# Socially Anxious Individuals' Conflicted Emotional and Cognitive Responses to Self-Verifying and Self-Enhancing Others

### by

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M.A. (Clinical Psychology), Simon Fraser University, 2006

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### **Abstract**

This study investigated how individuals with social anxiety respond to others who provide them with positive (self-enhancing) or negative (self-verifying) feedback. The findings are based on data from 276 undergraduate students (74 males and 202 females). Participants completed a standardized measure of social anxiety and then answered questions about themselves in front of a one-way mirror. They received positive and negative written feedback on their social abilities supposedly from two student observers on the other side of the mirror. The feedback was actually predetermined and identical across participants. Experimenters instructed participants to consider each feedback paragraph and then imagine interacting with the respective observer. Participants rated their interest in contact with each observer, their emotional response, their guesses about the observer's traits, their perception of the observer's expectations of them and their perception of their own social ability. Regardless of social anxiety, participants reported more interest in further contact with the observer who provided positive, as opposed to negative, feedback. When participants with high social anxiety imagined interacting with the observer who provided positive, as opposed to negative, feedback they experienced more positive emotion; however, they rated this observer to be significantly less astute and trustworthy than the observer who provided negative feedback. Further, they thought they were more likely to fail to meet the positive observer's favourable expectations, than the negative observer's low expectations of them in the future. Participants with high social anxiety show evidence of a cognitiveaffective crossfire (Swann, Griffin, Predmore, & Gaines, 1987) with emotional responses favouring self-enhancement strivings and cognitive responses favouring self-verification strivings. In contrast, participants with mid and low social anxiety reported emotional responses and observer ratings that were congruent and positive towards the observer who gave positive feedback, and vice versa for the observer who gave negative feedback. Thus, individuals with high social anxiety's interest in and emotional response to others who provided positive and negative feedback were similar to individuals with mid or low anxiety. Their cognitive attributions, however, differed and may play a role in maintaining their negative self-views and complicating their interpersonal interactions.

**Keywords**: Social Anxiety; Self-Verification; Self-Enhancement; Social Feedback; Partner Selection

This dissertation is dedicated to my parents,
Barbara and Jerzy Szpunar

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### **List of Acronyms**

ASQ Ability Standards Questionnaire BDI-II Beck Depression Inventory II

HSA A sub-group of participants with high social anxiety
LSA A sub-group of participants with low social anxiety
MSA A sub-group of participants with mid social anxiety

NFP Negative feedback partner

PANAS Positive and Negative Affect Scale

PFP Positive feedback partner

SPAI Social Phobia and Anxiety Inventory

TSBIA Texas Social Behavior Inventory: Short Form A

### Introduction

The experience of social anxiety exists on a continuum ranging from shyness in unfamiliar situations to clinically significant fear and avoidance of one or more social situations (Chavira, Stein, & Malcarne, 2002; Heiser, Turner, & Beidel, 2003). The characteristic features of social anxiety include a negative view of the self and excessive concern about the possibility of disapproval from others (Clark & Wells, 1995a; Moscovitch, 2009; Rapee & Heimberg, 1997). Much of the literature on social anxiety has focused on exploring the cognitive biases associated with the disorder. For instance, individuals with social anxiety exhibit heightened attention to their own anxiety during interactions with others, vigilance for signs of disapproval (Bögels & Mansell, 2004; Hirsch & Clark, 2004), and negatively biased interpretations and memories of social events (Beard & Amir, 2010; Dannahy & Stopa, 2007).

The intrapersonal responses of individuals with social anxiety are embedded in a social context, however, and social anxiety results from the combined effects of cognitive-affective processes and feedback from the social environment (Zayas, Shoda, & Ayduk, 2002). Responses to interaction partners may be skewed by cognitive biases and emotional processes, but often within a limited range. Positive and negative responses are generally recognized as such but ambiguous information is most easily misinterpreted by people with social anxiety (Beard & Amir, 2010). Recently more attention is being paid to the interpersonal factors that contribute to the development and maintenance of negative cognitive schemas and social fears (Alden & Taylor, 2010); however, many questions about how individuals with social anxiety respond to others and establish social ties remain unanswered.

The selection of interaction partners is one way in which individuals with social anxiety influence the quality of their social interactions and the feedback they are exposed to. Decisions about whom to interact with have implications for their self-assessment, emotional experiences, and social functioning (Buss, 1984; Kashdan &

Savostyanova, 2011; Robinson & Smith-Lovin, 1992). If, for example, individuals with socially anxiety elect to interact with critical people, they are more likely to be exposed to negative feedback, which leads to distress and reinforces their negative self-view and fear of disapproval from others. In these ways, socially anxious individuals' initial choices about who to spend time with have important implications for what occurs between them and their partners and how this may impact them. Interaction partner preferences have not previously been studied in individuals with social anxiety. This study aims to assess if individuals with social anxiety gravitate to flattering or critical partners and explores the potential consequences of their choices.

