may be adaptive for many couples, Kashdan and colleagues found that withholding the expression of negative emotions to their partners was the best option for socially anxious individuals (Kashdan, Volkmann, Breen, & Han, 2007). These researchers looked at perceived feelings of closeness to one's intimate partner over a 12-week period in a group of 89 women. Women higher on social anxiety who withheld negative emotions reported enhanced closeness in their relationships over time. In contrast, less anxious women felt closer to their partners when they expressed emotions that were more negative. Perceptions of closeness by one's partner were not examined.

Kashdan et al.'s (2007) study suggests that socially anxious women may be able to maintain and even enhance closeness with partners while bypassing one of the common mechanisms for building intimacy. The authors suggested that the usual benefits conferred by expressing emotions may be diminished for highly socially anxious people because they are prone to high levels of self-doubt, rumination, and other chronic but negatively charged experiences. Exposing partners to such content may put them at risk for the contagious effects of mood and pull them into ongoing cycles in which they must provide reassurance. Sensing this, socially anxious individuals might suppress their negative emotions in service of avoiding abandonment by their partners.

With contradicting implications, other studies suggest that withholding emotions, including negative ones, may contribute to personal and relationship distress for socially anxious individuals. Davila and Beck (2002) found that social anxiety was associated with interpersonal styles reflecting less assertion and greater emotional suppression, conflict avoidance, fear of rejection, and interpersonal dependency, all of which were associated with chronic interpersonal stress. A related longitudinal study examined whether avoidance of expressing emotion, lack of assertion, and interpersonal dependency associated with social anxiety predicted depressive symptoms over the course of one year (Grant et al., 2007). Although social anxiety was associated with all three interpersonal styles, avoidance of expressing emotion was solely predictive of depressive symptoms one year later (valence of emotional expression was not examined).

Problem Solving Behavior

A somewhat related but distinct aspect of communication involves the ability to solve problems with one's partner, including conflict resolution, in a skillful and sensitive manner and one that does not erode feelings of intimacy and caring between partners. The couples' literature is brimming with studies addressing communication patterns between members of a couple, which typically record, code, and analyze the behavior of both partners while the couple is discussing an issue of conflict. By identifying subtle aspects of communication in this context, researchers have been able to predict the longevity and quality of marital relationships quite accurately (Gottman et al., 1998; Gottman & Levenson, 2000). Researchers focus heavily on the presence of *negative* behaviors (such as belittling

one's partner or expressing contempt), as these are the most robust predictors of

marital satisfaction and longevity (Gottman et al., 1998; Julien et al., 2003).

However, the presence of positive behavior – such as expressions of affection and

the use of humor – are also important (Julien et al., 2003).

There is no universal consensus regarding what counts as "negative"

communication strategies during problem solving. The literature on marital

communication recognizes that not all behaviors or relationship dynamics that

appear "negative" at first glance are destabilizing to relationships over time (e.g.,

Erber & Erber, 2011). Early conceptualizations of conflict generally posited that

conflict was, in and of itself, destructive (Coser, 1956). However, subsequent

understandings recognize that conflict can be transformative and foster relationship

growth (Gottman & Krokoff, 1989; Rubin, Pruitt, & Kim, 1994). This view posits that

conflict can be either constructive or destructive and that different couples may take

different but equally stable approaches to managing conflict within their

relationship (Coser, 1967; Gottman, 1993). Seemingly negative emotions, such as

anger, can serve adaptive purposes such as the articulation of individual needs, the

development of deeper intimacy, and bringing couples closer together (Gottman,

1993).

Nonetheless, the destructive implications of some behaviors are indisputable.

Expressing contempt towards one's partner, acting with defensiveness, and

withdrawing from one's partner (i.e., "stonewalling.") have all been linked to poor

relationship outcomes over time (Gottman & Levenson, 1992; Swann et al., 2003).

One pattern that has been studied extensively, termed "demand-withdraw," involves

some of these elements (Eldridge, Sevier, Jones, Atkins, & Christensen, 2007; Holtzworth-Munroe, Smutzler, & Stuart, 1998). This pattern "pits one partner's willingness to be emotionally and verbally expressive against the other's reluctance to engage and his or her simultaneous preference for avoidance" (Erber & Erber, 2011, p. 239). Here, one partner (in heterosexual couples, often the wife) tackles a problem by complaining and criticizing and is met with a partner who retreats in self-defense and effectively cuts off communication.

In contrast, the use of humor, self-disclosure, and communicating affection may help deescalate negative situations and are associated with positive outcomes over time. Although their presence during problem solving is not a robust predictor of relationship quality and stability, the lack of positive behavior more generally has been implicated in the long-term dissolution of relationships (Gottman & Levenson, 1992; Gottman & Levenson, 2000).

There have been only two behavioral studies examining couple communication among socially anxious individuals to date. One piece of evidence that socially anxiety may be associated with negative problem solving behavior comes from a recent study that examined communication and relationship behaviors in a small sample of socially anxious and non-anxious individuals and their intimate partners. Wenzel et al. (2005) employed methodology commonly used within the couples' interaction literature (Gottman & Levenson, 2000) in which couples are asked to discuss neutral, negative (a relationship problem), and positive conversational topics for 10 minutes while their behavior is videotaped. The Communication Skills Test (Floyd & Markman, 1984), was used to categorize

behaviors into five groups from *very negative* (e.g., mind reading with negative affect; put-downs) to *very positive* (validation; providing specific information). Socially anxious participants demonstrated more *very negative* behaviors when engaging in negative conversations but not other conversation types. Across all conversation types, socially anxious individuals displayed fewer *positive* behaviors. Whether partners of socially anxious individuals noticed or were affected by the display of very negative behavior (and lack of positive behavior) was not examined.

A second behavioral study of couples' communication among socially anxious individuals (Beck, Davila, Farrow, & Grant, 2006) sheds light on the context and potential underlying contributions to any difficulty expressing negative affect socially anxious individuals may have. Female undergraduates were covertly videotaped interacting with their intimate partners after being asked to prepare a 4-minute speech, a source of social-evaluative threat. Socially anxious women were no more or less likely than their non-anxious counterparts to engage in either positive communication (asking for help or stating their needs constructively) or negative communication (demanding help, criticizing, blaming, accusing, or rejecting help). This is notable, especially as the speech task is a particularly salient threat to socially anxious individuals, who, as a result, had to manage significant levels of negative affect while interacting with their partners.

The finding that socially anxious individuals communicated no differently than those with low anxiety contradicts the findings of Wenzel et al. (2005). Potential reasons for this discrepancy include differences in their samples (the former was clinical, the latter was not), the kinds of behaviors coded, and how the

researchers defined "negative" behavior. We suggest that an important factor may have been the type of conversation. Whereas the Beck et al. (2006) study involved seeking and eliciting support from one's partner during a time of distress, participants in the Wenzel et al. (2005) study were asked to discuss a relationship problem, and thus, to manage conflict. The process of managing conflict often entails managing and expressing anger, asserting oneself, and disagreeing with one's partner. These are precisely the kinds of communication tasks that may challenge socially anxious individuals the most.

Anger and Assertion: Specific Challenges for Socially Anxious Persons

Socially anxious individuals often struggle with anger and anger suppression specifically. Comparing 234 persons with social anxiety disorder and 36 non-anxious controls, Erwin, Heimberg, Schneier, and Liebowitz (2003) found that the socially anxious group experienced greater anger and reported poorer anger expression skills than the non-anxious group. They were also more likely to harbor grudges, sulk, and to report being secretly critical of others. These tendencies appear maladaptive. Among a subset of socially anxious individuals who received treatment for social anxiety disorder, those with heightened levels of anger were more likely to perceive the treatment as unfair and were less likely to complete the full course of treatment. Greater use of anger suppression was associated with poorer treatment outcomes.

Further, socially anxious individuals report difficulty asserting themselves in relationships, being overly reliant on their partners, and being preoccupied with abandonment (Davila & Beck, 2002). Social anxiety is similarly associated with

preoccupied and fearful attachment styles, the former of which represents ongoing

fears that one's partner will not be available when needed (Wenzel, 2002). The

suggestion that socially anxious individuals may view a partner as someone on

whom to depend is corroborated by developmental research. When interviewed

regarding their expectations about their best friend, one study found that

withdrawn and anxious children focused on their own needs and viewed friendships

as a source of help. Non-anxious children were more likely to mention factors

related to intimacy and sharing (Schneider & Tessier, 2007).

  The combination of difficulty regulating anger and a dependent interpersonal

style may set the stage for the specific problems managing conflict with an intimate

partner. Indeed, Darcy, Davila, and Beck's (2005) found that social anxious

individuals reported avoiding conflict altogether. It may be that socially anxious

individuals are relatively comfortable seeking and eliciting support from their

partners, as such behavior is consistent with a relatively dependent interpersonal

stance and poses no direct threat to the relationship. In contrast, discussing a

relationship problem may entail expressing dissatisfaction or anger with one's

partner. It appears that although many socially anxious individuals may harbor high

levels of anger, they may aim to suppress these feelings and may have trouble

expressing their feelings in an adaptive way when they do. Communicating

disagreement and anger with one's partner may also activate concerns about

relationship dissolution and abandonment, which may be particularly stressful for

socially anxious individuals. As a result, socially anxious individuals may become

more agitated, hostile, and defensive when in the throes of conflict and may miss

opportunities to engage in positive behaviors, such as the use of humor.

With this in mind, we revisit the findings from Kashdan et al.'s (2007) study, which found that withholding negative emotions was adaptive for socially anxious women, as it made them feel closer to their partners over time. Because the study measured negative emotions in broad terms, it may have masked important differences in the utility and risk of expressing specific types of negative emotions. We wonder if the findings reflect the specific utility of suppressing anger rather than a general utility of suppressing negative emotions altogether. It may be adaptive for socially anxious individuals to express sadness and fear with their partners, as such feelings may elicit sympathy and connection, and feeling understood. In contrast, expressing anger may be more risky for socially anxious individuals, who may do so in a way that erodes closeness within relationships.

Partner Perception

Studies to date have examined social anxiety and communication from the perspective of the self and, in the case of behavioral studies, objective raters. Very little is known about whether *partners* of socially anxious individuals notice any deficits in communication, and if so, whether this affects their emotional experience, satisfaction with communication, or feelings of closeness to their partner.

Wenzel et al.'s (2005) study can be considered with this question in mind. The researchers concluded that socially anxious individuals had poorer social skills within intimate relationships, as they were less engaged and expressive with their partners than non-anxious persons. However, it is unclear whether these behaviors, understood as deficits, were perceived by intimate partners as negative

or whether they generated rejection or negative consequences. It is possible that intimate partners of socially anxious individuals recognize such behavior as part of an ongoing way of communicating. This interpersonal feature may have been seen as attractive when the relationship was initiated.

Current Study

The current study was designed to clarify ambiguities regarding the nature and scope of communication difficulties between socially anxious individuals and their intimate partners. We asked undergraduate students (actors) and their intimate partners (partners) to come to the laboratory for two different kinds of conversations. One conversation entailed discussing a personal problem with one's partner ("support-seeking" condition), whereas the other focused on a mutually agreed upon area of conflict within the relationship ("conflict" condition). Both conditions were designed to elicit a range of emotions and to provide an opportunity to self-disclose and express emotional content. However, only the latter was designed to create a circumstance in which the actor would need to assert him or herself, put forth a difference in opinion, and possibly experience and express anger toward the partner.

An important feature of the current study is that we assessed the behavior of the actor from multiple perspectives. Specifically, we had actors, their partners, and objective raters all rate the actor's behavior. This approach allowed us to "triangulate" so we could develop a more comprehensive picture of any behavioral differences associated with social anxiety and also determine whether self-perceived deficits were the result of negative self-biases. This was especially

important given that socially anxious individuals have been found to overestimate their communication deficits in past studies (e.g., Taylor & Alden, 2005). Further, a better understanding of whether partners notice communication deficits and are affected by them may help inform clinical interventions.

Primary Aims and Related Hypotheses

Our first goal was to examine how level of expressiveness and engagement of the actor varied as a function of social anxiety of the actor. Expressiveness was evaluated using a modified version of the *Social Skills Inventory* (Wenzel et al., 2005; see Appendix A, in which an objective coder assessed the frequency of verbal, gestural and physical behaviors (e.g., smiles, nods, physical gestures, initiation of conversation). In addition, we developed a Post-Conversation Questionnaire (PCQ; see Appendix B) to assess emotional expressiveness, avoidance of conflict, and other related behaviors of the actor as assessed by the actor, partner, and an objective rater. We hypothesized that social anxiety would be associated with lower levels of expressiveness in both conditions and for both genders as assessed by all three raters (Hypothesis 1.1). However, we predicted that social anxiety would be more strongly associated with low expressiveness in the Conflict Condition (Hypothesis 1.2).

Our second goal was to examine whether level of social anxiety was associated with particular problem solving behavior. Problem solving behavior was assessed by the *Rapid Marital Interaction Coding System* (Heyman & Vivian, 2011; see Appendix C), a behavioral coding scheme that identifies negative problem solving behavior (e.g., psychological abuse, expressions of hostility, withdrawal) and

positive problem solving behavior (e.g., humor, constructive problem solving). We hypothesized that the more socially anxious actors would engage in more negative problem solving behavior in the Conflict Condition but not in the Support Condition (Hypothesis 2.1). Although our primary prediction concerned negative behavior, we were also interested in positive behavior; we hypothesized that positive behavior would be less frequent for socially anxious individuals in both conditions, but especially in the conflict condition (Hypothesis 2.2).

Third, we wished to examine whether level of social anxiety was associated with poorer "conversation outcomes," including how satisfied actors and partners were with the conversation and how feelings of closeness between them changed immediately following the conversation. Feelings of closeness between partners were measured with the Inclusion of the Other in the Self scale (IOS; Aron, Aron, & Smollan, 1992), and satisfaction with the conversation was assessed with an item on the PCQ. We hypothesized that socially anxious actors and their partners would feel less close (controlling for pre-conversation levels) and would express less satisfaction with their conversations, particularly after the conflict condition (Hypothesis 3.1).

Our fourth goal was to examine emotions experienced by the actor and partner during conversations. This was of interest as an outcome of its own, as the emotional experience of the actor and partner is informative about the process of conversation and may lead to deeper understanding of couple dynamics. However, we were interested in examining emotional experiences as a potential mediator between social anxiety and any negative conversation outcomes and/or negative

behavior, should the relationship between social anxiety and negative outcomes be established. Emotional states of both partners were assessed using a modified version of the Differential Emotions Scale (Izard, Dougherty, Blosom & Kotsch, 1974). Negative emotional states were not conceptualized as poor conversation outcomes, but differences as a function of the social anxiety of the actor were of interest.

We hypothesized that actors higher in social anxiety would experience fewer/less-intense positive emotions (e.g., hopeful, optimistic, encouraged; proud, confident, self-assured) and more/more-intense negative emotions (e.g., ashamed, humiliated, disgraced; repentant, guilty, blameworthy; disgust, distaste, revulsion) during both conversations, but particularly during in the conflict condition (Hypothesis 4.1). We also hypothesized that *partners* of those higher on social anxiety would feel less "sympathy, concern, compassion" and "love, closeness, trust" during the conflict condition (Hypothesis 4.2).

Exploratory Aims

The current study had several exploratory aims. First, we sought to explore whether the effect of social anxiety on communication differed for men and women. Further, we wondered whether social anxiety's influence would vary depending on whether members of the couple "matched" on their level of social anxiety. Finally, we examined relationship satisfaction as detailed below.

Gender. The presence of meaningful, behavioral gender differences is often overstated (Hoyenga & Hoyenga, 1981); however, when examining the subtleties of communication, gender influences on behavior must be addressed. It has been

found, for example, that women tend to foster closeness via the process of sharing their thoughts and feelings and are more likely to want to approach conflict constructively. In contrast, men may prefer side-by-side interactions (e.g., engaging in activities together) above explicit dialogue (Erber & Erber, 2011). Within the context of relationships, men and women may take on different roles when engaging in conflict (Ball, Cowan, & Cowan, 1995).

Gender differences have revealed themselves within the small literature on social anxiety and intimate relationships. For example, Cuming and Rapee (2010) found that social anxiety was associated with low self-disclosure and emotional disclosure in both intimate relationships and close friendships for women, but not men. The authors suggest that the lack of findings for men may have been due to a floor effect, as men may not demonstrate much variability in their communication levels. However, other studies (Darcy et al., 2005; Sparrevohn & Rapee, 2009) have found that social anxiety is associated with less emotional expression, self-disclosure, and intimacy in men and women alike. Only one behavioral study examining social anxiety and the communication behavior included both men and women, but it did not examine gender differences explicitly (Wenzel et al., 2005). The current study seeks to address this gap in the literature by including both men and women in its design. We make no *a priori* hypotheses regarding the effects of gender, but rather examine gender in an exploratory fashion.

Partner Social Anxiety and Couple "Match." Another exploratory goal of the current study was to examine how corresponding levels of social anxiety of the actor and partner influence communication dynamics. Matching of personal

characteristics, including level of social anxiety, has already been shown to be an important factor in the generation of interpersonal closeness when two people are first getting to know each other. A study by Kashdan and Wenzel (2005) asked undergraduate participants to engage in 45-minute conversations of two types with a member of the opposite sex: one that emphasized small talk and one that prompted gradual increases in self-disclosure. When discussing personal matters, closeness was highest when two highly socially anxious individuals conversed with each other.

Little is known about how such matching affects established relationships. We wondered if communication between two partnered socially anxious individuals would be more congruous or intimate (as might be extrapolated from the study above) than communication between two people who differ in their level of social anxiety (e.g., high and low). On one hand, the shared experience of social anxiety and the potentially similar communication style may engender feelings of similarity and closeness. On the other hand, such relationships may be characterized by emotional distance, as might be inferred from literature demonstrating reduced emotional expression among socially anxious persons. Due to the limited past research on this topic, we included examination of partner match as an exploratory part of the study, making no *a priori* hypotheses about it.

Relationship Satisfaction. There is some evidence that social anxiety is associated with poorer relationship satisfaction, as discussed above. Since the current study examined outcome variables such as feelings of love and closeness between partners, we included a measure of relationship satisfaction to control for

baseline levels of satisfaction for analyses related to emotions experienced during

conversations. However, we did not want to take this approach for all outcomes, as

we wanted the most power to examine the effect of social anxiety in its "pure" state.

Relationship satisfaction was also of interest as an outcome variable in and of itself.

Few studies have examined whether social anxiety is associated with poorer

relationship satisfaction in one's partner. Although the thrust of this study oriented

around communication between partners, we took the opportunity to examine this

variable independently as well, for exploratory purposes.

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CHAPTER 2

METHODS

Participants

Participants (actors) were 111 Temple University undergraduates and their romantic partners (partners). Of the original sample, one couple declined videotaping; two couples participated in the conversation but did not follow directions (which was defined as staying on topic for at least 50% of the conversation duration); and recording equipment failed for a fourth couple. These couples were removed from the analysis. The final sample included 107 couples, including 101 consisting of a man and a woman, four consisting of two women, and two consisting of two men.

A slight majority of actors were women (n = 57; 53%) with a mean age of 22.58 years (SD = 3.31). A majority of the sample (n = 57; 53%) was Caucasian. Other ethnicities included African American (n = 14; 13.1%), Latino/Hispanic (n = 12; 11.2%), and Asian or Pacific Islander (n = 11; 10.3%). Additionally, six individuals (5.6%) self-identified as multiracial, and five (4.6%) reported that they were of another ethnicity. The majority (n = 87; 81.3%) identified as exclusively heterosexual, seven (6.5%) as heterosexual with some homosexual experience, five (4.7%) as bisexual, four (3.7%) as exclusively homosexual, one (1.0%) as homosexual with some heterosexual experience, and one (1.0%) as unsure/questioning. Relationship length varied from 6 months to 8.41 years with an average of over 23 months (M = 23.15; SD = 19.89). The vast majority of actors were single (n = 103; 96.26%). Actors and partners did not differ on any demographic

variables (gender χ^2 (1, 210) = 0.76, p = .89; age t(198) = -.40, p = .69; ethnicity χ^2 (5, 210) = 3.70, p = .59; sexual orientation χ^2 (5, 210) = 8.22, p = .14).

The study was announced in psychology courses offering credit for research participation and on the Department of Psychology's research participation website. In addition, fliers announcing the study were placed at a number of locations on Temple University's main campus. To be eligible, actors needed to be involved in a committed romantic relationship of at least 6 months' duration and their partner needed to agree to attend the in-laboratory session. Recruitment efforts were designed to obtain a sample with roughly equal proportions of men and women and which represented low, moderate, and high levels of actor social anxiety (see below). There were no additional selection criteria based on participants' ethnic background, sexual orientation[1], socioeconomic status, or other demographic descriptors. The majority of participants were compensated with 2 research credits in partial fulfillment of their course research requirements. Monetary compensation of $16 per couple was offered to four couples to provide an alternative source of compensation and enhance recruitment efforts.

Our recruitment strategy aimed to obtain roughly equal quantities of participants across the social anxiety spectrum as determined by scores on the *Social Interaction Anxiety Scale* (SIAS; Mattick & Clarke, 1998). Before signing up for the study, students were asked to complete a short screening questionnaire online

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[1] Although gender of actor was examined, we did not examine the effects of partner gender, even though heterosexual and homosexual couples were included in the sample. There is inadequate support in the literature for the assertion that same-sex couples differ greatly in terms of communication patterns (Julien et al., 2003). However, although it is possible that the inclusion of same-sex couples contributed a small level of additional unexplained variance, we did not believe this small risk was sufficient to exclude couples based on their gender composition.

that included the SIAS. Responses obtained through previous administrations of the SIAS at Temple University were examined to estimate quartiles of our target population. Roughly equal numbers of participants were recruited from each quartile (n (1st quartile) = 20; n (2nd quartile) = 24; n (3rd quartile) = 32; n (4th quartile) = 31).

We also sought to obtain roughly equal proportions of men and women. The vast majority of initial participants were women, perhaps reflecting the skewed gender ratio among Temple psychology students. To increase the number of male "actors," we switched who was considered the actor and the partner for a portion of heterosexual couples (n = 22), after confirming that the male was also an undergraduate student.

Power Analysis

A power analysis suggested that we needed 103 couples to adequately test the primary study hypotheses. Past studies examining interpersonal processes in romantic relationships and social anxiety have reported a range of effect sizes, from small to large (Beck et al., 2006; Kashdan et al., 2007; Wenzel et al., 2005). We entered the number of predictors in our most comprehensive regression model (7), alpha level (.05), medium effect size ($f = .15$), and desired power (.80) into a sample size calculator (G*Power 3.1.2; Faul, Erdfelder, Lang, & Buchner, 2007). The resulting sample size required to test the primary hypotheses was 103.

Instruments and Measures

Self-Report

   Demographic Questionnaire. A brief set of items (See Appendix D) was used to assess gender, age, ethnicity, relationship status, and parental education of each participant. This information was used to confirm relationship status and to determine generalizability of the sample and of study findings across demographic groups.

   The Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) is a 20-item measure of anxiety in dyads and groups scored on a 5-point Likert-type scale ranging from 0 (*not at all characteristic or true of me*) to 4 (*extremely characteristic or true of me*). Items include "I have difficulty making eye contact with others," and "I am nervous mixing with people that I don't know well." Excellent internal consistency has been reported among patients with social anxiety disorder and individuals in nonclinical samples, with Cronbach's alphas ranging from .86 to .94 (Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992; Mattick & Clarke, 1998). In addition, for the purpose of the current study, one item was altered to reduce heterosexist language ("I have difficulty talking to attractive persons of the opposite sex" was replaced with "I have difficulty talking to people to whom I am attracted."). Further, recent findings suggest that the 17 straightforwardly worded items are more valid indicators of social interaction anxiety than the reverse-scored items in both undergraduate and clinical samples (Rodebaugh, Woods, & Heimberg, 2007). The sum of the straightforwardly worded items has demonstrated excellent factorial validity and internal consistency (α= .93) in undergraduate samples and construct validity in both undergraduate and clinical samples (Rodebaugh et al., 2007). Consequently, we included only the 17 straightforward SIAS items in the total score,

referred to hereafter as the SIAS–Straightforward score (SIAS-S). Cronbach's alpha for the SIAS-S in the current sample was .92.

The Dyadic Adjustment Scale (DAS; Spanier, 1976) is a 32-item self-report measure that asks participants to estimate their agreement with their partners' views on issues such as finances, religion, sex, and household tasks. It also asks about the quantity and type of contact (e.g., physical affection, working on a project together) and conflict within the relationship. The scale yields a single score (from 0 to 151) that reflects an individual's relationship satisfaction; higher scores reflect greater satisfaction, and 98 is the normative cutoff for distress (Spanier, 1976). The measure was developed on a sample of married and divorced persons. Reliability was strong, with an alpha of .96. The measure is also able to discriminate between distressed and non-distressed couples, as well as those with a high probability of divorce (Graham, Liu, & Jeziorski, 2006). Wording for one item was altered to make the item more appropriate for non-married couples. Cronbach's alpha in the current sample was .92.

The Inclusion of Other in the Self Scale (IOS; Aron et al., 1992) was administered before and after each conversation to assess changes in the level of closeness between partners. The IOS a single-item measure used to assess closeness with a friend or romantic partner. Seven diagrams consisting of two circles with increasing degrees of overlap are presented, ranging from complete separation (1) to almost complete overlap (7). Participants select the pair of circles that represents their perceived level of closeness with their romantic partner, with greater overlap representing increased closeness. The IOS correlates well with

other measures of closeness and satisfaction, such as the Subjective Closeness Inventory (r = .77; Aron, Melinat, Aron, Vaollone, & Bator, 1997) and the Measure of Intimacy (r = .63; Swann et al., 2003). The IOS also has high test-retest reliability after a 2-week interval (r = .85), and it predicts relationship dissolution among dating couples (Aron et al., 1992).

We used a modified version of the *Differential Emotions Scale* (DES; Izard et al., 1974) to assess emotions experienced during each conversation task. As done previously by Fredrickson, Tugade, Waugh and Larkin (2003), we supplemented the original DES scale to include eight additional discrete positive emotions. The modified scale included 20 sets of emotions, each described by three emotional words (e.g., joy was represented by "glad, happy, joyful"). Participants were instructed to report on how much they felt each set of emotions during their most recent conversation. Items were rated on an 8-point scale from "*none*" to "*a great deal*." Izard et al. (1974) reported a test-retest reliability of .77, and Boyle (1984) demonstrated construct validity of most subscales (Boyle, 1984). We were interested in different sets of emotions for actors and partners. Therefore, we administered the entire measure to actors and partners, but examined the items related to specific hypotheses only.

Conversation Topic Generation

We asked participants (actors and partners) to consider a range of couple and personal problem areas to help brainstorm ideas for subsequent conversations with their partners. To brainstorm ideas for the conflict condition, we used the *Couples' Problem Inventory* (Gottman, Markman & Notarius, 1977; See Appendix E),

which has been used in previous studies for the same purpose. The *Couples'*

Problem Inventory lists 12 common topics about which couples commonly disagree

(e.g., finances, sex, communication) and includes the opportunity to write in an

additional topic. Participants rate the extent to which the area is a problem in their

relationship on a Likert-type scale ranging from 0 to 10 (0 = *not a problem* to 10 =

serious problem). We developed a parallel list of personal problem areas (e.g.,

mental health, body image, family; see Appendix E.), entitled the *Personal Problem*

Inventory, which we employed to help the actor generate ideas for the topic of the

support conversation. To help generate a comprehensive list of problems, we

consulted with several research assistants in our laboratory. The final list included a

range of personal problems and used the same scale as the *Couples' Problem*

Inventory.

Behavioral Coding

The *Social Skills Inventory* (Wenzel et al., 2005; Appendix A) is a behavioral

coding scheme that rates the frequency of 10 molecular behaviors (e.g., smiling,

gestures, "guggles"[2]) and includes one rating reflecting the coders' global

impression of participants' social skills. Coders rate how often each type of behavior

occurs per 2-min interval as follows: 0 = no instances of the construct; 1 = 1–2

instances of the construct; 2 = 3–4 instances of the construct; and 3 = 5 or more

instances. Scores are then averaged, providing a mean score for each behavior per

conversation. Three additional constructs are rated but use different anchors,

including eye contact, speech loudness, and subjective overall impression of the

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[2] Guggles are utterances such as "uh-huh," which indicates an individual's attentiveness toward a
speaker and encourages continued participation in conversation.

participants' social skills. Because the current study examined expressiveness rather than social skill, we eliminated from our coding and analysis items related to fidgeting, paraverbals, and the global rating of social skill. We also added an item that assessed amount of speech. In the Wenzel et al. (2005) study, coders achieved good reliability (k = .90) across all rated behaviors, and high anxious individuals could be discriminated from those low in anxiety on all molecular skills included in this study. Because we obtained continuous rather than categorical data with this measure, we examined inter-rater reliability with Cronbach's alpha, which ranged across behaviors from .50-.94; only items that achieved adequate inter-rater reliability were maintained in our analyses (see more details below under *Behavioral Coding*).

The *Rapid Marital Interaction Coding System* (RMICS; Heyman & Vivian, 1993; Appendix C) is an observational coding system adapted from the Marital Interaction Coding System-IV (Heyman, Weiss, & Eddy, 1995) that captures 11 types of communication behavior. Each turn in speech provides the basic unit and is assigned a code (e.g., "psychological abuse," "hostility," "humor"). Codes are ordered hierarchically to enable the assignment of a single code when multiple behaviors characterize a single turn of speech. The hierarchy is based on communication theory and research demonstrating that negative, followed by positive, followed by neutral codes are of decreasing importance in understanding marital conflict. Reliability ranged across behaviors from k = .53-.86 (Heyman, Brown, Feldbau-Kohn, & O'Leary, 1999). Subgroups of distressed (n = 15) and nondistressed (n = 15) spouses were discriminated by positive behaviors of the MICS (Floyd, O'Farrell,

& Goldberg, 1987). The RMICS was modified for this study so that each 30-second interval was coded rather than each turn of speech. Coders achieved good overall reliability in the current study (k = .81; see details below under *Behavioral Coding*).

The Post-Conversation Questionnaire (PCQ; Appendix B) was developed for the current study primarily to assess actor, partner, and observer perceptions about the actor's behavior during each conversation. The questionnaire includes items intended to assess level of disclosure, emotional expressiveness, and other communication behavior (e.g., *How assertive was the actor?*) Most items are rated on a 7-point Likert-type scale from *not at all* to *very*. Slightly different versions were completed by each of the three groups to maintain a focus on the actor's behavior. In addition, an item assessing satisfaction with the conversation was included on the actor and partner versions. Finally, the questionnaire included an open-ended question in the actor and partner versions, solely for exploratory purposes. Inter-rater reliability in the current study varied per question from .53 to .88 (see details below under *Behavioral Coding*).

Procedure

Actors brought their romantic partners with them to the lab. After signing informed consent, couples were separated and asked to complete a series of self-report measures by computer via *FluidSurveys*, a secure online survey software system. Immediately upon completion of the measures, participants were asked to complete the Personal Problem Inventory and the Couples' Problem Inventory to help them brainstorm topics for each conversation task. Although only the actor was eventually asked to discuss a personal problem in the Support Condition, actors and

partners alike were asked to brainstorm ideas in advance to balance the administration of measures for both members of the couple. Participants were also asked to complete the first IOS at this time.

Couples were then taken to a private room equipped with two comfortable chairs and two video cameras mounted unobtrusively at opposite corners. Here, they completed the two conversational tasks with a short break in between. The order of conversations was randomized. Both tasks are variations of procedures commonly used in the couples' interaction literature (e.g., Chambless et al., 2002; Weiss & Heyman, 1997).

Conflict Condition: In this condition, the experimenter asked the couple to think about an area of conflict in their relationship and to decide together on a topic they wished to discuss. Couples were encouraged to select a problem that was important to both of them and about which they were comfortable talking in a laboratory setting. They were prompted to refer to their respective *Couples' Problem Inventories* to generate ideas and to help identify their most important areas of conflict. The experimenter left the room for 3-5 minutes while the couple came to a decision about what to discuss. Once the topic was selected, the experimenter collected study materials and left the room again for 10 minutes while the discussion was recorded.

Support Condition: In this condition, the experimenter explained to the couple that one of them (the actor) had been selected to discuss a personal problem with the other. Actors were then given their *Personal Problem Inventory* to assist them in deciding what to discuss with their partners.

Actors were encouraged to select the problem that was most important to them that they were also willing to discuss in a laboratory setting. Experimenters left the room for 3-5 minutes while the actor decided what to discuss. Once a topic was selected, the experimenter checked to make sure the topic was in fact a personal problem rather than an area of conflict for the couple. Once this was confirmed, the experimenter encouraged the partner to provide feedback and support to the actor as if this conversation were happening outside of the laboratory. The experimenter collected study materials and left the room for 10 minutes while the discussion was recorded.

After each conversation, the experimenter returned to the room and separated the couple to ensure confidentiality while they completed self-report measures. Each member of the couple completed the IOS, DES, and PCQ with reference to the first conversation. After completing the first task, couples were given a 10 min break to allow a return to baseline emotional states should the first conversation have been arousing in any way.

After the break, couples were administered the IOS again. Then, the experimenter provided instructions for the second task and left the room for 10 min. After that time, the experimenter returned, separated participants, and asked them to complete the IOS, DES, and PCQ with reference to the second conversation. At that time, participants were asked to talk with their partner about something they liked about the relationship for 5 min. This was not part of the experiment but was included so that the experimental experience would end on a positive note.

After completing the final conversation, participants were debriefed and thanked for their time.

Behavioral Coding

Research assistants, uninformed regarding the level of social anxiety of participants, coded each conversation using the RMICS, SSI, and PCQ. The behavior of the actor only was coded. Coding for the SSI was conducted in 2 min segments yielding five ratings for each behavior examined per conversation. These scores were averaged across segments to derive a total score, which was used in analyses. For the RMICS, each 30-sec interval was assigned one of 11 possible behavioral codes. When more than one behavior was observed, coders referred to the RMICS hierarchy to decide among them (see Appendix C). The frequency of each type of behavior was summed to create a total score for each behavior.

Training consisted of reading source materials (e.g., the RMICS manual and the description of the SSI as introduced by Wenzel et al., 2005) and team meetings to code behavioral samples. Six research assistants were trained over the course of one year, three of whom coded the SSI and PCQ, and three of whom coded the RMICS and manipulation check variables. Coders rated conversations in both conditions to reduce the likelihood that different rating styles would add variability between conversation conditions.

Research assistants were required to code five full conversations and obtain a level of reliability (percent agreement) greater than .80 on their respective coding schemes. Agreement was be defined as obtaining a score within one point of the correct coding as determined by the lead experimenter. After the initial training

period, research assistants and the lead experimenter met regularly to discuss any

problems and review coding examples. Conversations were randomly assigned to

coders, with 25% assigned to two coders to assess reliability.

Table 1 includes a list of all coder-rated variables on the SSI and PCQ and

their corresponding reliabilities. Good reliability (alpha > .70) was achieved for 6 of

9 SSI categories, and adequate reliability (alpha = .68) was achieved on a 7th. SSI

categories *eye contact* and *touching* were excluded from subsequent analyses due to

inadequate reliability (*alpha* = .50 and .56 respectively; touching was a very rare

behavior). Good reliability was achieved for 6 of 7 items on the Post-Conversation

Questionnaire (Observer version). Poor reliability was achieved on item #4, which

examined whether the actor approached or avoided conflict (alpha = .53). See the

Discussion section for author speculation as to why this may have been the case.

Despite poor reliability, we chose to keep this variable in our presentation of the

data. This was done so that we could maintain consistency of items in the PCQ,

which was administered to objective coders, actors and partners alike. We interpret

results related to this item with caution.

Raters achieved good reliability on the RMICS overall (kappa = .81; 85%

agreement). Three RMICS categories (*psychological abuse*, *withdrawal*, and

relationship-enhancing attribution) were rarely assigned. As a result, meaningful

kappas could not be calculated, and these categories were removed from analyses.

Remaining kappas by

Table 1. Reliability for Social Skills Inventory and Post-Conversation Questionnaire Items

Social Skills Inventory	Cronbach's alpha
Smile	.94
Guggle	.83
Head Nod	.72
Gesture	.96
Touching	.56
Initiation of Conversation	.68
Eye Contact	.50
Volume	.86
Speech Amount	.86
Post-Conversation Questionnaire (Observer Version)	
Share personal information	.78
Communicative	.79
Assertive	.84
Approach vs. avoid conflict	.53
Express positive emotions	.88
Express anger	.88
Express negative emotions)	.71

category ranged from .80-.93, and all were retained in our analyses.

Data Analytic Strategy

Our hypotheses were analyzed by multiple regression. We used a two-level hierarchical linear model (HLM version 7; Scientific Software International, 2011; Raudenbush & Bryk, 2002) to account for the within-subject design. Level 1 represented conversation-level variables (i.e., condition), and Level 2 represented dyad-level variables, which were static between conversations (e.g., actor and partner social anxiety, gender).

We used one model to examine most outcomes (See Figure 1). The model examined the main effects of social anxiety, social anxiety of one's partner, gender, and condition. It also included three 2-way interactions (social anxiety X gender, social anxiety X social anxiety of partner, and social anxiety X condition) and one 3-way interaction (social anxiety X gender X condition). In cases in which this 3-way interaction was significant, we divided our sample by gender and examined the 2-way interaction between condition and social anxiety separately for each.

Social anxiety of actor and partner were grand-mean centered before being entered into the model. Interaction terms were created by centering component variables and calculating a cross product, which was then entered into the HLM model. Gender and condition were dummy coded (gender: 0=male; 1=female; condition: 0=conflict; 1 = support) and centered before being entered into the model.

The Level-1 model contained the outcome variable, represented by

OUTCOME$_{ij}$ for individual j in conversation i. The variable β_{0j} represents an individual's outcome when all predictors were equal to zero. The effect of condition was represented by $\beta_{1j}*$(CONDITION$_{ij}$). Finally, the r_{ij} variable represented the error in the prediction of the individual's score. The between-subject (Level-2) model included variables representing static characteristics of the dyad. For the intercept equation (β_{0j}), we entered gender (GENDER_A$_j$), social anxiety (SA_A$_j$), social anxiety of partner (SA_B$_j$), the interaction between social anxiety and gender (SAXGEN$_j$) and the interaction between social anxiety of actor and partner (SA_AXB$_j$). For the slope equation (β_{1j}), we entered social anxiety and the interaction between social anxiety and gender so that cross-level interaction terms involving these variables would be calculated in HLM.

This model was used for nearly all outcomes (see Figure 1). One exception is that we controlled for the influence of relationship satisfaction of both actors and partners when examining emotions as outcome variables.

To facilitate interpretation, simple slopes analyses were conducted for all significant two-way interaction effects. When the moderator was continuous (e.g., if partner social anxiety was the moderator), high and low values were calculated by adding or subtracting one standard deviation from the mean. If the moderator was dichotomous (e.g., gender, condition), values equivalent to each value of the moderator were used. An online tool designed for the testing and probing of two-way interactions estimated in hierarchical linear regression models was used (Bauer & Curran, 2005). Figures for all interaction effects are provided, with simple slope estimates and levels of significance incorporated into each diagram.