### **Social Anxiety and the Effects of Interaction Partners**

Unfortunately, individuals with social anxiety often evoke more negative responses from interaction partners than non-anxious individuals (Creed & Funder, 1998; Meleshko & Alden, 1993; Voncken & Dijk, 2013); though, they tend to overestimate the magnitude of the negative responses they receive (Alden & Wallace, 1995; Christensen, Stein, & Means-Christensen, 2003; Kashdan & Savostyanova, 2011). As well, people's responses to socially anxious individuals are moderated by factors that are commonly implicated in interpersonal attraction (Byrne, 1997). For example, interaction partners perceive individuals with social anxiety more favourably and are less likely to reject them if they feel that they are similar to themselves (Papsdorf & Alden, 1998; Voncken, Alden, Bögels, & Roelofs, 2008). People who choose to date individuals with social anxiety tend not to agree with their negative self-perceptions. This results in large discrepancies between the positive ratings of the dating partner and the negative self-ratings of the individual with social anxiety (Gordon, Johnson, Heimberg, Montesi, & Fauber, 2013).

Individuals with social anxiety also think, feel, and behave differently depending on whom they are interacting with. For example, their tendency to overestimate the extent to which others see them negatively is significantly attenuated in interactions with others who similarly experience social anxiety (Kashdan & Savostyanova, 2011). As well, they tend not to perceive their social abilities as negatively when they are led to believe that the standards for social performance are low (Moscovitch & Hofmann,

2007). Further, individuals with social anxiety display improved social ability and are viewed as more likeable when interacting with a friendly as opposed to less friendly partner (Alden & Wallace, 1995). Individuals with social anxiety are generally motivated by a desire to protect themselves and usually disclose less and are less responsive to their interaction partners than less anxious individuals (Alden & Wallace, 1995; Papsdorf & Alden, 1998; Voncken & Dijk, 2013). When they are with a friendly partner, however, they disclose more and show greater warmth and responsiveness, which leads to more positive social outcomes (Alden & Wallace, 1995).

Whether individuals with social anxiety experience positive or negative social interactions, they may be more strongly affected by the interactions than non-anxious individuals. For instance, individuals with social anxiety anticipate stronger physical responses and longer-lasting effects, including greater improvements in their self-esteem, from positive social events (Gilboa-Schechtman, Franklin, & Foa, 2000; Reijntjes et al., 2011); however, it has also been shown that they expect more frequent and intense negative responses to positive events suggesting that their reactions are both strong and mixed (Gilboa-Schechtman et al., 2000). Correspondingly, individuals with social anxiety anticipate more intense physical responses and negative reactions to negative social events. This is illustrated by the participants in one study who reported that they believed they would continue to be affected for roughly two days by a negative social experience, while those without social anxiety expected the negative effects to pass after about an hour (Gilboa-Schechtman et al., 2000).

Over time, these experiences affect how individuals with social anxiety see themselves and respond in future social circumstances. In one study, when individuals with social anxiety were asked to recall an image of themselves during an anxiety-provoking social interaction, they reported lower self-esteem on implicit and explicit measures in comparison to individuals with social anxiety recalling a social interaction that they had found positive and relaxing. Further, thinking of the anxiety-provoking social situation made the individuals with social anxiety less resilient in facing an experience of social exclusion in the context of a computer game. They reported lower explicit self-esteem than those who thought of themselves in the positive social situation following the negative social experience (Hulme et al., 2012). In another study, individuals with social anxiety reported seeing themselves more negatively and

experiencing increased anxiety when exposed to a tone that had been previously associated with cues of rejection (Baldwin & Main, 2001).

As interaction partners are an important source of feedback on one's acceptability and value (Leary, 2010) it is useful to consider how individuals with social anxiety respond to the prospect of interacting with different potential partners. The choices they make regarding whether to continue contact with positive or more critical others play a role in shaping their social context and influence their wellbeing and interpersonal functioning. Further, given the meaningful ways relationships affect the development of self-views and expectations, it is unlikely that intrapersonal patterns of thinking and feeling can be enduringly altered without corresponding interpersonal choices that reinforce the changes (Swann, Chang-Schneider, & Larsen McClarty, 2007).

# Responses to Others: Self-Enhancement and Self-Verification Strivings

Ostensibly, all individuals, whatever their level of social anxiety, respond well to partners who see them positively and would choose to have future interactions with those partners if given the opportunity. Such predictions are in line with self-enhancement theory, which suggests that people are primarily motivated to see themselves as favourably as possible (Allport, 1937) and respond best to experiences and interaction partners that enhance their view of themselves (Taylor & Brown, 1988). Such partners may also be attractive because they tend to be generally positive in their interactions with others (Swann, Stein-Seroussi, & Giesler, 1992). Some research suggests that a positive partner's self-enhancing feedback can have self-fulfilling effects as individuals may come to see themselves as the partner sees them or act in accordance with their partner's positive expectations (Murray, Holmes, & Griffin, 1996).