Level-1 Model

$OUTCOME_{ij} = \beta_{0j} + \beta_{1j}*(CONDITION_{ij}) + r_{ij}$

Level-2 Model

$\beta_{0j} = \gamma_{00} + \gamma_{01}*(GEN\_A_j) + \gamma_{02}*(SA\_A_j) + \gamma_{03}*(SA\_B_j) + \gamma_{04}*(SAXGEN_j)$
$\quad + \gamma_{05}*(SA\_AXB_j) + u_{0j}$
$\beta_{1j} = \gamma_{10} + \gamma_{11}*(SA\_A_j) + \gamma_{12}*(SAXGEN_j)$

Mixed Model

$OUTCOME_{ij} = \gamma_{00} + \gamma_{01}*GEN\_A_j + \gamma_{02}*SA\_A_j + \gamma_{03}*SA\_B_j + \gamma_{04}*SAXGEN_j +$
$\gamma_{05}*SAT\_AXB_j + \gamma_{10}*CONDITION_{ij} + \gamma_{11}*SA\_A_j*CONDITION_{ij} +$
$\gamma_{12}*SAXGEN_j*CONDITION_{ij} + u_{0j} + r_{ij}$

Figure 1. Hierarchical Linear Model

CHAPTER 3

RESULTS

Data Management

A complete listing of study variables with means and standard deviations is

presented in Tables 2-4 below. Data were examined for accuracy of input and the

presence of missing data. There were no out-of-range values for any study variables.

Minimal missing data on self-report measures were handled by mean substitution;

no participant was missing more than 10% of items on any single measure. There

were occasional missing data from the behavioral portion of the study, in cases

when coders could not assign behavioral codes (e.g., if a couple turned away from

the camera for an extended period or if there was a technical failure). Such

instances were rare. Participants were deleted listwise or pairwise as necessary for

analysis. Overall, no more than 8 couples were deleted from any single analysis.

Social anxiety, as measured by the straightforward items of the *Social

Interaction Anxiety Scale* (M = 15.09, SD = 10.77), ranged in our actors from very low

to very high (range: 0-59). Eleven participants (10.48%) met the straightforward-

item cutoff score of 28, which is often considered equivalent to a total score of 34

(Rodebaugh et al., 2011), often used to indicate clinical levels of social anxiety.

Therefore, it is likely that clinically meaningful social anxiety was present in our

sample. Partner scores on the SIAS-S were slightly lower (M = 12.11, SD = 8.12),

which represented a statistically significant difference from actor scores (t(109) =

2.52, p < .05). One possible explanation for this discrepancy is that we recruited

Table 2. Means and Standard Deviations for Behavioral Coding Items

Instrument/Item	M	SD
Social Skills Inventory		
Smile	0.64	1.05
Guggle	0.49	0.33
Head Nod	0.49	0.39
Gesture	0.74	0.94
Initiation of Conversation	0.55	0.53
Speech Volume	0.19	0.98
Speech Amount	0.32	1.85
Rapid Marital Interaction Coding System	*M*	*SD*
Psychological Abuse	0.98	0.13
Distress-Maintaining Attribution	0.65	0.21
Hostility	2.82	1.34
Dysphoric Affect	1.09	0.29
Withdrawal	0.58	0.11
Acceptance	0.62	0.21
Relationship-Enhancing Attribution	0.57	0.12
Self-Disclosure	3.47	4.70
Humor	3.66	4.59
Problem Discussion	4.21	6.64
Other	2.84	1.58

Table 3. Means and Standard Deviations for Post-Conversation Questionnaire Items

Item	Self		Partner		Observer	
	M	*SD*	*M*	*SD*	*M*	*SD*
1 Personal information	6.00	1.25	5.92	1.25	5.31	1.37
2 Communicative	6.05	1.12	6.18	1.15	5.27	1.38
3 Assertive	5.08	1.44	5.15	1.38	4.29	1.29
4 Approach vs. avoid conflict	5.20	1.56	5.30	1.69	4.82	.94
5 Express positive emotions	4.80	1.76	4.87	1.80	4.37	1.50
6 Express anger	1.92	1.38	2.06	1.46	3.17	1.66
7 Express negative emotions	2.96	1.77	3.09	1.86	4.32	1.44
8 Satisfaction with conversation	5.23	1.63	5.27	1.68	--	--

Table 4. Means and Standard Deviations for Differential Emotions Scale Items and the Inclusion of Other in the Self Change Score

		Self		Partner	
DES Item		*M*	*SD*	*M*	*SD*
--	POS	3.88	2.15	4.31	2.13
2	Angry	1.33	2.05	0.98	1.86
3	Ashamed	1.10	1.93	--	--
5	Scared	0.83	1.85	--	--
7	Disgust	0.51	1.28	6.34	2.41
8	Embarrassed	2.04	2.49	--	--
12	Interested	4.92	2.70	0.46	1.26
13	Love	6.28	2.21	5.17	2.64
14	Proud	4.79	2.62	--	--
16	Sad	1.56	2.29	0.37	1.07
17	Contemptuous	0.42	1.10	5.85	2.29
20	Sympathy	3.25	2.95	6.34	2.41
IOS-Change Score		0.17	0.86	0.07	0.89

Note. N = 107. POS = Positive Emotion Composite; IOS = Inclusion of Other in the Self.

actors (but not partners) with respect to their own level of social anxiety, making special efforts to recruit those with higher social anxiety.

Normality and other Assumptions of Regression

All variables were examined to determine whether they satisfied assumptions of normality. The distribution of the SIAS-S for both actors ($w = .92$, $p < .05$) and partners ($w = .94$, $p < .05$) did not meet assumptions of normality due to significant deviations in skewness and kurtosis. A square root transformation resulted in normal distributions for both variables. We subsequently conducted all analyses with the transformed scores.

The majority of outcome measures violated strict assumptions of normality as well. Generally, these issues were addressed by referring to HLM output using robust standard errors. We applied a square root transformation to address extreme violations of normality for the outcome *experiencing feelings of contempt during the conversation*.

Data were also examined for influential outliers. Most of the outcome variables were measured on a 7-point Likert-type scale with scores across this spectrum utilized by many participants across the range of social anxiety. As a result, there were few isolated outliers for most of our analyses. However, *contempt* was an exception here as well. Most participants reported experiencing very little contempt, utilizing only the lower portion of the range. However, one outlier was identified in this case, and a sensitivity analysis was conducted. Results differed depending on whether this case was included; we present findings both with and without this case.

Manipulation Check

We examined the emotions felt by actors and partners by conversation type to confirm that our conditions elicited the emotions intended. As expected, actors and partners alike endorsed feeling angrier in the conflict condition than in the support condition (Actor: β condition = -0.64, $t(105)$ = -2.40, $p < .05$; Partner: β condition = -1.12, $t(106)$ = -4.91, $p < .001$). In contrast, they reported feeling more love, closeness, or trust in the support condition (Actor: β condition = 0.42, $t(105)$ = 2.34, $p < .05$; Partner Love: β condition = 0.62, $t(106)$ = 2.99, $p < .01$).

Associations between Study Variables

Zero-order Pearson correlations assessed associations between main variables of interest including social anxiety, gender, and relationship satisfaction in actors and partners, respectively (see Table 5 below). Actors higher in socially anxiety tended to have partners who were also higher in social anxiety. Being female was associated with greater social anxiety to a marginal degree among actors and to a significant degree among partners. Having a male partner was significantly associated with social anxiety for both actors and partners. Higher social anxiety of actors was associated with lower relationship satisfaction, but it was not associated with lower relationship satisfaction in their partners. The relationship between one's own social anxiety and relationship satisfaction was not replicated among partners. Relationship satisfaction in actors and their respective partners was highly correlated.

Table 5. Correlations between Select Study Variables

	Variable	1	2	3	4	5
1	Social Anxiety (Actor)	--				
2	Social Anxiety (Partner)	.220**	--			
3	Gender (Actor)	.121†	-.200**	--		
4	Gender (Partner)	-.177**	.190**	-.870**	--	
5	Relationship Satisfaction (Actor)	-.367**	.047	-.058	.121	--
6	Relationship Satisfaction (Partner)	-.09	-.051	.127	-.056	.559**

* p <.05, ** p <.01, † p<.10
Note. N = 107. Social Anxiety = Square root of total score on SIAS-S; Relationship Satisfaction = Total score on the DAS.

Hypothesis Testing

Expressiveness and Engagement

Recall that our first hypothesis predicted that individuals higher in social

anxiety would be less expressive and engaged with their partners, particularly in the

conflict condition. We examined this via subjective ratings by actor, partner, and

objective coder in reference to whole conversations (by the use of the PCQ) as well

as through the frequency of micro-behaviors on the SSI. Due to the large volume of

outcome variables in this study, complete reports for each regression are included

in Appendix F. Tables in text below summarize results of each family of regressions.

Tables indicate when a slope for a predictor was significant and, in the case of main

effects, the direction of significant slopes.

<u>Post-Conversation Questionnaire</u>

Table 6 presents a summary of regressions for the PCQ of actor, partner, and

objective rater.

<u>*Main effects of gender and condition*</u>: There were no main effects of gender.

Main effects of condition were as follows. The conflict condition was associated

with actors rating themselves as acting with more assertiveness (β condition = -0.38,

$t(104)$ = -2.69, $p < .05$), approaching conflict more (β condition = -0.35, $t(104)$ = -2.80,

$p < .01$), and expressing more anger (β condition = -0.56, $t(104)$ = -3.34, $p < .01$). In

contrast, actors reported that they revealed more personal information in the

support condition (β condition = 0.30, $t(104)$ = 2.38, $p < .05$). Objective coders agreed

that in the conflict condition actors were more assertive (β condition = -0.31, $t(104)$ =

-2.19, $p < .05$) and approached conflict more (β condition = -0.27, $t(104)$ = -2.39, $p <$

Table 6. Post-Conversation Questionnaire by Actor, Partner, and Observer

	personal info	communicative	assertive	approach conflict	express positive emotion	express anger	express negative emotion
PCQ-Actor (A)	PCQ1A	PCQ2A	PCQ3A	PCQ4A	PCQ5A	PCQ6A	PCQ7A
Gender							
Condition	(+)*		(-)**	(-)**		(-)**	
Social Anxiety (Actor)	(-)*		(-)**				
Social Anxiety (Partner)	(-)*		(-)**				
Social Anxiety X Gender							
Social Anxiety (Actor) X Social Anxiety (Partner)							
Social Anxiety X Condition							
Social Anxiety X Gender X Condition							
PCQ-Partner (B)	PCQ1B	PCQ2B	PCQ3B	PCQ4B	PCQ5B	PCQ6B	PCQ7B
Gender							
Condition					(-)*		(+)*
Social Anxiety (Actor)							
Social Anxiety (Partner)							
Social Anxiety X Gender							
Social Anxiety (Actor) X Social Anxiety (Partner)		*					
Social Anxiety X Condition							
Social Anxiety X Gender X Condition							
PCQ-Observer	PCQ1-O	PCQ2_O	PCQ3-O	PCQ4-O	PCQ5-O	PCQ6-O	PCQ7-O
Gender							
Condition	(+)**		(-)*	(-)*			(+)*
Social Anxiety (Actor)			(-)*				
Social Anxiety (Partner)					(+)**		
Social Anxiety X Gender							
Social Anxiety (Actor) X Social Anxiety (Partner)							
Social Anxiety X Condition	*	*					
Social Anxiety X Gender X Condition							

Note. N = 103-107.* $p < .05$, ** $p < .01$. Plus (+) and minus (-) signs indicate the direction of the slope in the case of main effects. PCQ = Post-Conversation Questionnaire; Social Anxiety = Square root of total score on SIAS-S; Gender was dummy coded (0=male; 1=female) as was condition (0=conflict; 1=support).

.05). They also agreed with actors' self-assessments that they revealed more personal

information in the support condition (β condition = 0.47, $t(104) = 2.84$, $p < .01$).

However, there were no main effects with respect to expressing anger as rated by

the observer. Further, observers rated actors as expressing more negative emotion

in the support condition (β condition = 0.35, $t(104) = 2.03$, $p < .05$). Partners agreed

that actors expressed more negative emotion in the support condition (β condition =

0.45, $t(104) = 2.30$ $p < .05$) and thought they expressed less positive emotion in the

support condition as well (β condition = -0.44, $t(104) = -2.28$, $p < .05$). Otherwise,

partners saw no differences in how actors communicated in the different conditions.

Social Anxiety: Social anxiety of the actor predicted perceiving oneself as

revealing less personal information (β social anxiety = -0.30, $t(101) = -2.16$, $p < .05$)

and as less assertive (β social anxiety = -0.38, $t(101) = -2.98$, $p < .01$). Objective coders

agreed that actors were less assertive (β social anxiety = -0.15, $t(101) = -2.21$, $p < .05$)

but saw no evidence that they shared less personal information or differed in any

other way from those with lower social anxiety as assessed by PCQ items. Partners

of actors higher on social anxiety rated their behavior similarly to those with lower

social anxiety with one exception: when the partner had low social anxiety, actor

social anxiety was more strongly associated with being rated as less communicative

by one's partner (β social anxiety actor X social anxiety partner = -0.11, $t(101) = -2.34$,

$p < .05$). However, simple slope analyses for partners both high and low in social

anxiety fell just short of traditional levels of significance (see Figure 2).

Participants whose *partners* were higher in social anxiety rated *themselves* as

sharing less personal information (β social anxiety partner = -0.25, $t(101) = -1.96$, $p =$

Figure 2. Partner's Social Anxiety Moderates the Relationship between Actor Social

Anxiety and Level of Communication as Rated by Partner

.05) and being less assertive (β social anxiety partner = -0.50, $t(101)$ = -2.34, $p < .05$).

Partners and objective coders did not detect this difference. However, actors whose

partners were higher in social anxiety (regardless of their own level of social

anxiety) were rated as expressing more positive emotion by objective coders (β

social anxiety partner = 0.27, $t(101)$ = 2.57, $p = .01$).

Consistent with our hypotheses, condition moderated the relationship

between social anxiety and expressiveness in two instances. Condition interacted

with social anxiety in predicting amount of communication (β social anxiety X

condition = .20, $t(104)$ = 2.01, $p < .05$). Simple slopes analysis showed a trend ($p =$

.13) indicating that actors with higher social anxiety communicated less during

conflict than during support (see Figure 3). There was a second significant

interaction between social anxiety and condition in predicting personal information

from the perspective of the objective rater (β social anxiety X condition = 0.24, $t(104)$

= 2.44, $p < .05$). Simple slopes analysis confirmed that social anxiety predicted

sharing less personal information in the conflict condition but it had no relationship

with personal information in the support condition (See Figure 4).

Social Skills Inventory

Next, we examined ratings on the SSI (See Table 7).

Main effects of gender and condition: Main effects of gender indicate that men

gestured more (β gender = -0.25, $t(101)$ = -2.18, $p = .05$) and women initiated

conversation more (β gender = 0.19, $t(101)$ = 2.55, $p < .05$). Actors in the support

condition smiled less (β condition =- 0.17, $t(104)$ = -2.88, $p < .01$), nodded their heads

less (β condition = -0.09, $t(104)$ = -2.23, $p < .05$), and emitted fewer "guggles" (β

Figure 3. Condition Moderates the Relationship between the Actor's Social Anxiety and Level of Communication

Figure 4. Condition Moderates the Relationship between Social Anxiety and the Amount of Personal Information Shared from the Perspective of the Objective Rater

Table 7. Social Skills Inventory

	Smile	Guggle	Head Nod	Gesture	Initiation Conver	Volume	Speech Amt
Gender				(-)*	(+)*		
Condition	(-)**	(-)*	(-)*				
Social Anxiety (Actor)							
Social Anxiety (Partner)	(+)*						
Social Anxiety X Gender							
Social Anxiety (Actor) X Social Anxiety (Partner)							
Social Anxiety X Condition		*	**				
Social Anxiety X Gender X Condition	*						**

Note. N = 103-107.* *p* < .05, ** *p* < .01. Plus (+) and minus (-) signs indicate the direction of the slope in the case of main effects. Social Anxiety = Square root of total score on SIAS-S; Gender was dummy coded (0=male; 1=female) as was condition (0=conflict; 1=support).

condition = -0.10, $t(104)$ = -2.01, $p < .05$) than they did in the conflict condition.

Social Anxiety: Counter to hypotheses, there were no main effects of social anxiety in predicting any SSI items. However, unexpectedly, participants whose *partners* were higher in social anxiety smiled more (β social anxiety partner = 0.12, $t(101)$ = 2.69, $p < .01$).

Counter to hypotheses, there were two instances in which social anxiety was associated with less communication in the support condition compared to the conflict condition. First, condition moderated the association between social anxiety and guggles (guggles: β social anxiety X condition = -0.06, $t(104)$= -2.23, $p < .05$). Simple slopes analyses showed that social anxiety was associated with fewer guggles in the support condition than in the conflict condition, although neither of these relationships were significant (see Figure 5). Another 2-way interaction between social anxiety and condition demonstrated that social anxiety predicted less head nodding in the *support* condition than in the conflict condition (head nodding: β social anxiety X condition = -0.10, $t(101)$ = -4.02, $p < .001$). Simple slopes analysis revealed a positive relationship between social anxiety and head nodding during conflict but no relationship between social anxiety and head nodding during the support condition (see Figure 6).

Further, there was a significant 3-way interaction between gender, condition, and social anxiety in predicting smiling, and another in predicting the amount of speech (smiling: β social anxiety X condition X gender = 0.17, $t(104)$ = 2.29, $p < .05$; amount speech: β social anxiety X condition X gender = 0.11, $t(104)$ = 2.69, $p < .01$). We divided our sample by gender and examined the social anxiety by condition

Figure 5. Condition Moderates the Relationship between the Actor's Social Anxiety and Guggles

Figure 6. Condition Moderates the Relationship between the Actor's Social Anxiety and Head Nodding

interaction among men and women separately for each dependent variable. Higher

social anxiety was associated with smiling less in the support condition in

comparison to the conflict condition among men but not women (for men: β social

anxiety X condition = -0.12, $t(46)$ = -2.38, $p < .05$; for women: β social anxiety X

condition = 0.05, $t(57)$ = 0.94, *n.s.).* The simple slope of the relationship between

social anxiety and decreased smiling among men did not reach significance,

however (see Figure 7).

Social anxiety was associated with talking *less* in the conflict condition among

women only (among women: β social anxiety X condition = 0.08, $t(57)$ = 2.37, $p < .05$;

among men: β social anxiety X condition = -0.02, $t(46)$ = -1.22, *n.s*;). Simple slope

analyses revealed that the relationship between social anxiety and talking less

during conflict among women was marginally significant (see Figure 8).

Positive and Negative Communication Behavior

Due to the low frequency of certain types of behavior, we were limited in the

number of behaviors we could assess via the RMICS. Overall, we were able to assess

distress-maintaining attributions, hostility, dysphoric affect, acceptance, self-

disclosure, humor, and constructive problem discussion. Table 8 summarizes our

findings.

Main effects of gender and condition: There was a main effect of gender such

that women exhibited more dysphoric affect than men (β gender = 0.41, $t(101)$ = 2.91,

$p < .01$). Further, actors exhibited more self-disclosure in the support condition (β

condition = 1.55, $t(104)$ = 4.09, $p < .001$) and more hostility and distress-maintaining

attributions in the conflict condition (hostility: β condition = -1.03, $t(104)$ = -3.28, $p <$

Figure 7. Condition Moderates the Relationship between the Actor's Social Anxiety and Smiling among Men

Figure 8. Condition Moderates the Relationship between the Actor's Social Anxiety and Amount of Speech among Women

Table 8. Positive and Negative Communication Behaviors as Measured by the RMICS

	DA	HO	DY	AC	SD	HM	PD	OT
Gender			(+)**					
Condition	(-)**	(-)**			(+)**			
Social Anxiety (Actor)						(-)**	(+)**	
Social Anxiety (Partner)								
Social Anxiety X Gender							*	
Social Anxiety (Actor) X Social Anxiety (Partner)								
Social Anxiety X Condition								
Social Anxiety X Gender X Condition						**	*	

Note. N = 103-107.* $p < .05$, ** $p < .01$. Plus (+) and minus (-) signs indicate the direction of the slope in the case of main effects. DA = Distress-Maintaining Attribution; HO = Hostility; DY = Dysphoric Affect; AC = Acceptance; SD = Self-Disclosure; HM = Humor; PD = Problem Discussion; OT = Other. Social Anxiety = Square root of total score on SIAS-S; Gender was dummy coded (0=male; 1=female) as was condition (0=conflict; 1=support).

.01; distress-maintaining attributions: β condition = -0.25, $t(104)$ = -2.99, $p < .01$).

 Social Anxiety: Recall that we hypothesized that actors with higher social anxiety would engage in more negative behavior, particularly during the conflict condition. There was no evidence to support this hypothesis among the restricted set of behaviors we could examine. However, social anxiety did predict using *less humor* generally (β social anxiety = -0.48, $t(101)$ = -2.47, $p < .05$). A significant 3-way interaction between gender, social anxiety and condition was found (β social anxiety X gender X condition = 1.18, $t(104)$ = 2.66, $p < .01$). We divided our sample by gender and examined the social anxiety by condition interaction among men and women separately. Higher social anxiety was associated with less use of humor in the support condition in comparison to the conflict condition among men but not women (for men: β social anxiety X condition = -0.73, $t(46)$ = -2.09, $p < .05$; for women: β social anxiety X condition = 0.45, $t(57)$ = 1.64, $p = .11$). Simple slopes analysis confirmed that relationship between social anxiety and less use of humor among men was significant in the support condition but not the conflict condition (see Figure 9).

 Social anxiety was positively associated with constructive problem discussion (β social anxiety = 0.71, $t(101)$ = 3.30, $p < .01$). A two-way interaction between social anxiety and gender (β social anxiety X gender = -0.82, $t(101)$ = -1.97, $p = .05$) indicated that this effect was particularly pronounced among men. Further, a 3-way interaction between social anxiety, gender, and condition (β social anxiety X gender X condition = -1.47, $t(104)$ = -2.29, $p < .05$) revealed that, among men, the

Figure 9. Condition Moderates the Relationship between the Actor's Social Anxiety and Use of Humor among Men

effect was most pronounced in the support condition. We divided our sample by gender and examined the social anxiety by condition interaction among men and women separately. Higher social anxiety was associated with more problem discussion in the support condition in comparison to the conflict condition among men but not women (for men: β social anxiety X condition = 0.94, $t(46)$ = 2.21, $p <$ .05; for women: β social anxiety X condition = -0.55, $t(57)$ = -1.12, $p = .26$; see Figure 10). Simple slopes analyses confirmed that social anxiety was associated with increased problem discussion in the support condition only. We found no additional relationships between social anxiety and any other communication behaviors.

Conversation Outcomes

Recall that conversational outcomes were measured in two ways. First, we used the final item of the PCQ to gauge the level of satisfaction with the conversation for the actor and the partner. Second, we calculated the difference between how close partners felt immediately before and after each conversation (positive scores on this item indicate increased feelings of closeness after the conversation). A summary of findings is presented below in Table 9.

Main effects of gender and condition: There was a main effect of condition indicating that partners felt closer to actors after the support condition in comparison to the conflict condition (β condition = 0.32, $t(106)$ = 2.88, $p < .01$). Actors, in contrast, did not demonstrate differences in feelings of closeness based on condition. These non-reciprocal results may have been influenced by the non-parallel nature of the two conditions between partners.

Figure 10. Condition Moderates the Relationship between the Actor's Social Anxiety and Use of Problem Discussion Among Men

Table 9. Conversation Outcomes

	Satisfaction		IOS Change	
	Actor	Partner	Actor	Partner
Gender				
Condition				(+)**
Social Anxiety (Actor)				(+)**
Social Anxiety (Partner)				
Social Anxiety X Gender				
Social Anxiety (Actor) X Social Anxiety (Partner)				*
Social Anxiety X Condition				
Social Anxiety X Gender X Condition				

Note. N = 103-107.* p < .05, ** p < .01. Plus (+) and minus (-) signs indicate the direction of the slope in the case of main effects. IOS Change = Difference in rating on the Inclusion of Other in the Self Scale taken before and after each conversation; Social Anxiety = Square root of total score on SIAS-S; Gender was dummy coded (0=male; 1=female) as was condition (0=conflict; 1=support).

Social Anxiety: In direct contradiction of our hypotheses, social anxiety of the actor predicted increased feelings of closeness by partners, irrespective of condition (β social anxiety = 0.24, $t(99)$ = 2.48, $p < .05$). There was also an interaction between actor and partner social anxiety such that this effect lessened when the partner was also socially anxious (β social anxiety actor X partner = -0.06, $t(99)$ = -2.44, $p < .05$). Simple slopes analysis revealed that this relationship was significant when the partner was both high and low in social anxiety (see Figure 11). Counter to hypotheses, social anxiety had no influence on the level of satisfaction with conversations as assessed by either partner. The significance of results remained the same when relationship satisfaction was included in the model.

Emotions

Our final set of analyses examined the emotional experience of actors and partners during each conversation. Tables 10 and 11 below summarize results pertaining to actors and partners, respectively. In our analysis of emotion, we ran two models: the original model and a second, controlling for relationship satisfaction of both partners. Below, we report results from the latter model but note three cases in which the model had been significant prior to inclusion of relationship satisfaction and became either marginally significant or did not reach significance after relationship satisfaction was included. To streamline the report, we summarize results related to main effect of gender, condition, and relationship satisfaction, and refer the reader to Appendix F for specific statistics.

Main effects of gender and condition: Being female predicted feeling more embarrassment and sadness among actors and more disgust among partners. As

Figure 11. Partner Social Anxiety Moderates the Relationship between the Actor's Social Anxiety and Feelings of Closeness by Partner toward Actor

Table 10. Emotions Experienced by Actor during Conversations

	positive emotions	angry	ashamed	scared	disgust	embarrassed	interested	love	proud	sad	contemptuous	sympathy
DES Item Number:	POSA	2A	3A	5A	7A	8A	12A	13A	14A	16A	17A	20A
Gender						(+)**				(+)**		
Condition		(-)*		(+)**		(+)**	(-)*	(+)*				(-)*
Social Anxiety (Actor)			(+)*			(+)**	(+)*					
Social Anxiety (Partner)						(+)*					(-)*	(+)*/ns
Relationships Satisfaction (Actor)	(+)**							(+)**				
Relationship Satisfaction (Partner)												
Social Anxiety X Gender						(+)**					(-)*	
Social Anxiety (Actor) X Social Anxiety (Partner)						(-)**					(+)*	
Social Anxiety X Condition	(-)*/†		(+)**	(+)*					(-)*/†			
Social Anxiety X Gender X Condition												

Note. N = 103-107. * $p < .05$, ** $p < .01$. Plus (+) and minus (-) signs indicate the direction of the slope in the case of main effects. POSA = Composite of positive emotions on the DES for Actor. Social Anxiety = Square root of total score on SIAS-S; Gender was dummy coded (0=male; 1=female) as was condition (0=conflict; 1=support). Findings for contempt are marked in grey because they became nonsignificant when the sole outlier was removed. Results represent analyses in which relationship satisfaction was included in the model with the exception of those with a forward slash. In such cases, level of significance without relationship satisfaction is presented before the slash and with relationship satisfaction after. Relationship satisfaction was measured by the Dyadic Adjustment Scale.

Table 11. Emotions Experienced by Partner during Conversation

	positive emotions	angry	disgust	interested	love	sad	contemptuous	sympathy
	POSB	2B	7B	12B	13B	16B	17B	20B
Gender			(+)*					
Condition		(-)**		(+)**	(+)**			(+)**
Social Anxiety (Actor)					(+)*			(+)*
Social Anxiety (Partner)								
Relationships Satisfaction (Actor)					(+)**			
Relationship Satisfaction (Partner)					(+)**			
Social Anxiety X Gender								
Social Anxiety (Actor) X Social Anxiety (Partner)								
Social Anxiety X Condition			(+)*					
Social Anxiety X Gender X Condition								

Note. N = 103-107. * $p < .05$, ** $p < .01$. Plus (+) and minus (-) signs indicate the direction of the slope in the case of main effects. POSB = Composite of positive emotions on the DES for partner. Social Anxiety = Square root of total score on SIAS-S; Gender was dummy coded (0=male; 1=female) as was condition (0=conflict; 1=support).

touched upon previously, there were several main effects of condition. During the conflict condition, actors felt more anger, interest, and sympathy, whereas they felt more fear, embarrassment, and love during the support condition. Partners similarly felt more anger during the conflict condition and more interest, love, and sympathy during the support conversation. Greater relationship satisfaction of actors predicted that actors experienced more positive emotion and love and that *their partners* experienced more love. Greater relationship satisfaction of *partners* similarly predicted that partners experienced more love, but it did not predict the experience of more love among actors.

Social Anxiety: As expected, actors higher in social anxiety reported feeling more embarrassed (β social anxiety = 1.17, $t(96) = 3.62$, $p < .001$). A 2-way interaction between gender and social anxiety and subsequent simple slopes analysis revealed that this effect was significant among women only (β social anxiety X gender = 0.61, $t(96) = 2.88$, $p < .01$; see Figure 12). Further, social anxiety of one's *partner* predicted increased embarrassment in the actor (β social anxiety partner = 0.72, $t(96) = 2.46$, $p < .05$). A two-way interaction between actor and partner social anxiety revealed that the association between social anxiety and embarrassment intensified if the partner was lower in social anxiety (β social anxiety (Actor) X Social Anxiety (Partner) = -0.22, $t(96) = -3.07$, $p < .01$; See Figure 13). Social anxiety also predicted feeling more shame overall (β social anxiety = 0.72, $t(96) = 2.46$, $p < .05$).

Unexpectedly, actors higher in social anxiety reported experiencing *more* interest or curiosity (β social anxiety actor = 0.91, $t(96) = 2.00$, $p < .05$). Further,

Figure 12. Gender Moderates the Relationship between the Actor's Social Anxiety and Feelings of Embarrassment

Figure 13. Social Anxiety of the Partner Moderates the Relationship between the Actor's Social Anxiety and Feelings of Embarrassment

actors with *partners* higher in social anxiety experienced *more* sympathy when relationship satisfaction was not included in the model (β social anxiety partner = 0.70, $t(100)$ = 2.01, $p < .05$) and *less* contempt (β social anxiety actor = -0.12, $t(94)$ = -2.10, $p < .05$), although this later effect became nonsignificant when the sole outlier was removed.

We examined reciprocal emotions among partners to see if the effects of having a socially anxious partner were replicated (in this case, the partner is the "actor"). Although the results were not identical, there was some confirmatory evidence that as a partner's social anxiety increases, so do positive feelings. Specifically, social anxiety of *actors* predicted that *partners* experienced more sympathy (β social anxiety actor = 0.69, $t(95)$ = 1.99, $p < .05$) and also more love (β social anxiety actor = 0.74, $t(95)$ = 2.26, $p < .05$).

Recall that our hypotheses broadly predicted that the conflict condition would be the most problematic for socially anxious individuals. Contradicting this prediction, we found a series of interactions demonstrating that social anxiety was associated with more negative and less positive emotion in the *support* condition. Condition moderated the relationship between social anxiety and experiencing shame, such that this effect intensified in the support condition (β social anxiety X condition = 0.42, $t(103)$ = 2.60, $p = .01$). Simple slopes analyses revealed that the relationship was significant in the support condition only (see Figure 14).

Likewise, a social anxiety by condition interaction revealed that social anxiety was associated with experiencing more fear in the support condition (β social anxiety X condition = 0.27, $t(103)$ = 2.12, $p < .05$). Simple slopes analysis revealed that the

Figure 14. Condition Moderates the Relationship between the Actor's Social Anxiety and Feelings of Shame

relationship was significant in the support condition only (see Figure 15).

Condition also moderated the relationship between social anxiety and feelings of pride[3] (β social anxiety X condition = -0.37, $t(105)$ = -2.06, $p < .05$). Simple slopes analysis demonstrated that social anxiety predicted feeling less pride in the support condition at a significant level, whereas it predicted feeling less pride only at a marginally significant level in the conflict condition (see Figure 16). Further, condition moderated the relationship between social anxiety and positive feelings such that social anxiety was associated with feeling fewer positive emotions in the support condition[4] (β social anxiety X condition = -0.25, $t(105)$ = -2.06, $p < .05$), although simple slopes were not significant (see Figure 17).

Finally, overall, there was only one social anxiety by condition interaction in predicting partner emotions. Nevertheless, this one effect followed the pattern established that the support condition was associated with more negative emotions generally: social anxiety was associated with *partners* experiencing disgust in the support condition more so than in the conflict condition (β social anxiety X condition = 0.22, $t(104)$ = 2.10, $p < .05$). Simple slopes analyses revealed that social anxiety was significantly associated with feelings of disgust by one's partner in the support condition only (see Figure 18). Overall, results consistently demonstrated that social anxiety is associated with more emotional difficulty in the support condition in comparison to the conflict condition.

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[3] This result was significant when relationship satisfaction was not included in the model; it became marginally significant when relationship satisfaction was included (p = .08).
[4] This result was significant when relationship satisfaction was not included in the model; it became marginally significant when relationship satisfaction was included (p = .07).

Figure 15. Condition Moderates the Relationship between the Actor's Social Anxiety and Feeling Scared

Figure 16. Condition Moderates the Relationship between the Actor's Social Anxiety and Feeling Pride

Figure 17. Condition Moderates the Relationship between the Actor's Social Anxiety and Experiencing Positive Emotions

Figure 18. Condition Moderates the Relationship between the Actor's Social Anxiety and Feelings of Disgust by one's Partner

Mediational Analyses

Mediational analyses were contingent upon finding robust connections between social anxiety and poor conversation outcomes and/or negative behavior. Because this was not found, mediational analyses were not warranted.

CHAPTER 4

DISCUSSION

Overview

Interpersonal impairment is one of the most troubling difficulties faced by

socially anxious people. Research findings suggest that the maintenance of healthy

intimate relationships promotes well-being, reduces loneliness, and provides a

sense of connection (Glenn, 1975; Holt-Lunstad et al., 2008; Montgomery et al.,

1991). Meanwhile, socially anxious individuals have specific trouble in such

relationships, as they are less likely to date and marry, more likely to divorce, and

report impairment within their existing relationships (Schneier et al., 1994;

Montgomery et al., 1991; Wittchen & Fehm, 2001). To date, little research has

uncovered the specific processes that contribute to relationship impairment for

socially anxious individuals.

The current study aimed to clarify specific problems socially anxious

individuals have communicating with their romantic relationship partners. Past

research had suggested that socially anxious individuals report that they experience

lower levels of emotional intimacy, avoid conflict, and have trouble expressing and

asserting themselves with close others (Cuming & Rapee, 2010; Darcy et al., 2005;

Sparrevohn & Rapee, 2009). Further, there was some evidence that socially anxious

individuals may have particular difficulty managing anger and navigating conflict

(Erwin et al., 2003; Wenzel et al., 2005). However, only one behavioral study

(Wenzel et al., 2005) had found significant differences in how those high and low in

social anxiety actually communicated with a romantic partner, leaving many questions about the nature of the impairment. Further, issues of gender, partner match on level of social anxiety, and effects on one's partner had not been examined.

We sought to target specific conversational contexts that would be most problematic for socially anxious individuals and to examine the kinds of behaviors that present the most difficulty. We asked participants, ranging in their levels of social anxiety, to bring their intimate partners to the laboratory to complete one conversation pertaining to conflict and another pertaining to a personal problem of the designated participant (the actor). Both conversations were designed to provide a context in which being expressive and engaged with one's partner would be appropriate and helpful, but the conflict conversation alone was included to target difficulty asserting oneself and expressing anger. The discussion that follows reviews the main study hypotheses and findings, their implications, strengths and limitations of the study, and directions for future research.

Summary of Hypotheses and Results

Our central hypothesis was that social anxiety would be associated with lower levels of engagement and expressiveness during both conversations, as evidenced by fewer smiles and other micro-behaviors associated with engagement, and as indicated by subjective ratings made by the self, the partner, and objective coder when asked to describe their reaction to the conversation more globally. We also hypothesized that those higher in social anxiety would demonstrate more negative communication behaviors, such as expressing hostility or withdrawing from one's partner.

Further, we hypothesized that the *conflict* condition would be most problematic for socially anxious individuals. Here, we predicted that socially anxious individuals would be particularly unexpressive, and when they were expressive, they would be most likely to demonstrate negative communication behavior such as expressing hostility or withdrawing from their partners. Similarly, we predicted that social anxiety would be associated with experiencing more negative emotions and poor relationship outcomes, and again, that these effects would intensify in the conflict condition.

Results provided mixed support for our hypotheses. We found some evidence that socially anxious individuals were less engaged and expressive when speaking with their intimate partners; however, these findings were limited to a few aspects of communication and they were noticed by a limited audience. For example, actors higher in social anxiety observed themselves to be less communicative; this effect was more likely to be detected among partners who were low in social anxiety themselves. Actors and objective coders agreed that those higher in social anxiety were less assertive overall, but partners did not agree. Furthermore, there was no main effect of social anxiety in predicting micro-behaviors such as smiling and nodding. An unexpected finding was that actors smiled more and expressed emotions that were more positive as their *partners'* level of social anxiety increased.

Our assessment of the presence of positive and negative communication behaviors was hindered by a limited range of behaviors coded and the near absence of our some critical behaviors, such as withdrawal. For the behaviors that could be

examined, socially anxiety failed to predict negative communication behavior, although it was associated with less use of humor and more problem discussion.

Further, the majority of conversational outcomes were not influenced by social anxiety, but in the one instance that it did, it was in a direction counter to hypotheses. Specifically, partners of those higher in social anxiety reported feeling closer to their partners after conversations when compared to how they felt immediately prior to them.

Emotionally, socially anxious individuals felt more shame, embarrassment (especially among women), and, unexpectedly, more interest during conversations, regardless of condition. They did not differ on other emotions of central interest to the study such as anger. Unexpectedly, the higher one's partner was in social anxiety, the more likely one was to experience feelings of sympathy and love during conversations.

Consistent with hypotheses, condition moderated the relationship between social anxiety and outcomes. In some cases, this was in the predicted direction, that is, there was evidence of a particular problem with conflict. For example, as assessed by objective raters, social anxiety was associated with revealing less personal information (for both genders), and with talking less (for women only), during conflict but not during support conversations.

However, in several other instances, outcomes were in a direction *counter* to our hypotheses. Overall, the conversations in which actors were asking their partners for *support* appeared to be more challenging for those with high social anxiety, particularly when emotional experiences are considered. For example, simple slopes

analyses revealed that the association between social anxiety and feelings of shame, humiliation, or disgrace were significant only during the support condition. Social anxiety was also associated with feeling more fear and less pride during the support condition exclusively. Further, the association between social anxiety and decreased use of humor, as well as increased use of problem solving behavior, was intensified in the support conversation among men. Finally, although partners of those higher in social anxiety were no more likely to feel disgust (or any other negative emotion) overall, there was a condition by social anxiety interaction suggesting that partners of those higher in social anxiety felt more disgust during the support conversation.

Support Seeking: A specific problem for socially anxious persons?