Nonetheless, research suggests that people are attracted to interaction partners for many different reasons. For instance, individuals are drawn to potential partners who validate their perception of themselves, in line with self-verification theory (Swann, 1983). Self-verification theory asserts that individuals use their view of themselves to

make sense of their experiences and navigate their social world. As one's self-view serves important functions, it is not easily given up whether it is positive or negative. Individuals may make interpersonal choices and cognitive attributions that help to maintain a sense of coherence and their belief that things are as they think they are (Swann, Rentfrow, & Guinn, 2003; Swann, 2005). Interaction partners who verify one's self-view are also attractive because they seem perceptive, intelligent, and trustworthy (Swann et al., 1992). As well, a sense of shared understanding may increase intimacy and give rise to a belief that interactions will proceed in a smooth manner (North & Swann, 2009; Swann et al., 1992). On the other hand, choosing partners who reinforce one's self-view and validate one's limitations may make these beliefs more resistant to change (Swann, 2004).

Self-enhancement and self-verification theories make the same predictions about individuals with positive self-views because being evaluated favourably by others verifies their positive self-perceptions. Things are more complicated, however, for the roughly 30% of individuals with negative self-views (Swann, Griffin, Predmore, & Gaines, 1987). Individuals with low self-esteem may find positive feedback from others enhancing, but also confusing or unsettling because it does not fit with how they see themselves.

## **Negative Self-Views and Incongruent Cognitive and Affective Responses to Feedback**

Past research reveals evidence of both self-enhancing and self-verifying motivations but suggests that these motivations tend to affect different kinds of responses (Kwang & Swann, 2010). In line with self-enhancement theory, individuals usually have positive emotional responses to favourable information about themselves, but their cognitive responses to information are generally those predicted by self-verification theory.

As self-enhancement and self-verification theories make the same predictions about individuals with positive self-views, these individuals are expected to have positive and congruent emotional and cognitive responses to favourable evaluations. In contrast, individuals with negative self-views are likely to be conflicted because favourable

evaluations evoke positive emotions, but do not fit intellectually. This pattern of incongruent responses in individuals with low self-esteem has been dubbed the cognitive-affective crossfire (Swann et al., 1987). Indeed, research shows that, although like individuals with high self-esteem, individuals with low self-esteem report that positive feedback feels better to them, they will often discount positive feedback and choose to interact with partners who view them negatively (Hixon & Swann, 1993; Robinson & Smith-Lovin, 1992; Swann et al., 1992; Swann, Griffin, Predmore, & Gaines, 1999). The most commonly cited reasons include: a preference for being with someone whose perceptions match one's own; the pragmatic benefits of interacting with a partner who understands one's strengths and weaknesses and is likely to have predictable and reasonable expectations; and a preference for interacting with someone who seems to be perceptive (Swann et al., 1992). Thus, one's choice of an interaction partner may be influenced by how well the partner's feedback fits with one's self-perception, the likely interpersonal consequences of this (Leary, 2007), and what the congruence of the partner's feedback indicates about that person (Swann et al., 1992). These considerations may be particularly important in the formation of longer or more intimate relationships and there is evidence that suggests that self-verification strivings are stronger under these conditions (Swann, Ronde, & Hixon, 1994). If so, individuals may show a stronger preference for self-verifying partners when considering interactions that are likely to go beyond a single brief meeting.

# Individuals With Social Anxiety's Reponses to Others: Current Findings

### **Self-protection strivings**

The research on social anxiety to date does not lead to clear predictions regarding whether individuals with social anxiety are more likely to choose enhancing or verifying interaction partners. It is clear that individuals with social anxiety fear negative feedback (Clark & Wells, 1995; Kocovski & Endler, 2000). Recent evidence suggests they may also fear positive feedback and perhaps any evaluation at all (Rodebaugh, 2009; Weeks, Heimberg, & Rodebaugh, 2008). Individuals with social anxiety report more goals related to avoiding negative outcomes and fewer goals related to gaining

approval or other rewards from social interactions (Meleshko & Alden, 1993). Thus, individuals with social anxiety appear to be primarily driven by self-protective motivations (Arkin, 1987; Rodebaugh, 2009). As a result they are less likely to disclose to or engage with others, which evokes negative responses from others and brings about the negative social outcomes that they presumably want to avoid (Meleshko & Alden, 1993; Papsdorf & Alden, 1998; Sparrevohn & Rapee, 2009).

Individuals with social anxiety's increased avoidance of social contact and frequently cited motivation to protect or conceal themselves could reflect a reduced desire to either enhance or verify the self in relationships with others. Such selfprotective motivations are consistent with self-enhancement strivings if, feeling that positive evaluations are unobtainable, individuals with social anxiety strive to minimize negative evaluations or at least such evaluations of the true beliefs and values they keep hidden (Arkin, 1987). Self-protective goals and behaviours can also be consistent with self-verification strivings. Individuals with social anxiety effectively communicate to others that they are socially inhibited and uninterested in continued contact. If selfprotective behaviour is an attempt to avoid negative social outcomes, then how this relates to whether an enhancing or verifying partner is preferred may depend on which is more threatening: dealing with an interaction partner who may have unrealistically positive expectations or dealing with one who confirms one's negative expectations of social interaction. It may be that the increased chance of rejection that results from selfprotective behaviours is an unintended consequence (Alden & Taylor, 2010). Alternatively or additionally, it may be that individuals with social anxiety feel more comfortable with less involved interactions that end sooner rather than later (Alden, Taylor, Mellings, & Laposa, 2008), and involve lower expectations from others (Baumgardner & Brownlee, 1987).