The findings of the study suggest that asking intimate partners for help, and being vulnerable in doing so, may be a particular challenge for socially anxious individuals, even more so than engaging in conflict. Although this was counter to our hypotheses, in retrospect, the finding is not surprising. Socially anxious individuals are often understood to hold negative beliefs about themselves and to be vulnerable to feelings of shame and self-doubt (Moscovitch, 2009; Moscovitch, Orr, Rowa, Reimer & Antony, 2009). Having to discuss a personal problem, even with a close partner, may ignite concerns of deep internal flaws and perhaps exacerbate a sense of shame.

Attachment theory can provide another framework in which to interpret these results. Attachment theory holds that early experiences with caregivers foster the development of internal working models, or ways that an individual understands him or herself in relation to close others (Bowlby, 1988). People are understood to carry such perceptions and related behavioral patterns with them through life, with one's

adult intimate relationships serving as the primary contexts for attachment-related

behavior (Hazan & Shaver, 1987). The majority of adults have a secure attachment

style, generally trusting that others will be there for them when they need them and

feeling comfortable receiving and giving love. In contrast, about a third of adults can

be characterized by an insecure attachment style, which manifests as anxiety about

close relationships, fear that others will not be there when needed, or ambivalence

about becoming close to others at all (Hazan & Shaver, 1987).

Prior research has demonstrated that, although the majority of healthy adults

have secure attachment style, the majority of adults with social anxiety disorder can

be characterized by an insecure adult attachment style (Eng, Heimberg, Hart,

Schneier, Liebowitz, 2001). One implication of this finding is that socially anxious

individuals may be less likely to feel comfortable depending on others for support

and trusting that others will be there for them when needed. The experimental

condition of support seeking within the current study may have set the stage for

such a scenario.

The finding that partners of socially anxious actors felt more disgust during

the support condition was difficult for us to interpret. It may be that partners detect

specific difficulties in their socially anxious partners in eliciting support and have a

negative response. Such a process may become reciprocal. As socially anxious

individuals seek support, and have negative emotional experiences doing so,

negative emotional reactions may be elicited in their partners. Arriving to the

situation with insecure attachment, and being particularly vulnerable to cues of

rejection, socially anxious individuals may delve deeper into a sense of shame and self-doubt, which may elicit additional negative feelings on behalf of the partner.

Finally, the increased negative emotions experienced by socially anxious individuals during the support condition may be seen as the product of greater underlying distress or more intense personal problems associated with higher social anxiety. The experimental condition asked individuals to discuss a personal problem, with issues of mental health, career performance, or academic problems all possible topics. As social anxiety is associated with greater impairment in these and other areas, it may be that the experimental condition provided a different experience for those with higher social anxiety, who may have more serious or pervasive problems to discuss in the first place. Hence, the increased negative emotionality may be due to the nature or severity of the pre-existing personal problems discussed rather than the process of discussing personal problems with one's partner. In hindsight, our research design would have been improved if we included a way to standardize or control for the seriousness of the problem discussed. Follow-up research might examine the nature and intensity of personal problems discussed by those with higher and lower social anxiety.

Conflict: Not a Problem?

Although the current study highlights the difficulty socially anxious individuals have communicating with a partner while seeking support rather than when engaging in conflict, there remains some evidence that socially anxious individuals have trouble communicating during conflict as well. Specifically, social anxiety was associated with revealing less personal information and talking less

during conflict. This finding is consistent with past research in which socially

anxious individuals reported avoiding conflict. Further, social anxiety predicted

lower levels of assertiveness in both conditions, and it seems likely that there would

be important implications during times of conflict as a result.

Further, two measurement failures of the study impaired our ability to fully

assess difficulties with conflict. Our observer rating of whether actors approached

or avoided conflict was unreliable (see more discussion of this under limitations).

Further, we were unable to study one of the key forms of negative behavior,

withdrawal, which we hypothesized would be associated with social anxiety during

conflict. As such, the current study was not able to study this issue as thoroughly as

we would have liked. Future research should continue to examine specific

challenges resolving conflict, as there are multiple indications in the literature that

this may remain a problem for socially anxious individuals.

Partner Perception

An important set of findings relates to how the level of social anxiety of one's

partner influenced one's own behavior and emotions. Overall, rather than eliciting

frustration, anger, or contempt, socially anxious partners appeared to elicit positive

behavior and emotions. Actors whose partners had higher levels of social anxiety

smiled more and were rated as expressing more positive emotion by objective raters.

Actors and partners alike whose partner was higher in social anxiety reported that

they experienced more sympathy. Further, partners of actors higher in social anxiety

reported feeling more love and feeling closer to them after conversations compared to

how they felt immediately prior. At the same time, actors with highly socially anxious

partners reported being less assertive and revealing less personal information.

There are several possible ways to interpret these data. A straightforward interpretation is that there are appealing aspects to talking with someone who is socially anxious and partners notice and appreciate this. It could be that socially anxious individuals act in a more humble, self-effacing, or compliant manner, and that this engenders sympathy, concern, or love in their partners. It may be that socially anxious individuals are more in touch with their own imperfections, and this makes them easier to relate to when they do open up and talk. Further, couples involving socially anxious individuals may be less likely to have frequent conversations in the first place. Having the opportunity to do so in a laboratory setting may be relatively more valuable for these couples, and it may engender feelings of increased closeness. For other couples who may talk more frequently, the difference in closeness before and after the laboratory-based conversation may be less pronounced.

Another possibility is that partners of highly socially anxious individuals exude positivity in an attempt to engage socially anxious individuals, who may be less expressive and engaged generally (based on past research). Partners' increased frequency of smiling and conveying positive emotion may have the effect of minimizing this deficit and foster reciprocal emotional expression, possibly enhancing communication, feelings of connection, and intimacy. As such, partners may be reinforced for their efforts to convey positive emotion.

Finally, a third, and we think likely, interpretation is that people with a socially anxious partner take a careful approach to their communication, and one that may be like "tiptoeing" around their partners. They may try to infuse the conversation with

positivity, refrain from being "too" assertive, and not sharing "too" much. Such individuals likely have a sense that their socially anxious partners are sensitive to criticism and vulnerable to negative mood states. Sensing this, partners may intentionally or not provide subtle behavioral cues that the situation is safe, non-threatening, and upbeat. This may be met with more positive conversational outcomes, which would reinforce such behavior on behalf of the partner. Put another way, partners would be serving to regulate some of the negative emotions that may come with their own partners' social anxiety. In addition to being a learned behavior that develops over the course of many conversations, it may be that socially anxious individuals are more likely to select partners who take a more gentle and positive conversational approach in the first place.

If partners of socially anxious individuals do "tiptoe" around their partners, it would be important to examine the long-term implications of such a strategy. On one hand, it may be an adaptive approach that meets the needs of individuals who are sensitive and anxious. However, given the increased risk of divorce and relationship impairment in this population, this behavioral pattern may not be adaptive in the long-run. Such an approach may leave too much room for misunderstandings between partners and risks leaving one or both partners wanting more intimacy and straightforwardness in their relationship.

Gender Effects

The current study found that social anxiety influenced intimate partner communication in both women and men. Although some past studies have found effects solely in women, the current study lends support to the idea that social

anxiety affects communication in men and women alike, although sometimes in different ways. A pronounced gender effect was that social anxiety was especially associated with limited sense of humor and less smiling among men, when seeking support. It may be that seeking support is especially difficult for men with social anxiety, who may already feel a sense of shame and may be less likely than women to discuss personal problems.

We also found that social anxiety was associated with increased use of problem discussion among men, particularly when seeking support. We are hesitant to interpret this result, however. Constructive problem discussion was the most popular type of behavior assigned and may have been a "default" category; a higher score here may reflect less use of humor and possibly other categories as well. Still another interpretation is that social anxiety serves to exacerbate some gender differences that already exist. Past research has documented differences in how men and women communication when problem solving. Men may take an instrumental approach, aiming to give and receive practical advice and solve the problem at hand. In contrast, women often seek to express their feelings and to be understood rather than to develop a specific strategy or solution (Erber and Erber, 2011). It may be that for socially anxious men, a tendency to take an instrumental approach is exacerbated, perhaps because having a logical, problem-oriented discussion, is the safest – or least vulnerable—option. Such a strategy may decrease the chance of having to reveal sensitive personal information or disclose emotional content, which would be likely alternatives when discussing a personal problem.

Sticking to a structured, problem solving approach may be the least risky option for socially anxious men.

Partner Match in Social Anxiety

The current study provides some, but limited, evidence that partner match on level of social anxiety affects communication behavior and related emotional experiences. High social anxiety was associated with feeling more intense levels of embarrassment when partnered with someone who was lower in social anxiety. The same pattern also predicted that partners would rate actors as less communicative. These findings suggest that those with more discrepant levels of social anxiety may have increased difficulty communicating. This interpretation is consistent with a prior finding that individuals who match on high social anxiety are more likely than those who do not to feel close to each other when disclosing personal information (Kashdan & Wenzel, 2005). However, of the many outcomes examined in this study, partner match predicted very few.

Limitations

The current study had several limitations. First and foremost, it relied on a college sample that contained a relatively small proportion of individuals with clinically severe social anxiety. As such, it may be difficult to generalize our findings to populations of interest, most notably adults of various ages who are in committed long-term marriages or partnerships. The average relationship length in our sample was approximately two years. Couples in this stage of relationship development may not have had sufficient time together for some of the behavioral patterns of interest to emerge fully. Further, because only 10% of the sample endorsed very high levels of

social anxiety, our study may have failed to detect interpersonal deficits that arise among those with social anxiety disorder. Additional research that includes individuals who are older in age, who are in longer-term relationships, and who have been clinically diagnosed with social anxiety disorder is needed.

Beyond the limitations associated with the sample we used, we note several additional limitations. First, we developed a measure for the study (the Post-Conversation Questionnaire) for which we have no prior psychometric information. One item, which measured the extent to which individuals avoided versus approached conflict, had particularly poor reliability. Upon closer examination of the item, we suspect that its wording may have been vague. The item did not differentiate between contexts that do and do not involve conflict. It may be unclear how to rate a participant who is in the midst of a conversation that is not conflictual. In this case, the individual is neither avoiding nor approaching conflict. Ideally, we would have established the absolute level of conflict separately from ratings of how avoidant the participant was with reference to it.

A second case of measurement limitation involves the Social Skills Inventory. Our study was the first replication study of this methodology; it has only been used once before, by the system creator (Wenzel et al., 2005). Our results differ considerably from those of the original study, as, in contrast to the original study, we failed to detect much impairment associated with social anxiety. We used this system with minimal instruction, based solely on guidelines gleaned from the original article. It may have been that more detail was needed to implement this coding system properly. We also note that some of the categories were so broad as

to not capture some subtleties that may have existed. For example, for speech loudness, there were only three categories – whisper, normal, or loud; almost all of our couples were characterized as using normal loudness. If there had been higher calibration, we may have been able to detect finer differences.

Another necessary but important limitation in the design of the study involves the use of video recording. To abide by informed consent and ethical standards, we needed to inform participants that they would be videotaped during conversations in advance. This likely served to increase anxiety, especially among participants with higher levels of social anxiety. As such, some of the results we found and interpreted as resulting from interpersonal, dyadic anxiety may have resulted instead from the anxiety associated with being on camera. Conversations occurring in real life with one's partner do not include such stressors, of course.

Conclusion

The current study makes an important contribution to the literature. To date, few studies have used objective methods to examine how couples' behavior is influenced by social anxiety. The current study makes further contributions to the literature by including both men and women in the sample, examining partner social anxiety, and analyzing behavior and emotion from multiple perspectives. Our research hopes to inform clinical interventions that can assist socially anxious individuals communicate effectively with their partners during times of support seeking and conflict. Ultimately, we hope this will help them maintain healthy, enduring, and supportive romantic relationships.

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APPENDIX A

SOCIAL SKILLS INVENTORY: BEHAVIORAL DEFINITIONS

Social Skills Inventory

All behavioral definitions, with the exception of "amount of speech," referenced from

Wenzel et al. (2005).

- **Smile**: an instance in which an individual's teeth are visible, the sides of his or her
  mouth are turned up, and his or her eyes are slanted.

- **Guggle**: an utterance such as "uh-huh," which indicates an individual's attentiveness
  toward a speaker and encourages continued participation in conversation.

- **Head nods**: when participants bow their head downward and then upward in either
  a slow or a quick motion in a manner that suggests a listening response.

- **Gesture**: a nonverbal tactic to emphasize or make more graphic a verbal expression,
  including hand movements and eye rolling.

- **Touching**: an act that sends a message of encouragement, expresses care and
  concern, and/or shows emotional support and understanding and is coded when
  participants patted their partner's leg, back, or hand in a friendly manner.

- **Initiation of conversation**: the introduction of a topic of conversation by asking a
  question.

- **Eye contact**: rated according to the following scheme: 0 = no eye contact; 1 = a little
  eye contact, but generally inattentive and/or avoidant; 2 = some eye contact and
  some instances of being inattentive and/or avoidant; and 3 = normal, effective, and
  engaged eye contact.

- **Speech loudness**: 0 = whisper, 1 =normal speech loudness, and 2 = excessive
  speech loudness.

- **Amount of speech:** 0 = no or very little speech; 1 = speech slightly lower than
  expected; 2 = normal amounts of speech; 3 = excessive speech.

APPENDIX B

POST-CONVERSATION QUESTIONNAIRES

Post-conversation Questionnaire (actor version)

Please answer the following questions regarding the conversation you just had with your romantic partner. For each item, circle a number between 1 and 7. You can use any number between 1 and 7, but please use only whole numbers. Please do not share your answers with your partner.

1.) How much personal information did you share with your partner?

1	2	3	4	5	6	7
None			shared some			shared a lot

2) How communicative were you?

1	2	3	4	5	6	7
Not at all			Somewhat communicative			Extremely communicative

3) How assertive were you?

1	2	3	4	5	6	7
Not at all			Somewhat communicative			Extremely assertive

4) To what extent did you approach vs. avoid conflict?

1	2	3	4	5	6	7
avoided conflict a lot	avoided conflict moderately	avoided conflict mildly	Neither held back nor approached conflict	approached conflict mildly	approached conflict moderately	fully approached conflict

5) To what extent did you express positive emotions (contentment, joy, curiosity?)

1	2	3	4	5	6	7
expressed no positive emotions			expressed some positive emotions			expressed a lot of positive emotions

6) To what extent did you express anger?

1	2	3	4	5	6	7
expressed no anger			expressed some anger			expressed a lot of anger

7) To what extent did you express negative emotions other than anger (sadness, shame, guilt, anxiety, fear, hostility)

1	2	3	4	5	6	7
expressed no negative emotions			expressed some negative emotions			expressed a lot of negative emotions

8) How satisfying was the conversation for you?

1	2	3	4	5	6	7
Not satisfying			Somewhat satisfying			Extremely satisfying

9) Is there anything you wish you had done differently during the conversation?

Post-Conversation Questionnaire (partner version)

Please answer the following questions regarding the conversation you just had with your romantic partner. For each item, circle a number between 1 and 7. You can use any number between 1 and 7, but please use only whole numbers. Please do not share your answers with your partner.

1.) How much personal information did your partner share with you?

1	2	3	4	5	6	7
None			shared some			shared a lot

2.) How communicative was your partner with you?

1	2	3	4	5	6	7
Not at all			Somewhat			Extremely communicative

3.) How assertive was your romantic partner?

1	2	3	4	5	6	7
Not at all			Somewhat			Extremely assertive

4.) To what extent did your romantic partner approach vs. avoid conflict?

1	2	3	4	5	6	7
avoided conflict a lot	avoided conflict moderately	avoided conflict mildly	Neither held back nor approached conflict	approached conflict mildly	approached conflict moderately	fully approached conflict

5.) To what extent did your partner express positive emotions (contentment, joy, curiosity?)

1	2	3	4	5	6	7
expressed no positive emotions			expressed some positive emotions			expressed a lot of positive emotions

6.) To what extent did your partner express anger?

1	2	3	4	5	6	7
expressed no anger			expressed some anger			expressed a lot of anger

7.) To what extent did your partner express negative emotions other than anger

(sadness, shame, guilt, anxiety, fear, hostility)

1	2	3	4	5	6	7
expressed no negative emotions			expressed some negative emotions			expressed a lot of negative emotions

8.) How satisfying was the conversation for you?

1	2	3	4	5	6	7
Not satisfying			Somewhat satisfying			Extremely satisfying

9.) Is there anything you wish your partner had done differently during the

conversation?

_____

_____

Post-Conversation Questionnaire (observer version)

Please answer the following questions regarding the conversation between the IP and the RP. For each item, circle a number between 1 and 7. You can use any number between 1 and 7, but use only whole numbers.

1.) How much personal information did the actor share with the partner?

1	2	3	4	5	6	7
None			shared some			shared a lot

2.) How communicative was the actor?

1	2	3	4	5	6	7
Not at all			Somewhat			Extremely communicative

3.) How assertive was the actor?

1	2	3	4	5	6	7
Not at all			Somewhat			Extremely assertive

4.) To what extent did the actor <u>approach vs. avoid</u> conflict?

1	2	3	4	5	6	7
avoided conflict a lot	avoided conflict moderately	avoided conflict mildly	Neither held back nor approached conflict	approached conflict mildly	approached conflict moderately	fully approached conflict

5.) To what extent did the actor express positive emotions (contentment, joy, curiosity?)

1	2	3	4	5	6	7
expressed no positive emotions			expressed some positive emotions			expressed a lot of positive emotions

6.) To what extent did the actor express anger?

1	2	3	4	5	6	7
expressed no anger			expressed some anger			expressed a lot of anger

7.) To what extent did the actor express negative emotions other than anger (sadness, shame, guilt, anxiety, fear, hostility)

1	2	3	4	5	6	7
expressed no negative emotions			expressed some negative emotions			expressed a lot of negative emotions

APPENDIX C

RAPID MARITAL INTERACTION CODING SYSTEM HIERARCHY

Rapid Marital Interaction Coding System Hierarchy

The following hierarchy from the Rapid Marital Interaction Coding System (Heyman & Vivian, 1993) was used to prioritize coding of behaviors.

PA	Psychological Abuse
DA	Distress Maintaining Attribution
HO	Hostility
DY	Dysphoric Affect
WI	Withdrawal
AC	Acceptance
RA	Relationship Enhancing Attribution
SD	Self-Disclosure - Neutral or positive
HM	Humor
PD	Constructive Problem Discussion/Solution
OT	Other (Discussion about the Experimental Task)

APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

1. Gender (circle one): Female Male

2. How long have you been involved in your current relationship?
____ years ____ months

3. Sexual orientation (circle one)
    a. Exclusively heterosexual
    b. Heterosexual, with some homosexual experience
    c. Bisexual
    d. Homosexual, with some heterosexual experience
    e. Exclusively homosexual
    f. Unsure/questioning

4. Marital Status (circle one)
    a. Single (never married)
    b. Married
    c. Separated
    d. Divorced
    e. Widowed

5. Race/ethnicity (circle one)
    a. African/African American
    b. Hispanic/Latino
    c. Asian/Asian American
    d. Caucasian/European American
    e. Native American
    f. Mixed ethnicity
    g. None of the above, please specify

6. Highest level of education completed
    a. Middle School/Junior High
    b. High School
    c. Some college
    d. College
    e. Graduate School

APPENDIX E

PROBLEM INVENTORIES

Couples Problem Inventory

These items are about problems experienced in many relationships. We would like to get some idea of how much of a problem each area is for you and your partner. Circle the number on the rating scale from 0 (not a problem) to 10 (serious problem) that indicates how serious the problem is for your relationship.

	Not A Problem				Somewhat A Problem					Serious Problem	
1. Money	0	1	2	3	4	5	6	7	8	9	10
2. Communication	0	1	2	3	4	5	6	7	8	9	10
3. In-laws	0	1	2	3	4	5	6	7	8	9	10
4. Sex	0	1	2	3	4	5	6	7	8	9	10
5. Religion	0	1	2	3	4	5	6	7	8	9	10
6. Recreation	0	1	2	3	4	5	6	7	8	9	10
7. Friends	0	1	2	3	4	5	6	7	8	9	10
8. Alcohol	0	1	2	3	4	5	6	7	8	9	10
9. Children	0	1	2	3	4	5	6	7	8	9	10
10. Jealousy	0	1	2	3	4	5	6	7	8	9	10
11. Housework	0	1	2	3	4	5	6	7	8	9	10
12. Being Unfaithful	0	1	2	3	4	5	6	7	8	9	10
13. Other	0	1	2	3	4	5	6	7	8	9	10

(specify)_____

Personal Problem Inventory

These items are about problems experienced by many individuals. We would like to get some idea of how much of a problem each area is for you. Circle the number on the rating scale from 0 (not a problem) to 10 (serious problem) that indicates how serious the problem is for you. Personal problems are those that do not directly involve your partner or your partner's family.

		Not A Problem				Somewhat A Problem					Serious Problem
1.	Money	0	1	2	3	4	5	6	7	8	9	10
2.	Work	0	1	2	3	4	5	6	7	8	9	10
3.	School	0	1	2	3	4	5	6	7	8	9	10
4.	Career	0	1	2	3	4	5	6	7	8	9	10
5.	Physical Health	0	1	2	3	4	5	6	7	8	9	10
6.	Mental Well-being	0	1	2	3	4	5	6	7	8	9	10
7.	Friends	0	1	2	3	4	5	6	7	8	9	10
8.	Alcohol or Drugs	0	1	2	3	4	5	6	7	8	9	10
9.	Physical Fitness/ Appearance	0	1	2	3	4	5	6	7	8	9	10
10.	Family	0	1	2	3	4	5	6	7	8	9	10
11.	Spirituality	0	1	2	3	4	5	6	7	8	9	10
12.	Other	0	1	2	3	4	5	6	7	8	9	10

(specify)_____

APPENDIX F

REGRESSION OUTPUT

OUTCOME: PCQ1A (Personal Information as Assessed by Actor)
Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx. d.f.	p
Intercept, γ_{00}	4.25	0.53	7.95	101	<.001
Gender (Actor), γ_{01}	0.26	0.22	1.17	101	.243
Social Anxiety (Actor), γ_{02}	-0.38	0.13	-2.98	101	.004
Social Anxiety (Partner), γ_{03}	-0.50	0.18	-2.85	101	.005
Social Anxiety X Gender, γ_{04}	-0.07	0.17	-0.45	101	.654
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.07	0.04	1.71	101	.09
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.39	0.14	-2.79	104	.006
Social Anxiety (Actor), γ_{11}	-0.10	0.09	-1.14	104	.258
Social Anxiety X Gender, γ_{12}	-0.08	0.17	-0.48	104	.635

Final estimation of variance components

Random Effect	Standard Deviation	Variance Component	d.f.	χ^2	p-value
INTRCPT1, u_0	0.78	0.62	101	240.05	<.001
level-1, r	0.94	0.89			

Statistics for current covariance components model

Deviance = 682.993269

Number of estimated parameters = 2

OUTCOME: PCQ3A (Assertiveness as Assessed by Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.25	0.53	7.95	101	<.001
Gender (Actor), γ_{01}	0.26	0.22	1.17	101	.243
Social Anxiety (Actor), γ_{02}	-0.38	0.13	-2.98	101	.004
Social Anxiety (Partner), γ_{03}	-0.50	0.18	-2.85	101	.005
Social Anxiety X Gender, γ_{04}	-0.07	0.17	-0.45	101	.654
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.07	0.04	1.71	101	.09
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.39	0.14	-2.78	104	.006
Social Anxiety (Actor), γ_{11}	-0.10	0.09	-1.13	104	.258
Social Anxiety X Gender, γ_{12}	-0.08	0.17	-0.47	104	.635

Final estimation of variance components

Random Effect	Standard	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.88	0.78	101	247.62	<.001
level-1, r	1.03	1.07			

Statistics for current covariance components model

Deviance = 723.707015

Number of estimated parameters = 2

OUTCOME: PCQ4A (Approach Conflict as Assessed by Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	df	p
Intercept, γ_{00}	4.71	0.91	5.18	101	<.001
Gender (Actor), γ_{01}	0.27	0.27	1.02	101	.313
Social Anxiety (Actor), γ_{02}	-0.22	0.30	-0.73	101	.468
Social Anxiety (Partner), γ_{03}	-0.23	0.31	-0.76	101	.452
Social Anxiety X Gender, γ_{04}	-0.22	0.19	-1.17	101	.243
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.04	0.08	0.54	101	.591
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.35	0.12	-2.796	104	.006
Social Anxiety (Actor), γ_{11}	-0.12	0.07	-1.675	104	.097
Social Anxiety X Gender, γ_{12}	-0.15	0.14	-1.066	104	.289

Final estimation of variance components

Random Effect		SD	Variance	d.f.	χ^2	p
	INTRCPT1, u_0	1.24906	1.56015	101	475.4307	<.001
	level-1, r	0.91543	0.83801			

Statistics for current covariance components model

Deviance = 738.541674

Number of estimated parameters = 2

OUTCOME: PCQ6A (Express Anger as Assessed by Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	1.39	0.61	2.26	101	.026
Gender (Actor), γ_{01}	0.27	0.20	1.32	101	.190
Social Anxiety (Actor), γ_{02}	-0.22	0.20	-1.06	101	.290
Social Anxiety (Partner), γ_{03}	-0.24	0.18	-1.34	101	.185
Social Anxiety X Gender, γ_{04}	-0.17	0.14	-1.27	101	.209
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.05	0.05	0.91	101	.363
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.56	0.17	-3.338	104	.001
Social Anxiety (Actor), γ_{11}	-0.02	0.09	-0.258	104	.797
Social Anxiety X Gender, γ_{12}	0.35	0.19	1.823	104	.071

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.62	0.39	101	155.98	<.001
level-1, r	1.19	1.43			

Statistics for current covariance components model

Deviance = 738.54

Number of estimated parameters = 2

OUTCOME: PCQ2B (Communicative as Assessed by Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	7.48	0.64	11.71	101	<.001
Gender (Actor), γ_{01}	0.25	0.18	1.38	101	.170
Social Anxiety (Actor), γ_{02}	0.26	0.20	1.30	101	.197
Social Anxiety (Partner), γ_{03}	0.28	0.22	1.29	101	.201
Social Anxiety X Gender, γ_{04}	0.00	0.12	0.03	101	.978
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.11	0.05	-1.97	101	.052
For CONDITION slope, β_1					
Intercept, γ_{10}	0.11	0.11	0.992	104	.323
Social Anxiety (Actor), γ_{11}	-0.09	0.09	-0.908	104	.366
Social Anxiety X Gender, γ_{12}	0.03	0.19	0.162	104	.872

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.69	0.47	101	224.16	<0.001
level-1, r	0.88	0.78			

Statistics for current covariance components model

Deviance = 738.54

Number of estimated parameters = 2

OUTCOME: PCQ5B (Express Positive Emotion as Assessed by Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	6.11	1.05	5.85	101	<.001
Gender (Actor), γ_{01}	0.24	0.30	0.81	101	.422
Social Anxiety (Actor), γ_{02}	0.28	0.33	0.85	101	.397
Social Anxiety (Partner), γ_{03}	0.30	0.31	0.99	101	.325
Social Anxiety X Gender, γ_{04}	-0.01	0.22	-0.06	101	.954
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.10	0.09	-1.20	101	.235
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.44	0.19	-2.284	104	.024
Social Anxiety (Actor), γ_{11}	0.07	0.14	0.495	104	.622
Social Anxiety X Gender, γ_{12}	0.00	0.27	0.015	104	.988

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	1.12	1.26	101	227.84	<0.001
level-1, r	1.41	2			

Statistics for current covariance components model

Deviance = 847.286887

Number of estimated parameters = 2

OUTCOME: PCQ7B (Express Negative Emotion as Assessed by Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	3.16	0.94	3.34	101	.001
Gender (Actor), γ_{01}	-0.08	0.32	-0.24	101	.811
Social Anxiety (Actor), γ_{02}	0.05	0.28	0.19	101	.847
Social Anxiety (Partner), γ_{03}	0.04	0.29	0.14	101	.890
Social Anxiety X Gender, γ_{04}	0.00	0.21	0.01	101	.993
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.01	0.08	-0.07	101	.948
For CONDITION slope, β_1					
Intercept, γ_{10}	0.45	0.19	2.304	104	.023
Social Anxiety (Actor), γ_{11}	0.03	0.11	0.274	104	.785
Social Anxiety X Gender, γ_{12}	0.25	0.22	1.142	104	.256

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.24	1.55	101	258.9432	<.001
level-1, r	1.4	1.98			

Statistics for current covariance components model

Deviance = 857.71

Number of estimated parameters = 2

OUTCOME: PCQO-1 (Personal Information as Assessed by Objective Rater)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	5.35	0.10	53.17	101	<.001
Gender (Actor), γ_{01}	-0.21	0.21	-0.99	101	.324
Social Anxiety (Actor), γ_{02}	-0.04	0.07	-0.52	101	.605
Social Anxiety (Partner), γ_{03}	-0.05	0.09	-0.50	101	.617
Social Anxiety X Gender, γ_{04}	-0.10	0.05	-1.80	101	.075
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.00	0.14	0.03	101	.974
For CONDITION slope, β_1					
Intercept, γ_{10}	0.47	0.17	2.836	104	.005
Social Anxiety (Actor), γ_{11}	0.24	0.10	2.447	104	.016
Social Anxiety X Gender, γ_{12}	0.09	0.21	0.433	104	.666

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.56	0.32	101	145.43	0.003
level-1, r	1.21	1.47			

Statistics for current covariance components model

Deviance = 741.05

Number of estimated parameters = 2

OUTCOME: PCQO-2 (Communicativeness as Assessed by Objective Rater)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	5.30	0.10	54.10	101	<.001
Gender (Actor), γ_{01}	-0.29	0.21	-1.34	101	.183
Social Anxiety (Actor), γ_{02}	-0.02	0.08	-0.27	101	.789
Social Anxiety (Partner), γ_{03}	0.03	0.09	0.29	101	.772
Social Anxiety X Gender, γ_{04}	-0.09	0.06	-1.41	101	.161
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.02	0.15	-0.11	101	.911
For CONDITION slope, β_1					
Intercept, γ_{10}	0.29	0.17	1.753	104	.083
Social Anxiety (Actor), γ_{11}	0.20	0.10	2.011	104	.047
Social Anxiety X Gender, γ_{12}	-0.03	0.21	-0.144	104	.886

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.63	0.4	101	156.31	<.001
level-1, r	1.21	1.46			

Statistics for current covariance components model

Deviance = 746.97

Number of estimated parameters = 2

OUTCOME: PCQO-3 (Assertive as Assessed by Objective Rater)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.28	0.09	45.33	101	<.001
Gender (Actor), γ_{01}	0.11	0.19	0.56	101	.574
Social Anxiety (Actor), γ_{02}	-0.16	0.07	-2.21	101	.030
Social Anxiety (Partner), γ_{03}	-0.09	0.08	-1.09	101	.277
Social Anxiety X Gender, γ_{04}	0.04	0.06	0.73	101	.467
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.02	0.14	-0.17	101	.867
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.31	0.14	-2.198	104	.030
Social Anxiety (Actor), γ_{11}	0.18	0.10	1.753	104	.082
Social Anxiety X Gender, γ_{12}	-0.03	0.21	-0.165	104	.869

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.69	0.47	101	187.24	<0.001
level-1, r	1.057	1.11			

Statistics for current covariance components model

Deviance = 709.44

Number of estimated parameters = 2

OUTCOME: PCQO-4 (Approach Conflict as Assessed by Objective Rater)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.83	0.07	72.71	101	<.001
Gender (Actor), γ_{01}	0.13	0.14	0.94	101	.348
Social Anxiety (Actor), γ_{02}	-0.06	0.05	-1.14	101	.256
Social Anxiety (Partner), γ_{03}	-0.04	0.07	-0.65	101	.518
Social Anxiety X Gender, γ_{04}	-0.01	0.04	-0.17	101	.867
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.10	0.11	-0.87	101	.388
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.27	0.11	-2.392	104	.019
Social Anxiety (Actor), γ_{11}	0.11	0.08	1.433	104	.155
Social Anxiety X Gender, γ_{12}	-0.14	0.16	-0.875	104	.383

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.46	0.21	101	169.48	<.001
level-1, r	0.8	0.64			

Statistics for current covariance components model

Deviance = 586.64

Number of estimated parameters = 2

OUTCOME: PCQO-5 (Express Positive Emotion as Assessed by Objective Rater)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.41	0.11	40.31	101	<.001
Gender (Actor), γ_{01}	-0.15	0.24	-0.64	101	.523
Social Anxiety (Actor), γ_{02}	-0.09	0.10	-0.84	101	.401
Social Anxiety (Partner), γ_{03}	0.27	0.10	2.57	101	.012
Social Anxiety X Gender, γ_{04}	-0.11	0.08	-1.32	101	.190
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.03	0.21	0.13	101	.895
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.10	0.16	-0.624	104	.534
Social Anxiety (Actor), γ_{11}	0.01	0.10	0.118	104	.907
Social Anxiety X Gender, γ_{12}	0.27	0.21	1.322	104	.189

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.9	0.81	101	222.97	<.001
level-1, r	1.15	1.34			

Statistics for current covariance components model

Deviance = 764.85

Number of estimated parameters = 2

OUTCOME: PCQO-7 (Express Negative Emotion as Assessed by Objective Rater)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.29	0.10	41.93	101	<.001
Gender (Actor), γ_{01}	0.05	0.22	0.24	101	.813
Social Anxiety (Actor), γ_{02}	0.02	0.09	0.18	101	.862
Social Anxiety (Partner), γ_{03}	-0.11	0.09	-1.18	101	.241
Social Anxiety X Gender, γ_{04}	0.05	0.07	0.71	101	.478
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.08	0.18	0.43	101	.670
For CONDITION slope, β_1					
Intercept, γ_{10}	0.35	0.17	2.032	104	.045
Social Anxiety (Actor), γ_{11}	0.12	0.11	1.186	104	.238
Social Anxiety X Gender, γ_{12}	-0.16	0.21	-0.772	104	.442

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.7	0.5	101	165.12	<.001
level-1, r	1.25	1.58			

Statistics for current covariance components model

Deviance = 768.16

Number of estimated parameters = 2

OUTCOME: SSI Smile

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	1.05	0.05	20.49	101	<.001
Gender (Actor), γ_{01}	0.19	0.10	1.82	101	.073
Social Anxiety (Actor), γ_{02}	-0.03	0.04	-0.89	101	.378
Social Anxiety (Partner), γ_{03}	0.12	0.05	2.47	101	.015
Social Anxiety X Gender, γ_{04}	-0.03	0.03	-1.07	101	.287
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.03	0.07	0.41	101	.686
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.17	0.06	-2.881	104	.005
Social Anxiety (Actor), γ_{11}	-0.03	0.04	-0.697	104	.487
Social Anxiety X Gender, γ_{12}	0.18	0.08	2.29	104	.024

Final estimation of variance components

Random Effect		SD	Variance	d.f.	χ^2	p
	INTRCPT1, u_0	0.44	0.2	101	311.8293	<.001
	level-1, r	0.43	0.19			

Statistics for current covariance components model

Deviance = 400.66

Number of estimated parameters = 2

OUTCOME: SSI Guggle

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.34	0.04	8.29	101	<.001
Gender (Actor), γ_{01}	-0.06	0.09	-0.64	101	.526
Social Anxiety (Actor), γ_{02}	0.01	0.03	0.32	101	.746
Social Anxiety (Partner), γ_{03}	0.00	0.04	-0.06	101	.950
Social Anxiety X Gender, γ_{04}	-0.01	0.01	-0.89	101	.376
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.05	0.05	-1.12	101	.267
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.10	0.05	-2.005	104	.048
Social Anxiety (Actor), γ_{11}	-0.06	0.03	-2.229	104	.028
Social Anxiety X Gender, γ_{12}	0.09	0.06	1.502	104	.136

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.31	0.09	101	242.711	<.001
level-1, r	0.37	0.14			

Statistics for current covariance components model

Deviance = 311.77

Number of estimated parameters = 2

OUTCOME: SSI Head Nod

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.40	0.04	9.61	101	<.001
Gender (Actor), γ_{01}	0.05	0.08	0.56	101	.579
Social Anxiety (Actor), γ_{02}	0.03	0.03	0.95	101	.343
Social Anxiety (Partner), γ_{03}	0.05	0.04	1.44	101	.152
Social Anxiety X Gender, γ_{04}	0.00	0.02	-0.16	101	.877
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.01	0.06	0.17	101	.863
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.09	0.04	-2.229	104	.028
Social Anxiety (Actor), γ_{11}	-0.10	0.03	-4.019	104	<.001
Social Anxiety X Gender, γ_{12}	-0.02	0.05	-0.304	104	.762

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.37	0.14	101	398.3	<.001
level-1, r	0.31	0.09			

Statistics for current covariance components model

Deviance = 283.09

Number of estimated parameters = 2

OUTCOME: SSI Gesture

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.93	0.06	15.50	101	<.001
Gender (Actor), γ_{01}	-0.28	0.13	-2.23	101	.028
Social Anxiety (Actor), γ_{02}	-0.01	0.04	-0.30	101	.763
Social Anxiety (Partner), γ_{03}	-0.03	0.06	-0.47	101	.636
Social Anxiety X Gender, γ_{04}	0.02	0.04	0.51	101	.610
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.07	0.09	-0.79	101	.431
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.05	0.07	-0.667	104	.506
Social Anxiety (Actor), γ_{11}	-0.04	0.05	-0.983	104	.328
Social Anxiety X Gender, γ_{12}	0.05	0.09	0.566	104	.573

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.5	0.25	101	283.91	<.001
level-1, r	0.53	0.28			

Statistics for current covariance components model

Deviance = 472.76

Number of estimated parameters = 2

OUTCOME: SSI Initiation of Conversation

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.52	0.04	13.11	101	<.001
Gender (Actor), γ_{01}	0.20	0.08	2.55	101	.012
Social Anxiety (Actor), γ_{02}	-0.01	0.03	-0.44	101	.659
Social Anxiety (Partner), γ_{03}	-0.03	0.03	-1.03	101	.307
Social Anxiety X Gender, γ_{04}	0.00	0.02	0.11	101	.917
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.02	0.06	0.30	101	.767
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.08	0.07	-1.228	104	.222
Social Anxiety (Actor), γ_{11}	0.01	0.05	0.121	104	.904
Social Anxiety X Gender, γ_{12}	0.10	0.09	1.104	104	.272

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.22	0.04	101	140.65	0.006
level-1, r	0.5	0.25			

Statistics for current covariance components model

Deviance = 375.31

Number of estimated parameters = 2

OUTCOME: SSI Speech Amount

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	1.86	0.02	82.35	101	<.001
Gender (Actor), γ_{01}	-0.05	0.05	-0.96	101	.340
Social Anxiety (Actor), γ_{02}	-0.01	0.02	-0.34	101	.736
Social Anxiety (Partner), γ_{03}	0.01	0.02	0.45	101	.652
Social Anxiety X Gender, γ_{04}	-0.02	0.01	-1.60	101	.112
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.02	0.03	-0.56	101	.579
For CONDITION slope, β_1					
Intercept, γ_{10}	0.02	0.04	0.631	104	.529
Social Anxiety (Actor), γ_{11}	0.03	0.02	1.578	104	.118
Social Anxiety X Gender, γ_{12}	0.11	0.04	2.694	104	.008

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.15	0.02	101	166.51	<0.001
level-1, r	0.27	0.07			