### **Emotional and cognitive responses**

Given that low social self-esteem is a core feature of social anxiety (Moscovitch, 2009), individuals with social anxiety's emotional and cognitive responses to positive and negative social events may also reflect a cognitive-affective crossfire. In line with self-enhancement theory and similar to other individuals with low self-esteem, individuals with social anxiety experience more positive affect and less negative affect following

positive interactions and social feedback and the reverse is true for negative interactions and social feedback (Lake & Arkin, 1985; Wallace & Alden, 1997). An exception to this general finding is a study that found that social anxiety is related to increased discomfort in response to positive statements (Weeks, Heimberg, Rodebaugh, & Norton, 2008); however, the broader spectrum of emotional responses was not assessed. As well, participants in that study were told that the discomfort they felt reflected how accurate the statements were, which may have confounded the findings with respect to how the participants felt about the feedback and their appraisals of its accuracy.

When anticipating future interactions with a person from whom they have received positive feedback, some evidence suggests that individuals with social anxiety expect to feel more anxious than non-socially anxious individuals; whereas, they did not differ from non-socially anxious individuals if the feedback emphasized the absence of negative outcomes (Alden, Mellings, & Laposa, 2004). Taken together, it seems that individuals with social anxiety may have mixed feelings in response to positive interactions or feedback. However, when their overall emotional response is assessed, they still feel better following positive feedback than they do after negative feedback.

Consistent with self-verification theory, despite individuals with social anxiety's positive emotional response to favourable social events, their appraisals and expectations suggest that they discount them. Even when individuals with social anxiety behave in a more socially skilled manner and receive positive cues from their interaction partners, they tend to underestimate their likeability to a greater extent than do nonsocially anxious individuals (Alden & Wallace, 1995). Individuals with social anxiety's beliefs about how they come across to their interaction partners are more strongly quided by their self-views than the partner's actual opinion of them (Christensen et al., 2003). When individuals with social anxiety experience positive social events they are more likely to attribute the success of the interaction to external factors or the characteristics of the people with whom they are interacting (Lake & Arkin, 1985; Weeks, 2010). Individuals with social anxiety have a greater tendency to doubt that others' positive responses to them are genuine (Alden et al., 2008), and they believe that people who evaluate them negatively are more perceptive and accurate than those who provide more positive evaluations (Lake & Arkin, 1985). As well, many of the cognitive features of social anxiety serve to maintain these individuals' negative self-concept. For instance, social anxiety is associated with biases in attention, interpretation, and memory of social disapproval (Beard & Amir, 2010; Bögels & Mansell, 2004).

It may seem contradictory that individuals who apparently fear negative feedback also defend its validity, and in some sense prefer it. Nevertheless, a recent study found that individuals with social anxiety's fear of evaluation, both negative and positive, relates to an increased tendency to ask questions that are more likely to elicit negative feedback than positive. Social anxiety is related to low social self-esteem and this mediates individuals with social anxiety's preference for negative feedback. Further, this preference for negative feedback is not significantly reduced by standard cognitive behavioural interventions and predicted ongoing symptoms of social anxiety post treatment (Valentiner, Skowronski, McGrath, Smith, & Renner, 2011). This suggests that a preference for feedback that confirms individuals with social anxiety's negative self-image may play a role in the maintenance of their difficulties.

### **Pragmatic considerations**

Individuals with social anxiety may also believe that there are pragmatic or interpersonal benefits to being with others who view them in the same way that they view themselves. Individuals with social anxiety have been found to be more likely to agree that positive social events may have negative implications (Alden et al., 2008). Alden et al. (2008) found that following an interaction that went well, individuals with social anxiety reported feeling that others might expect more of them. Further, a positive interaction did not appear to improve their view of their social abilities and individuals with social anxiety tended to make negative predictions about how they would feel and behave in a second interaction (Alden et al., 2008). Thus, paradoxically, social success led to an increased sense of being unable to meet their partners' expectations in the future and hence failed to assuage social insecurities (Alden et al., 2008; Wallace & Alden, 1997). If individuals with social anxiety received feedback about what had gone well in an interaction, they anticipated feeling more anxiety than non-socially anxious individuals in the next interaction; although, if the feedback focused on the absence of negative outcomes they did not differ from non-socially anxious individuals in their predictions about the next interaction (Alden et al., 2004). As well, when individuals with social anxiety imagine giving a presentation, they report feeling more anxious if they also imagine that a partner who views them more favourably than they view themselves will be there (Gordon et al., 2013).

Socially anxious individuals may be most comfortable in situations where little is expected of them, presumably because this fits with their negative view of their own social competence (Baumgardner & Brownlee, 1987). Baumgardner and Brownlee (1987) found that if individuals with social anxiety believed that their performance on a task affected future standards, they performed poorly on the task. A similar drop in performance, however, was not observed if they were faced with high standards that they did not believe would be affected by their performance. This suggests that the poor performance was strategic; that it was intended to encourage others to lower their standards to a level they felt they could more comfortably reach (Baumgardner & Brownlee, 1987).