Statistics for current covariance components model

Deviance = 148.11

Number of estimated parameters = 2

OUTCOME: IOS Change (Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.83	0.33	2.51	99	.014
Gender (Actor), γ_{01}	-0.06	0.12	-0.51	99	.611
Social Anxiety (Actor), γ_{02}	0.25	0.10	2.49	99	.015
Social Anxiety (Partner), γ_{03}	0.17	0.10	1.77	99	.079
Social Anxiety X Gender, γ_{04}	-0.03	0.07	-0.46	99	.650
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.06	0.03	-2.44	99	.017
For CONDITION slope, β_1					
Intercept, γ_{10}	0.32	0.11	2.883	106	.005
Social Anxiety (Actor), γ_{11}	0.00	0.06	-0.063	106	.950
Social Anxiety X Gender, γ_{12}	-0.09	0.13	-0.696	106	.488

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.3	0.09	99	124.16	0.044
level-1, r	0.82	0.68			

Statistics for current covariance components model

Deviance = 543.87

Number of estimated parameters = 2

OUTCOME: RMICS – Distress Maintaining Attribution

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.19	0.05	4.18	101	<.001
Gender (Actor), γ_{01}	0.04	0.09	0.44	101	.662
Social Anxiety (Actor), γ_{02}	0.00	0.03	0.01	101	.989
Social Anxiety (Partner), γ_{03}	0.00	0.03	-0.09	101	.930
Social Anxiety X Gender, γ_{04}	0.04	0.02	1.52	101	.132
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.04	0.07	-0.55	101	.581
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.25	0.08	-2.993	104	.003
Social Anxiety (Actor), γ_{11}	0.02	0.06	0.309	104	.758
Social Anxiety X Gender, γ_{12}	0.03	0.12	0.288	104	.774

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.22	0.04	101	127.56	.038
level-1, r	0.61	0.37			

Statistics for current covariance components model

Deviance = 445.61

Number of estimated parameters = 2

OUTCOME: RMICS - Hostility

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	1.36	0.23	6.00	101	<.001
Gender (Actor), γ_{01}	0.80	0.44	1.83	101	.070
Social Anxiety (Actor), γ_{02}	-0.01	0.13	-0.10	101	.922
Social Anxiety (Partner), γ_{03}	0.01	0.17	0.05	101	.957
Social Anxiety X Gender, γ_{04}	0.02	0.08	0.27	101	.789
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.28	0.27	-1.05	101	.297
For CONDITION slope, β_1					
Intercept, γ_{10}	-1.03	0.31	-3.28	104	.001
Social Anxiety (Actor), γ_{11}	-0.03	0.19	-0.147	104	.883
Social Anxiety X Gender, γ_{12}	0.33	0.38	0.867	104	.388

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.58	2.5	101	196.91	<.001
level-1, r	2.29	5.28			

Statistics for current covariance components model

Deviance = 1032.86

Number of estimated parameters = 2

OUTCOME: RMICS - Dysphoric Affect

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.29	0.07	3.90	101	<.001
Gender (Actor), γ_{01}	0.41	0.14	2.91	101	.004
Social Anxiety (Actor), γ_{02}	0.00	0.04	-0.11	101	.914
Social Anxiety (Partner), γ_{03}	0.02	0.05	0.33	101	.741
Social Anxiety X Gender, γ_{04}	-0.01	0.02	-0.34	101	.737
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.03	0.07	-0.37	101	.712
For CONDITION slope, β_1					
Intercept, γ_{10}	0.28	0.15	1.87	104	.064
Social Anxiety (Actor), γ_{11}	0.05	0.08	0.651	104	.517
Social Anxiety X Gender, γ_{12}	0.07	0.16	0.447	104	.656

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.07	0.01	101	98.89	>.500
level-1, r	1.07	1.15			

Statistics for current covariance components model

Deviance = 654.80

Number of estimated parameters = 2

OUTCOME: RMICS - Self Disclosure

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.70	0.27	17.67	101	<.001
Gender (Actor), γ_{01}	-0.81	0.54	-1.49	101	.138
Social Anxiety (Actor), γ_{02}	0.02	0.17	0.14	101	.887
Social Anxiety (Partner), γ_{03}	0.05	0.22	0.25	101	.803
Social Anxiety X Gender, γ_{04}	-0.11	0.10	-1.10	101	.275
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.49	0.32	1.56	101	.122
For CONDITION slope, β_1					
Intercept, γ_{10}	1.55	0.38	4.093	104	<.001
Social Anxiety (Actor), γ_{11}	-0.12	0.28	-0.434	104	.665
Social Anxiety X Gender, γ_{12}	0.76	0.57	1.344	104	.182

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.86	3.46	101	189.02	<.001
level-1, r	2.82	7.96			

Statistics for current covariance components model

Deviance = 1112.95

Number of estimated parameters = 2

OUTCOME: RMICS - Humor

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.60	0.31	15.02	101	<.001
Gender (Actor), γ_{01}	0.04	0.57	0.07	101	.945
Social Anxiety (Actor), γ_{02}	-0.48	0.19	-2.47	101	.015
Social Anxiety (Partner), γ_{03}	0.45	0.31	1.46	101	.147
Social Anxiety X Gender, γ_{04}	-0.15	0.12	-1.25	101	.213
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.57	0.35	1.63	101	.107
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.51	0.34	-1.504	104	.136
Social Anxiety (Actor), γ_{11}	-0.08	0.21	-0.38	104	.704
Social Anxiety X Gender, γ_{12}	1.18	0.44	2.659	104	.009

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	2.6	6.77	101	325.66	<.001
level-1, r	2.46	6.08			

Statistics for current covariance components model

Deviance = 1112.84

Number of estimated parameters = 2

OUTCOME: RMICS - Problem Discussion

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	6.65	0.31	21.23	101	<.001
Gender (Actor), γ_{01}	-1.10	0.61	-1.81	101	.074
Social Anxiety (Actor), γ_{02}	0.71	0.21	3.30	101	.001
Social Anxiety (Partner), γ_{03}	-0.48	0.27	-1.75	101	.083
Social Anxiety X Gender, γ_{04}	0.15	0.17	0.90	101	.372
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.82	0.42	-1.97	101	.052
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.06	0.47	-0.129	104	.898
Social Anxiety (Actor), γ_{11}	0.07	0.33	0.217	104	.829
Social Anxiety X Gender, γ_{12}	-1.47	0.64	-2.291	104	.024

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	2.1	4.61	101	179.12	<.001
level-1, r	3.45	11.95			

Statistics for current covariance components model

Deviance = 1190.80

Number of estimated parameters = 2

OUTCOME: DES - Positive Emotions (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	5.50	1.24	4.44	100	<.001
Gender (Actor), γ_{01}	-0.26	0.37	-0.70	100	.487
Social Anxiety (Actor), γ_{02}	0.34	0.41	0.84	100	.405
Social Anxiety (Partner), γ_{03}	0.53	0.41	1.30	100	.198
Social Anxiety X Gender, γ_{04}	0.06	0.28	0.21	100	.836
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.13	0.10	-1.30	100	.196
For CONDITION slope, β_1					
Intercept, γ_{10}	0.07	0.19	0.368	105	.714
Social Anxiety (Actor), γ_{11}	-0.25	0.12	-2.062	105	.042
Social Anxiety X Gender, γ_{12}	-0.14	0.25	-0.555	105	.580

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.65	2.73	100	379.32	<.001
level-1, r	1.39	1.95			

Statistics for current covariance components model

Deviance = 885.68

Number of estimated parameters = 2

OUTCOME: DES - Positive Emotions (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	5.13	1.16	4.44	96	<.001
Gender (Actor), γ_{01}	-0.42	0.35	-1.20	96	.232
Social Anxiety (Actor), γ_{02}	0.46	0.35	1.32	96	.189
Social Anxiety (Partner), γ_{03}	0.37	0.36	1.03	96	.305
Social Anxiety X Gender, γ_{04}	0.16	0.26	0.63	96	.528
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.11	0.09	-1.13	96	.263
Relationship Satisfaction (Actor), γ_{06}	0.04	0.01	3.44	96.00	<.001
Relationship Satisfaction (Partner), γ_{07}	0.01	0.01	0.99	96.00	0.32
For CONDITION slope, β_1					
Intercept, γ_{10}	0.04	0.19	0.213	103	.831
Social Anxiety (Actor), γ_{11}	-0.23	0.12	-1.852	103	.067
Social Anxiety X Gender, γ_{12}	-0.09	0.25	-0.357	103	.722

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.49	2.23	96	317.68	<0.001
level-1, r	1.39	1.93			

Statistics for current covariance components model

Deviance = 865.11

Number of estimated parameters = 2

OUTCOME: DES - Angry (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	-0.48	1.13	-0.42	100	.674
Gender (Actor), γ_{01}	0.24	0.29	0.86	100	.394
Social Anxiety (Actor), γ_{02}	-0.44	0.36	-1.24	100	.219
Social Anxiety (Partner), γ_{03}	-0.57	0.36	-1.59	100	.115
Social Anxiety X Gender, γ_{04}	-0.24	0.22	-1.11	100	.269
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.15	0.09	1.59	100	.115
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.64	0.27	-2.402	105	.018
Social Anxiety (Actor), γ_{11}	-0.17	0.16	-1.038	105	.302
Social Anxiety X Gender, γ_{12}	-0.17	0.32	-0.535	105	.594

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.62	0.39	100	120.5947	.079
level-1, r	1.92	3.7			

Statistics for current covariance components model

Deviance = 901.37

Number of estimated parameters = 2

OUTCOME: DES - Angry (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	-0.19	0.94	-0.21	96	.836
Gender (Actor), γ_{01}	0.33	0.28	1.18	96	.240
Social Anxiety (Actor), γ_{02}	-0.47	0.29	-1.62	96	.110
Social Anxiety (Partner), γ_{03}	-0.45	0.27	-1.66	96	.101
Social Anxiety X Gender, γ_{04}	-0.28	0.19	-1.46	96	.148
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.13	0.08	1.67	96	.097
Relationship Satisfaction (Actor), γ_{06}	-0.02	0.01	-1.30	96	0.20
Relationship Satisfaction (Partner), γ_{07}	-0.02	0.01	-1.23	96	0.22
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.61	0.27	-2.252	103	.026
Social Anxiety (Actor), γ_{11}	-0.21	0.16	-1.293	103	.199
Social Anxiety X Gender, γ_{12}	-0.25	0.32	-0.759	103	.450

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.5	0.25	96	108.73	.177
level-1, r	1.92	3.69			

Statistics for current covariance components model

Deviance = 889.92

Number of estimated parameters = 2

OUTCOME: DES - Ashamed (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	1.47	0.79	1.87	100	.065
Gender (Actor), γ_{01}	0.39	0.23	1.67	100	.097
Social Anxiety (Actor), γ_{02}	0.35	0.24	1.46	100	.148
Social Anxiety (Partner), γ_{03}	0.12	0.26	0.46	100	.647
Social Anxiety X Gender, γ_{04}	0.21	0.16	1.31	100	.194
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.03	0.06	-0.50	100	.617
For CONDITION slope, β_1					
Intercept, γ_{10}	0.32	0.25	1.317	105	.191
Social Anxiety (Actor), γ_{11}	0.49	0.17	2.884	105	.005
Social Anxiety X Gender, γ_{12}	0.71	0.33	2.172	105	.032

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.51	0.27	100	116.65	.122
level-1, r	1.77	3.15			

Statistics for current covariance components model

Deviance = 865.46

Number of estimated parameters = 2

OUTCOME: DES - Ashamed (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	2.27	0.68	3.33	96	.001
Gender (Actor), γ_{01}	0.43	0.24	1.79	96	.077
Social Anxiety (Actor), γ_{02}	0.56	0.18	3.20	96	.002
Social Anxiety (Partner), γ_{03}	0.41	0.21	1.92	96	.058
Social Anxiety X Gender, γ_{04}	0.29	0.14	1.98	96	.050
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.10	0.05	-1.91	96	.059
Relationship Satisfaction (Actor), γ_{06}	-0.01	0.01	-0.71	96	0.48
Relationship Satisfaction (Partner), γ_{07}	-0.02	0.01	-1.80	96	0.07
For CONDITION slope, β_1					
Intercept, γ_{10}	0.40	0.24	1.682	103	.096
Social Anxiety (Actor), γ_{11}	0.42	0.16	2.6	103	.011
Social Anxiety X Gender, γ_{12}	0.59	0.31	1.865	103	.065

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.38	0.14	96	104.71	.255
level-1, r	1.72	2.98			

Statistics for current covariance components model

Deviance = 844.36

Number of estimated parameters = 2

OUTCOME: DES - Scared (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.99	0.99	1.00	100	.320
Gender (Actor), γ_{01}	0.38	0.26	1.44	100	.154
Social Anxiety (Actor), γ_{02}	0.28	0.26	1.09	100	.280
Social Anxiety (Partner), γ_{03}	0.11	0.23	0.45	100	.651
Social Anxiety X Gender, γ_{04}	0.03	0.20	0.16	100	.876
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.01	0.08	-0.17	100	.867
For CONDITION slope, β_1					
Intercept, γ_{10}	0.82	0.22	3.799	105	<.001
Social Anxiety (Actor), γ_{11}	0.27	0.12	2.19	105	.031
Social Anxiety X Gender, γ_{12}	-0.09	0.26	-0.33	105	.742

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.9	0.82	100	169.97	<.001
level-1, r	1.53	2.34			

Statistics for current covariance components model

Deviance = 844.97

Number of estimated parameters = 2

OUTCOME: DES - Scared (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	1.16	1.07	1.08	96	.282
Gender (Actor), γ_{01}	0.47	0.28	1.67	96	.098
Social Anxiety (Actor), γ_{02}	0.30	0.25	1.19	96	.236
Social Anxiety (Partner), γ_{03}	0.15	0.28	0.53	96	.600
Social Anxiety X Gender, γ_{04}	0.02	0.20	0.10	96	.919
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.03	0.09	-0.30	96	.765
Relationship Satisfaction (Actor), γ_{06}	0.00	0.02	-0.02	96	.988
Relationship Satisfaction (Partner), γ_{07}	-0.02	0.02	-1.15	96	.253
For CONDITION slope, β_1					
Intercept, γ_{10}	0.82	0.22	3.731	103	<.001
Social Anxiety (Actor), γ_{11}	0.27	0.13	2.119	103	.037
Social Anxiety X Gender, γ_{12}	-0.09	0.27	-0.337	103	.737

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.89	0.79	96	159.98	<.001
level-1, r	1.54	2.39			

Statistics for current covariance components model

Deviance = 843.31

Number of estimated parameters = 2

OUTCOME: DES - Embarrassed (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.01	0.89	4.53	100	<.001
Gender (Actor), γ_{01}	0.97	0.33	2.96	100	.004
Social Anxiety (Actor), γ_{02}	1.05	0.24	4.32	100	<.001
Social Anxiety (Partner), γ_{03}	0.49	0.27	1.80	100	.074
Social Anxiety X Gender, γ_{04}	0.58	0.20	2.85	100	.005
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.17	0.07	-2.43	100	.017
For CONDITION slope, β_1					
Intercept, γ_{10}	0.71	0.28	2.561	105	.012
Social Anxiety (Actor), γ_{11}	0.22	0.18	1.217	105	.226
Social Anxiety X Gender, γ_{12}	0.45	0.35	1.304	105	.195

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.01	1.03	100	150.31	.001
level-1, r	2.02	4.1			

Statistics for current covariance components model

Deviance = 946.12

Number of estimated parameters = 2

OUTCOME: DES - Embarrassed (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.66	0.92	5.05	96	<.001
Gender (Actor), γ_{01}	1.03	0.32	3.20	96	.002
Social Anxiety (Actor), γ_{02}	1.17	0.25	4.72	96	<.001
Social Anxiety (Partner), γ_{03}	0.72	0.29	2.46	96	.016
Social Anxiety X Gender, γ_{04}	0.61	0.21	2.89	96	.005
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.22	0.07	-3.07	96	.003
Relationship Satisfaction (Actor), γ_{06}	-0.01	0.01	-0.82	96	.414
Relationship Satisfaction (Partner), γ_{07}	-0.02	0.02	-1.04	96	.300
For CONDITION slope, β_1					
Intercept, γ_{10}	0.79	0.28	2.833	103	.006
Social Anxiety (Actor), γ_{11}	0.16	0.17	0.934	103	.352
Social Anxiety X Gender, γ_{12}	0.34	0.34	1.001	103	.319

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.98	0.96	96	141.75	.002
level-1, r	2.01	4.05			

Statistics for current covariance components model

Deviance = 935.50

OUTCOME: DES - Interested (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	7.09	1.35	5.25	100	<.001
Gender (Actor), γ_{01}	0.28	0.46	0.60	100	.548
Social Anxiety (Actor), γ_{02}	0.67	0.42	1.59	100	.115
Social Anxiety (Partner), γ_{03}	0.69	0.41	1.68	100	.096
Social Anxiety X Gender, γ_{04}	-0.26	0.31	-0.85	100	.396
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.18	0.11	-1.58	100	.118
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.66	0.27	-2.431	105	.017
Social Anxiety (Actor), γ_{11}	-0.14	0.21	-0.668	105	.505
Social Anxiety X Gender, γ_{12}	-0.38	0.40	-0.942	105	.348

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.8	3.25	100	261.83	<.001
level-1, r	2	4.01			

Statistics for current covariance components model

Deviance = 997.24

Number of estimated parameters = 2

OUTCOME: DES - Interested (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	7.34	1.50	4.91	96	<.001
Gender (Actor), γ_{01}	0.13	0.45	0.28	96	.781
Social Anxiety (Actor), γ_{02}	0.91	0.46	2.00	96	.048
Social Anxiety (Partner), γ_{03}	0.76	0.44	1.75	96	.083
Social Anxiety X Gender, γ_{04}	-0.12	0.31	-0.38	96	.702
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.20	0.12	-1.64	96	.105
Relationship Satisfaction (Actor), γ_{06}	0.02	0.02	1.36	96	.176
Relationship Satisfaction (Partner), γ_{07}	0.01	0.02	0.30	96	.767
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.67	0.28	-2.405	103	.018
Social Anxiety (Actor), γ_{11}	-0.14	0.22	-0.641	103	.523
Social Anxiety X Gender, γ_{12}	-0.38	0.42	-0.904	103	.368

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.72	2.99	96	236.15	<.001
level-1, r	2.02	4.09			

Statistics for current covariance components model

Deviance = 986.53

Number of estimated parameters = 2

OUTCOME: DES - Love (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	8.74	1.65	5.30	100	<.001
Gender (Actor), γ_{01}	-0.05	0.38	-0.12	100	.904
Social Anxiety (Actor), γ_{02}	0.61	0.55	1.10	100	.274
Social Anxiety (Partner), γ_{03}	0.65	0.56	1.17	100	.243
Social Anxiety X Gender, γ_{04}	-0.19	0.31	-0.62	100	.536
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.20	0.14	-1.44	100	.154
For CONDITION slope, β_1					
Intercept, γ_{10}	0.42	0.18	2.348	105	.021
Social Anxiety (Actor), γ_{11}	-0.24	0.13	-1.873	105	.064
Social Anxiety X Gender, γ_{12}	0.07	0.25	0.282	105	.778

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	1.74	3.03	100	438.75	<.001
level-1, r	1.33	1.79			