### The Present Study: Purpose and Hypotheses

Self-enhancement and self-verification both relate to improved interpersonal outcomes (Katz, Anderson, & Beach, 1997); though, this may occur through different routes. Enhancing feedback improves an individual's emotional state and verifying feedback indicates accurate understanding, which increases trust and provides assurance that the partner is likely to have realistic expectations for future interactions (Swann et al., 1992). Given the negative view that individuals with social anxiety have of themselves, however, they are faced with a conflict between what feels good and what they believe to be true. The basis on which they choose an interaction partner may also have implications for both how individuals with social anxiety view themselves and how skilfully they behave in social interactions.

The primary aim of the present study is to assess how social anxiety relates to decisions about whom to spend time with. Past research suggests that socially anxious individuals may be primarily motivated to protect and conceal the self (Arkin, 1987; Rodebaugh, 2009). How this relates to preferences for enhancing or verifying partners is currently unknown and examinations of these relationships is unique to the current

study. The present study examines whether previous findings with individuals with low self-esteem will generalize to individuals with social anxiety.

The secondary aims include exploring how social anxiety influences emotional and cognitive responses to potential interaction partners who have given positive or more negative feedback about the individual. The influence of social anxiety will be assessed in two ways. First, social anxiety symptoms will be assessed continuously across an undergraduate population. Then participants with high levels of social anxiety symptoms (HSAs) that are typical of clinical populations will be identified and their responses will be compared to participants with mid (MSAs) to low levels (LSAs) of social anxiety. In keeping with the cognitive-affective crossfire model (Swann et al., 1987), the following predictions are made:

### **Primary variables of interest:**

Hypotheses related to social anxiety's impact on individuals' interest in further contact with interaction partners who provide positive or negative feedback.

- 1. a. In keeping with self-verification theory, social anxiety will relate to more frequently choosing to interact with a person who has previously provided negative, as opposed to positive, feedback.
- a. Social anxiety symptoms will predict increased interest in further contact with a person who has previously provided negative feedback and decreased interest in contact with a person who has previously provided positive feedback.
  - b. HSAs will be more interested in further interactions with a person who has previously provided negative, as opposed to positive, feedback; particularly when they are asked to consider more intimate relationships.

### Secondary variables:

Hypotheses related to emotional responses, perceptions of others, and perceived expectations of individuals who provide positive or negative feedback.

3. a. Consistent with the features of social anxiety, social anxiety symptoms will predict higher negative affect and lower positive affect when individuals think of talking with a potential interaction partner regardless of the valence of previous feedback (positive or negative).

- b. In line with self-enhancement theory, regardless of social anxiety symptoms, LSA, MSA, and HSA individuals will feel more positive affect and less negative affect when thinking of engaging with a person who has provided positive, as opposed to negative, feedback.
- 4. a. Consistent with self-verification theory, social anxiety symptoms will predict more negative impressions of a person who provided positive feedback and more favourable impressions of a person who provided negative feedback.
  - b. Unlike LSAs and MSAs, HSAs will find a person who provides negative feedback more astute, trustworthy, and appealing than a person who provides positive feedback.
- a. Social anxiety symptoms will relate to predictions that one will fail to meet another's expectations if that other has previously provided positive, as opposed to negative feedback.
  - b. HSAs will predict that a person who has previously provided positive feedback will expect more from them than a person who has previously provided negative feedback.
  - c. HSAs will predict that their social abilities will not differ in their interactions with others regardless of whether they have previously provided positive or negative feedback.
  - d. HSAs will predict that they are more likely to fail to meet a potential interaction partner's expectations if that partner has previously provided positive as opposed to negative feedback.

### Method

### **Participants**

Undergraduate students were recruited from first and second year psychology courses that provide credit for participation in research at a comprehensive university in British Columbia, Canada. Students in these courses were encouraged to log onto an online research participation system to view various psychological research studies that they could choose to participate in for a maximum of 6% towards their course grade. The description of the present study at the website indicated that participants would be asked to "complete a series of verbal and written activities concerning social relations" to obtain 2% towards their course grade. Participant recruitment took place over the course of 11 months (three university semesters) from February 2010 to December 2010.

Two-hundred-and-eighty-seven students participated in the study. Eight (3% of the total sample) participants' results were deleted because either their data were incomplete (n = 5), they had difficulty understanding written and spoken English (n = 1), or they indicated that they did not believe the premise on which the participant activities were based, that is, that there were observers in another room evaluating them through a one-way mirror (n = 2). Thus, 276 undergraduate students (202 females and 74 males) are included in the data analysis for this study. According to the students' responses on a demographic questionnaire (see Appendix A) the average age was 20.32 years (SD = 3.34, range 17–46 years of age). The majority of students reported being in their first (35.1%), second (40.5%), or third year (17.2%) of undergraduate studies while the remaining 7.2% of students were in their fourth to sixth year. Twenty-eight percent of the participants reported that psychology was their major; the remaining 72.4% were majoring in other areas or had not yet declared their academic focus.