Statistics for current covariance components model

Deviance = 885.00

Number of estimated parameters = 2

OUTCOME: DES - Love (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	8.42	1.38	6.10	96	<.001
Gender (Actor), γ_{01}	-0.15	0.37	-0.40	96	.691
Social Anxiety (Actor), γ_{02}	0.78	0.44	1.77	96	.079
Social Anxiety (Partner), γ_{03}	0.48	0.43	1.13	96	.261
Social Anxiety X Gender, γ_{04}	-0.07	0.27	-0.28	96	.782
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.18	0.11	-1.53	96	.129
Relationship Satisfaction (Actor), γ_{06}	0.05	0.01	4.02	96	<.001
Relationship Satisfaction (Partner), γ_{07}	0.00	0.02	0.25	96	.806
For CONDITION slope, β_1					
Intercept, γ_{10}	0.42	0.18	2.288	103	.024
Social Anxiety (Actor), γ_{11}	-0.24	0.13	-1.816	103	.072
Social Anxiety X Gender, γ_{12}	0.07	0.25	0.272	103	.786

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.55	2.42	96	350.54	<.001
level-1, r	1.35	1.82			

Statistics for current covariance components model

Deviance = 865.34

Number of estimated parameters = 2

OUTCOME: DES - Proud (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	6.13	1.28	4.78	100	<.001
Gender (Actor), γ_{01}	0.09	0.42	0.21	100	.835
Social Anxiety (Actor), γ_{02}	-0.09	0.41	-0.23	100	.821
Social Anxiety (Partner), γ_{03}	0.39	0.44	0.89	100	.375
Social Anxiety X Gender, γ_{04}	0.20	0.26	0.77	100	.442
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.11	0.11	-1.05	100	.296
For CONDITION slope, β_1					
Intercept, γ_{10}	0.10	0.26	0.365	105	.716
Social Anxiety (Actor), γ_{11}	-0.37	0.18	-2.064	105	.041
Social Anxiety X Gender, γ_{12}	0.33	0.36	0.894	105	.373

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.68	2.83	100	252.02	<.001
level-1, r	1.93	3.72			

Statistics for current covariance components model

Deviance = 978.25

Number of estimated parameters = 2

OUTCOME: DES - Proud (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	5.51	1.09	5.07	96	<.001
Gender (Actor), γ_{01}	-0.04	0.41	-0.11	96	.917
Social Anxiety (Actor), γ_{02}	0.00	0.31	-0.01	96	.990
Social Anxiety (Partner), γ_{03}	0.13	0.34	0.38	96	.703
Social Anxiety X Gender, γ_{04}	0.30	0.24	1.23	96	.221
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.06	0.09	-0.72	96	.473
Relationship Satisfaction (Actor), γ_{06}	0.05	0.02	3.33	96	.001
Relationship Satisfaction (Partner), γ_{07}	0.01	0.02	0.76	96	.452
For CONDITION slope, β_1					
Intercept, γ_{10}	0.03	0.26	0.1	103	.921
Social Anxiety (Actor), γ_{11}	-0.33	0.18	-1.799	103	.075
Social Anxiety X Gender, γ_{12}	0.42	0.36	1.156	103	.250

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	1.47	2.16	96	208.46	<.001
level-1, r	1.92	3.69			

Statistics for current covariance components model

Deviance = 954.42

Number of estimated parameters = 2

OUTCOME: DES - Sad (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	2.03	0.94	2.15	100	.034
Gender (Actor), γ_{01}	0.86	0.33	2.59	100	.011
Social Anxiety (Actor), γ_{02}	0.35	0.27	1.27	100	.208
Social Anxiety (Partner), γ_{03}	0.12	0.24	0.50	100	.621
Social Anxiety X Gender, γ_{04}	0.14	0.22	0.62	100	.535
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.04	0.07	-0.53	100	.597
For CONDITION slope, β_1					
Intercept, γ_{10}	0.45	0.27	1.689	105	.094
Social Anxiety (Actor), γ_{11}	-0.02	0.17	-0.113	105	.910
Social Anxiety X Gender, γ_{12}	0.22	0.33	0.673	105	.503

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.17	1.38	100	175.43	<.001
level-1, r	1.91	3.67			

Statistics for current covariance components model

Deviance = 939.27

Number of estimated parameters = 2

OUTCOME: DES - Sad (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	2.45	0.98	2.50	96	.014
Gender (Actor), γ_{01}	0.88	0.34	2.62	96	.010
Social Anxiety (Actor), γ_{02}	0.39	0.26	1.46	96	.147
Social Anxiety (Partner), γ_{03}	0.29	0.26	1.12	96	.267
Social Anxiety X Gender, γ_{04}	0.14	0.23	0.62	96	.540
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.08	0.08	-0.97	96	.334
Relationship Satisfaction (Actor), γ_{06}	-0.02	0.02	-1.09	96	.277
Relationship Satisfaction (Partner), γ_{07}	-0.01	0.02	-0.79	96	.430
For CONDITION slope, β_1					
Intercept, γ_{10}	0.44	0.26	1.663	103	.099
Social Anxiety (Actor), γ_{11}	-0.05	0.17	-0.293	103	.770
Social Anxiety X Gender, γ_{12}	0.17	0.33	0.513	103	.609

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.18	1.4	96	174.54	<.001
level-1, r	1.85	3.44			

Statistics for current covariance components model

Deviance = 923.36

Number of estimated parameters = 2

OUTCOME: DES - Contemptuous (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	-1.28	0.87	-1.46	100	.147
Gender (Actor), γ_{01}	0.01	0.15	0.05	100	.962
Social Anxiety (Actor), γ_{02}	-0.41	0.26	-1.59	100	.114
Social Anxiety (Partner), γ_{03}	-0.44	0.26	-1.72	100	.088
Social Anxiety X Gender, γ_{04}	-0.29	0.15	-1.95	100	.054
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.14	0.08	1.88	100	.063
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.05	0.14	-0.367	105	.714
Social Anxiety (Actor), γ_{11}	0.10	0.09	1.119	105	.266
Social Anxiety X Gender, γ_{12}	-0.06	0.19	-0.299	105	.766

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.47	0.22	100	150.27	.001
level-1, r	0.94	0.89			

Statistics for current covariance components model

Deviance = 636.10

Number of estimated parameters = 2

OUTCOME: DES - Contemptuous (Actor); Transformed, Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.65	0.22	2.89	94	.005
Gender (Actor), γ_{01}	0.02	0.05	0.46	94	.649
Social Anxiety (Actor), γ_{02}	-0.13	0.07	-1.90	94	.060
Social Anxiety (Partner), γ_{03}	-0.13	0.06	-2.11	94	.038
Social Anxiety X Gender, γ_{04}	-0.10	0.04	-2.27	94	.026
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.04	0.02	2.17	94	.033
Relationship Satisfaction (Actor), γ_{06}	0.00	0.00	-1.54	94	.127
Relationship Satisfaction (Partner), γ_{07}	0.00	0.00	-0.51	94	.612
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.01	0.04	-0.297	98	.767
Social Anxiety (Actor), γ_{11}	0.03	0.03	1.26	98	.211
Social Anxiety X Gender, γ_{12}	0.00	0.06	-0.048	98	.962

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.15	0.02	94	143.3	.001
level-1, r	0.29	0.08			

Statistics for current covariance components model

Deviance = 178.86

Number of estimated parameters = 2

OUTCOME: DES - Sympathy (Actor)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	5.28	1.12	4.70	100	<.001
Gender (Actor), γ_{01}	0.38	0.47	0.81	100	.420
Social Anxiety (Actor), γ_{02}	0.50	0.37	1.36	100	.177
Social Anxiety (Partner), γ_{03}	0.70	0.35	2.01	100	.047
Social Anxiety X Gender, γ_{04}	0.20	0.29	0.67	100	.503
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.17	0.09	-1.92	100	.058
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.74	0.31	-2.381	105	.019
Social Anxiety (Actor), γ_{11}	-0.20	0.26	-0.79	105	.431
Social Anxiety X Gender, γ_{12}	-0.30	0.51	-0.586	105	.559

Final estimation of variance components

Random Effect		SD	Variance	d.f.	χ^2	p
	INTRCPT1, u_0	1.87	3.49	100	232.77	<.001
	level-1, r	2.29	5.26			

Statistics for current covariance components model

Deviance = 1040.33

Number of estimated parameters = 2

OUTCOME: DES -Sympathy (Actor), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	4.61	1.19	3.89	96	<.001
Gender (Actor), γ_{01}	0.26	0.44	0.59	96	.557
Social Anxiety (Actor), γ_{02}	0.38	0.36	1.03	96	.304
Social Anxiety (Partner), γ_{03}	0.46	0.35	1.29	96	.200
Social Anxiety X Gender, γ_{04}	0.18	0.29	0.63	96	.532
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.11	0.09	-1.23	96	.223
Relationship Satisfaction (Actor), γ_{06}	0.01	0.02	0.58	96	.567
Relationship Satisfaction (Partner), γ_{07}	0.02	0.02	0.86	96	.391
For CONDITION slope, β_1					
Intercept, γ_{10}	-0.77	0.32	-2.435	103	.017
Social Anxiety (Actor), γ_{11}	-0.20	0.26	-0.747	103	.457
Social Anxiety X Gender, γ_{12}	-0.28	0.52	-0.542	103	.589

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.82	3.33	96	216.05	<.001
level-1, r	2.31	5.33			

Statistics for current covariance components model

Deviance = 1030.08

Number of estimated parameters = 2

OUTCOME: DES - Angry (Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	-0.44	0.92	-0.48	99	.636
Gender (Actor), γ_{01}	-0.05	0.24	-0.20	99	.843
Social Anxiety (Actor), γ_{02}	-0.45	0.31	-1.44	99	.152
Social Anxiety (Partner), γ_{03}	-0.38	0.30	-1.25	99	.215
Social Anxiety X Gender, γ_{04}	0.13	0.21	0.65	99	.517
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.12	0.08	1.53	99	.129
For CONDITION slope, β_1					
Intercept, γ_{10}	-1.12	0.23	-4.905	106	<.001
Social Anxiety (Actor), γ_{11}	0.22	0.15	1.444	106	.152
Social Anxiety X Gender, γ_{12}	0.24	0.30	0.824	106	.412

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.55	0.3	99	120.18	.073
level-1, r	1.69	2.86			

Statistics for current covariance components model

Deviance = 843.28

Number of estimated parameters = 2

OUTCOME: DES -Angry (Partner), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	0.22	0.83	0.27	95	.791
Gender (Actor), γ_{01}	0.00	0.23	0.02	95	.984
Social Anxiety (Actor), γ_{02}	-0.34	0.26	-1.32	95	.191
Social Anxiety (Partner), γ_{03}	-0.14	0.26	-0.54	95	.589
Social Anxiety X Gender, γ_{04}	0.14	0.19	0.75	95	.458
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.06	0.07	0.89	95	.377
Relationship Satisfaction (Actor), γ_{06}	-0.02	0.01	-1.64	95	.104
Relationship Satisfaction (Partner), γ_{07}	-0.02	0.01	-1.92	95	.058
For CONDITION slope, β_1					
Intercept, γ_{10}	-1.09	0.23	-4.807	104	<.001
Social Anxiety (Actor), γ_{11}	0.18	0.15	1.185	104	.239
Social Anxiety X Gender, γ_{12}	0.17	0.30	0.574	104	.567

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	0.39	0.15	95	105.51	.216
level-1, r	1.67	2.79			

Statistics for current covariance components model

Deviance = 827.15

Number of estimated parameters = 2

OUTCOME: DES - Disgust (Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	-0.25	0.50	-0.50	99	.620
Gender (Actor), γ_{01}	0.26	0.14	1.88	99	.063
Social Anxiety (Actor), γ_{02}	-0.13	0.17	-0.79	99	.434
Social Anxiety (Partner), γ_{03}	-0.15	0.14	-1.04	99	.303
Social Anxiety X Gender, γ_{04}	0.24	0.12	1.96	99	.053
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.05	0.04	1.20	99	.234
For CONDITION slope, β_1					
Intercept, γ_{10}	0.01	0.14	0.061	106	.951
Social Anxiety (Actor), γ_{11}	0.22	0.10	2.081	106	.040
Social Anxiety X Gender, γ_{12}	0.31	0.18	1.706	106	.091

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.16	0.02	99	103.23	.365
level-1, r	1.03	1.06			

Statistics for current covariance components model

Deviance = 629.41

Number of estimated parameters = 2

OUTCOME: DES -Disgust (Partner), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	-0.23	0.53	-0.43	95	.670
Gender (Actor), γ_{01}	0.30	0.14	2.13	95	.036
Social Anxiety (Actor), γ_{02}	-0.13	0.18	-0.73	95	.466
Social Anxiety (Partner), γ_{03}	-0.15	0.15	-0.98	95	.329
Social Anxiety X Gender, γ_{04}	0.23	0.12	1.92	95	.058
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	0.05	0.04	1.09	95	.280
Relationship Satisfaction (Actor), γ_{06}	0.00	0.01	0.57	95	.571
Relationship Satisfaction (Partner), γ_{07}	-0.01	0.01	-1.66	95	.100
For CONDITION slope, β_1					
Intercept, γ_{10}	0.00	0.14	0.025	104	.980
Social Anxiety (Actor), γ_{11}	0.22	0.11	2.103	104	.038
Social Anxiety X Gender, γ_{12}	0.33	0.19	1.744	104	.084

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	0.15	0.02	95	98.74	.376
level-1, r	1.03	1.07			

Statistics for current covariance components model

Deviance = 635.38

Number of estimated parameters = 2

OUTCOME: DES - Interest (Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	7.57	1.18	6.41	99	<.001
Gender (Actor), γ_{01}	-0.09	0.36	-0.26	99	.793
Social Anxiety (Actor), γ_{02}	0.34	0.39	0.86	99	.393
Social Anxiety (Partner), γ_{03}	0.41	0.34	1.22	99	.227
Social Anxiety X Gender, γ_{04}	0.32	0.27	1.17	99	.244
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.14	0.10	-1.49	99	.140
For CONDITION slope, β_1					
Intercept, γ_{10}	0.82	0.23	3.575	106	<.001
Social Anxiety (Actor), γ_{11}	0.06	0.16	0.352	106	.726
Social Anxiety X Gender, γ_{12}	-0.14	0.32	-0.448	106	.655

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.57316	2.47482	99	281.916	<.001
level-1, r	1.63663	2.67857			

Statistics for current covariance components model

Deviance = 914.36

Number of estimated parameters = 2

OUTCOME: DES -Interest (Partner), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	6.76	0.96	7.01	95	<.001
Gender (Actor), γ_{01}	-0.06	0.35	-0.17	95	.870
Social Anxiety (Actor), γ_{02}	0.23	0.28	0.82	95	.412
Social Anxiety (Partner), γ_{03}	0.10	0.26	0.40	95	.690
Social Anxiety X Gender, γ_{04}	0.31	0.23	1.35	95	.182
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.07	0.08	-0.93	95	.353
Relationship Satisfaction (Actor), γ_{06}	0.03	0.02	1.50	95	.137
Relationship Satisfaction (Partner), γ_{07}	0.02	0.02	1.29	95	.200
For CONDITION slope, β_1					
Intercept, γ_{10}	0.74	0.22	3.349	104	.001
Social Anxiety (Actor), γ_{11}	0.13	0.15	0.879	104	.382
Social Anxiety X Gender, γ_{12}	0.01	0.30	0.025	104	.980

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.36	1.85	95	238.17	<.001
level-1, r	1.56	2.46			

Statistics for current covariance components model

Deviance = 879.23

Number of estimated parameters = 2

OUTCOME: DES - Love (Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	9.37	1.68	5.59	99	<.001
Gender (Actor), γ_{01}	-0.15	0.37	-0.40	99	.693
Social Anxiety (Actor), γ_{02}	0.81	0.56	1.44	99	.152
Social Anxiety (Partner), γ_{03}	0.92	0.52	1.76	99	.081
Social Anxiety X Gender, γ_{04}	0.09	0.33	0.27	99	.788
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.25	0.14	-1.82	99	.072
For CONDITION slope, β_1					
Intercept, γ_{10}	0.63	0.21	2.99	106	.003
Social Anxiety (Actor), γ_{11}	0.03	0.16	0.197	106	.844
Social Anxiety X Gender, γ_{12}	-0.44	0.31	-1.414	106	.160

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.8	3.25	99	378.84	<.001
level-1, r	1.51	2.29			

Statistics for current covariance components model

Deviance = 910.64

Number of estimated parameters = 2

OUTCOME: DES -Love (Partner), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	8.06	1.16	6.95	95	<.001
Gender (Actor), γ_{01}	-0.31	0.32	-0.97	95	.335
Social Anxiety (Actor), γ_{02}	0.74	0.37	2.01	95	.047
Social Anxiety (Partner), γ_{03}	0.45	0.33	1.36	95	.176
Social Anxiety X Gender, γ_{04}	0.17	0.26	0.67	95	.506
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.14	0.09	-1.54	95	.127
Relationship Satisfaction (Actor), γ_{06}	0.06	0.01	4.08	95	<.001
Relationship Satisfaction (Partner), γ_{07}	0.04	0.01	2.65	95	.009
For CONDITION slope, β_1					
Intercept, γ_{10}	0.56	0.20	2.813	104	.006
Social Anxiety (Actor), γ_{11}	0.10	0.15	0.676	104	.500
Social Anxiety X Gender, γ_{12}	-0.30	0.29	-1.018	104	.311

Final estimation of variance components

Random Effect	SD	Variance	d.f.	χ^2	p
INTRCPT1, u_0	1.37	1.88	95	266.72	<.001
level-1, r	1.44	2.07			

Statistics for current covariance components model

Deviance = 855.20

Number of estimated parameters = 2

OUTCOME: DES - Sympathy (Partner)

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	6.65	1.22	5.45	99	<.001
Gender (Actor), γ_{01}	-0.01	0.41	-0.03	99	.973
Social Anxiety (Actor), γ_{02}	0.66	0.40	1.67	99	.099
Social Anxiety (Partner), γ_{03}	0.39	0.42	0.93	99	.357
Social Anxiety X Gender, γ_{04}	0.35	0.31	1.14	99	.259
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.12	0.10	-1.24	99	.219
For CONDITION slope, β_1					
Intercept, γ_{10}	1.47	0.28	5.231	106	<.001
Social Anxiety (Actor), γ_{11}	0.01	0.18	0.033	106	.973
Social Anxiety X Gender, γ_{12}	-0.34	0.38	-0.891	106	.375

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	1.49	2.23	99	202.89	<.001
level-1, r	2.06	4.26			

Statistics for current covariance components model

Deviance = 975.29

Number of estimated parameters = 2

OUTCOME: DES -Sympathy (Partner), Controlling for Relationships Satisfaction

Final estimation of fixed effects (with robust standard errors)

Fixed Effect	Coefficient	SE	t-ratio	Approx df	p
Intercept, γ_{00}	6.25	1.07	5.87	95	<.001
Gender (Actor), γ_{01}	-0.07	0.41	-0.17	95	.866
Social Anxiety (Actor), γ_{02}	0.69	0.35	1.99	95	.049
Social Anxiety (Partner), γ_{03}	0.24	0.35	0.68	95	.496
Social Anxiety X Gender, γ_{04}	0.42	0.29	1.42	95	.158
Social Anxiety (Actor) X Social Anxiety (Partner), γ_{05}	-0.09	0.08	-1.04	95	.302
Relationship Satisfaction (Actor), γ_{06}	0.03	0.02	1.69	95	.095
Relationship Satisfaction (Partner), γ_{07}	0.03	0.02	1.40	95	.166
For CONDITION slope, β_1					
Intercept, γ_{10}	1.47	0.29	5.125	104	<.001
Social Anxiety (Actor), γ_{11}	-0.01	0.19	-0.042	104	.967
Social Anxiety X Gender, γ_{12}	-0.36	0.38	-0.943	104	.348

Final estimation of variance components

Random Effect	SD	Variance	$d.f.$	χ^2	p
INTRCPT1, u_0	1.34	1.81	95	175.23	<.001
level-1, r	2.07	4.3			

Statistics for current covariance components model

Deviance = 959.08

Number of estimated parameters = 2