The students were ethnically diverse. They predominantly self-identified as: Asian/Pacific Islander (40.1%); Caucasian (35.8%); and East Indian (12.9%). The

remaining 11% of the sample self-identified as: Hispanic (1.8%); African American (0.7%); First Nations (0.4%); and other (8.2 %). Ethnicity categories with less than five individuals were combined to form groups of an adequate sample size to examine possible effects of ethnicity. The students who self-identified as Hispanic (n = 5), First Nations (n = 1), and African American (n = 2) were combined with the students who listed "Other" as their ethnicity. Fifty-eight percent of the participants described themselves as single, 38% reported being in a relationship, and the remaining 4% were cohabiting or married.

### **Measures and Procedure**

### Study rationale and set-up

Four female experimenters ran the study according to a standardized and scripted protocol (see Appendix B). Experimenters let participants into the lab and guided them past a room with a closed door into a second room and immediately closed the door after them. Participants sat at a desk facing a set of closed blinds that covered a one-way mirror on the wall separating the room they were in from the first room they passed by. A second table with two empty seats was also set up behind them. The experimenter then stated that they were still waiting for other participants and she needed to check the hallway to see if they had arrived. The experimenter left the room closing the door behind her, waited for a brief period and then knocked on the main door into the lab to signify the next participant's arrival. At this juncture, as well as throughout the study, the experimenter took various actions to lead the participant to believe that there were other students in the adjacent room; for example they spoke aloud to the alleged other students and periodically left the participant to check on the others.

Once the experimenter had established that all the other people were present, she went through the written consent form (see Appendix C) with the participant and explained that the purpose of the study was to gain a better understanding of how people form first impressions of each other based on different types of information, and how they respond to different potential interaction partners.

### Trait questionnaires

The experimenter then gave the participant several questionnaires in counterbalanced order. To assess symptoms of social anxiety, participants completed the Social Phobia and Anxiety Inventory (Turner, Beidel, Dancu, & Stanley, 1989). In addition, to assess factors that may covary with the dependent variables of interest, participants completed the demographic information form and a social self-esteem questionnaire (the Texas Social Behaviour Inventory A; Helmreich & Stapp, 1974), that is commonly used in research on self-verification (e.g., Robinson & Smith-Lovin, 1992; Swann et al., 1992). As well, given the high comorbidity of social anxiety and depression (e.g., Dalrymple, 2012), participants completed a questionnaire that assessed depressive symptoms (the Beck Depression Inventory II; Beck, Steer, & Brown, 1996). These measures are described in the following sections in greater detail.

### Social Phobia and Anxiety Inventory (SPAI; Turner et al., 1989)

The SPAI is a 45-item, self-report measure of somatic symptoms, cognitions, and behaviours associated with social anxiety in various situations. For example, several of the items ask about feeling anxious in various social contexts (being in a bar or restaurant, initiating conversation, etc.) with either a "stranger," an "authority figure," a person of the "opposite sex," or "people in general." Answers are given on a 7-point Likert scale ranging from 0 = "never" to 6 = "always." The SPAI consists of both a social phobia and an agoraphobia subscale. Social anxiety is measured as a difference score which is calculated by subtracting the agoraphobia score from the social phobia score in order to control for social anxiety symptoms that are better conceptualized as a part of agoraphobia.

The SPAI difference score has good discriminant validity (Turner et al., 1989) and has outperformed other commonly used self-report social anxiety measures in discriminating between those with social anxiety and those with other anxiety disorders (Peters, 2000). At a cut-off score of 88, the SPAI shows excellent diagnostic sensitivity (0.87) and specificity (0.91) (Peters, 2000). This cut-off also results in strong predictive power. Peters (2000) found that the probability that a person who scores above 88 has

social anxiety is 96% and the probability that a person who scores below 88 does not have social anxiety is 74%. The SPAI has good test-retest reliability (r = .86), internal consistency ( $\alpha$  = .96) (Turner, Beidel, & Dancu, 1996), and significant, large correlations with other commonly used measures of social anxiety (Peters, 2000). The SPAI's factor structure, convergent validity, and internal consistency ( $\alpha$  = .85 to  $\alpha$  = .96) have been demonstrated with undergraduate student samples (Osman, Barrios, Aukes, & Osman, 1995; Osman et al., 1996). In the present study, the SPAI's internal consistency was excellent ( $\alpha$  = .98).

### Texas Social Behavior Inventory: Short form A (TSBIA; Helmreich & Stapp, 1974)

The TSBIA is a 16-item, self-report measure of self-esteem and social competence (Helmreich & Stapp, 1974). The TSBIA is a short form of the original 32-item TSBI. The TSBIA and TSBI are strongly positively correlated (r = .97) and have a similar factor structure (Helmreich & Stapp, 1974). Given their equivalence, the TSBIA is most often administered. It is frequently used in research on interpersonal behaviour and partner selection because its emphasis on social self-esteem is presumably more relevant to these outcomes than global self-esteem (e.g., Rudich, Sedikides, & Gregg, 2007). In particular, to explore self-verification strivings, both the self-concept measure and the verifying or non-verifying feedback presented must assess the same attributes. The present study focuses on social impressions; hence, a questionnaire that assesses social self-concept is most pertinent.

The TSBIA consists of 16 statements, for example: "I would describe myself as self-confident"; "When in a group of people, I have trouble thinking of the right things to say"; and "I have no doubts about my social competence." Responses to each statement are given on a 5-point Likert scale ranging from a = "not at all characteristic of me" to e = "very much characteristic of me." Assessment of the TSBIA with undergraduate students supports the factor structure, the statistical equivalence to the TSBI long form, and the internal consistency ( $\alpha$  = .85 to  $\alpha$  = .88; Helmreich & Stapp, 1974). In the present study, the TSBI had good internal consistency ( $\alpha$  = .78).

### Beck Depression Inventory II (BDI-II; Beck et al., 1996)

The BDI-II is a 21-item, self-report measure of depressive symptoms. Each item lists four response options and answers are given by circling the statement that best describes how the participant has been feeling during the previous two weeks. For example, the item assessing sadness lists the following four options: 0 = "I do not feel sad"; 1 = "I feel sad much of the time"; 2 = "I am sad all the time"; 3 = "I am so sad or unhappy that I can't stand it."

The BDI-II has high convergent validity, one week test-retest reliability (r = .93), and internal consistency (r = .91; Beck et al., 1996). The BDI-II's good psychometric properties have been replicated in undergraduate student samples; the BDI-II has good convergent validity and internal consistency ( $\alpha$  = .90; Storch, Roberti, & Roth, 2004). In the present study, the internal consistency was excellent ( $\alpha$  = .90).

#### Social task

After the questionnaires were completed, the experimenter informed the participant that there was a one-way mirror behind the blinds on the wall between the room they were in and the room in which the other alleged students were sitting. The experimenter then placed a microphone near the participant that had a wire that projected into the room supposedly occupied by the other students. The experimenter opened the blinds, turned on the microphone, and then asked the participant to answer three short questions that were written on a sheet of paper. The questions were: "What university course did you find most interesting and why? What is your favourite movie and what did you like about it? What do you like to do in your spare time?"

Following the participant's answers, the experimenter closed the blinds covering the one-way mirror and turned off the microphone. The experimenter then told the participant that there would be a short break to give the student observers time to write down the feedback they had for him or her. Following this brief break, the experimenter went into the other room, stayed for another minute, and then re-entered the room where the participant waited with a clipboard holding two feedback forms face down.

### Feedback paragraphs

The feedback forms consisted of typed instructions for providing impressions of what the participant might be like in social situations. Following this, there were six lines for handwritten feedback. The feedback was written out ahead of time by three of the four female experimenters. The forms were labelled either "Observer A" or "Observer B", which corresponded to the order in which the feedback was presented. The handwriting and observer label (i.e., A or B) were counterbalanced across the positive and negative feedback paragraphs. Thus, Observer A provided positive feedback roughly as often as negative, and the feedback for this observer was handwritten by each of the experimenters an equal number of times; and vice versa for Observer B.

The content of the positive and negative feedback consisted of verbatim replications of paragraphs used in past research on self-verification (e.g., Rudich & Vallacher, 1999; Swann et al., 1992). The feedback paragraphs both described social characteristics of an individual and levels of anxiety and competence in facing social situations. The positive feedback paragraph described the participant as self-confident, at ease with unfamiliar others, and appearing certain about his or her social competence. The more negative paragraph described the participant as ill at ease in social situations, uncertain about what to say, and likely to enjoy being with some people but feel anxious with others (see Appendix D for examples of the feedback form and the full paragraphs).

### Provision of feedback from the alleged student observers

The experimenter gave the participant the two completed feedback forms with the positive and negative handwritten messages in counterbalanced order. They told the participant that the paragraphs were written by two student observers who were instructed to comment on the participant's social ease, confidence, and competence. The experimenter did not look at the feedback and left the room so that the participant could read the paragraphs in private.

### Responses to the positive and negative observers

Once the participant had finished reading the paragraphs, the experimenter asked the participant to complete a set of forms describing his or her thoughts and feelings about the observers and preferences regarding further contact with them. Following the completion of these forms, the experimenter told the participant that one of the observers would come to join the participant to engage in a 5-minute interaction using the two chairs that were located behind where the participant was seated. The experimenter assured the participant that observers would not be given any information about the participant's responses. The first form asked which observer the participant would prefer to meet for the five-minute introductory interaction and their degree of interest in further contact with either observer in different social contexts.

### Interaction partner choice and interest in further contact with each observer

The participants rated their interest in the two potential interaction partners by filling out a two-part form (see Appendix E). The first section asked the participants to indicate which of the two observers they would prefer to interact with for a 5-minute conversation by circling Observer A or Observer B; these labels corresponded to the positive and negative feedback paragraphs that were marked as coming from Observer A or Observer B. The second section asked the participant to indicate the extent to which they would be interested in engaging with Observer A and Observer B in different situations varying in their degree of intimacy. The situations, ordered in increasing levels of assumed intimacy included: participating in the upcoming 5-minute interaction; working together on a group project; spending an evening together; forming a friendship; considering a romantic relationship. The participant answered by placing an X along a continuous line for each situation; the end points of the line were 0 = "Not at all interested" and 100 = "Extremely interested." When scoring this measure, ratings were assessed by measuring the distance from 0 to the participant's X in millimetres (mm). Using this measurement method, responses for each situation could range from 0 to 145 given that the response line was 145 mm in length. The total overall interest scores were derived by summing the participant's ratings across situations for each interaction partner. The interest measure had good internal consistency for both the observer who provided positive feedback ( $\alpha$  = .85) and the observer who provided negative feedback ( $\alpha$  = .85).

### Emotional response while imagining contact with Observer A

The experimenter explained that the next set of forms assessed the participant's responses to each observer; starting with Observer A. The experimenter asked the participant to forget about Observer B for the time being, and reread Observer A's comments. The experimenter instructed the participant to imagine that Observer A is about to walk through the door to join them for the 5-minute interaction and hold the image of having an interaction with Observer A in mind. During this, participants rated how they felt on a measure of state anxiety and positive and negative affect.

### State anxiety

Participants were asked to rate their subjective anxiety at particular moments during the experiment on a continuous line ranging from 0 = "I do not feel at all anxious" to 100 = "I feel extremely anxious". This is a commonly used measure for assessing instantaneous mood (e.g., Mansell & Clark, 1999).

### Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988)

Participants' more global emotional responses were assessed on the PANAS; a self-report questionnaire that can measure either state or trait positive and negative affect. In the present study, participants were asked with respect to 20 emotions, for example afraid or inspired, to rate the extent to which they "feel this way right now, that is, at the present moment as you imagine interacting with Observer A." See Appendix F for the full list of the 20 emotions assessed. Participants answered by writing a number next to the emotion word on a 5-point Likert scale ranging from 1 = "very slightly or not at all" to 5 = "extremely."

When used as a measure of positive and negative affect in a given moment in a sample of undergraduate students, the findings supported the PANAS's factor structure, convergent validity, and high internal consistency ( $\alpha$  = .89 for PA and  $\alpha$  = .85 for NA; Watson et al., 1988). In the present study, the internal consistency of ratings for the

observer that provided positive feedback and the one that provided negative feedback were high ( $\alpha$  = .93 and  $\alpha$  = .90 respectively).

### Impressions of observer A's traits

The experimenter then asked the participant to indicate his or her impressions of Observer A on a measure that assesses various positive attributes. The ratings questionnaire (Appendix F) instructed participants to give their best guess of what Observer A is like given what he or she wrote. Eight positive traits were listed related to how astute (i.e., intelligent, perceptive, insightful), trustworthy (i.e., honest, dependable, genuine) and appealing (i.e., attractive, likeable) the observer seemed. Participants answered by circling a number on a 5-point Likert scale ranging from 1 = "not at all" to 5 = "extremely." The total scores for each observer were derived by summing participants' ratings across the 8 traits. This ratings measure had good internal consistency; the Cronbach's alpha coefficient was .84 in the current sample.

### Perception of social abilities and others' expectations

The experimenter next oriented the participant to a measure of self-rated ability and perception of other's standards; the Ability Standards Questionnaire (ASQ; Wallace, 1991). The experimenter explained that responses on the ASQ are given using a 9-point Likert scale that is anchored by three video clips (developed by Wallace & Alden, 1991) depicting increasingly skilled social behaviour corresponding to ratings of two, five, and eight. Each clip showed the same male and female engaging in brief conversations that are portrayed as first meetings. The individuals in the videos appear to be about the same age as the undergraduate students and they are sitting in two chairs in a quiet environment that is roughly similar to the setting of the present study.

The experimenter instructed the participant to watch the three video clips and informed them that the observers were doing the same, and that the participant and the observers would each fill out the ASQ questionnaire while thinking of interacting with the other. The participant questionnaire consisted of three items to rate: (a) what he or she believed Observer A expected their social abilities to be like, (b) what he or she believed

their actual social abilities would be like if they interacted with Observer A and (c) what he or she believed Observer A's social abilities would be like (see Appendix G).

### **Emotional response towards and perception of Observer B**

The experimenter then instructed the participant to shift his or her attention to Observer B and to put responses to Observer A aside for the time being. The experimenter asked the participant to reread Observer B's feedback, and imagine he or she is about to interact with Observer B. The participant completed all the steps described a second time with Observer B in mind. The steps were identical, with the exception that the forms were labelled Observer B.

### Follow-up questions and exploratory analyses

The experimenter asked the participant to tell her anything that came to mind about what the observers might be like while he or she was imagining an interaction or while filling in the various measures and rating scales. This open-ended question was included for exploratory purposes to (a) elicit impressions of the observers that were not explicitly asked about, but might help to generate possible explanations for the findings or bring up ideas that could be explored in future research; and (b) to look for clues that the participant did not believe that there were actual observers.

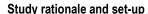
Partway through the study, several additions were made to the protocol to address additional questions that arose. The latter 238 of the 287 participants were asked if they made any assumptions about the observers' genders to see if these influenced their responses to them.

For the last 145 participants, experimenters rated participants' social abilities on the ASQ 9-point Likert Scale during the social task. This provided an idea of whether the participants' ratings of themselves on the ASQ corresponded to how they are actually perceived by others based on a brief social contact. Prior to rating study participants, experimenters made practice ratings with volunteers (who were not participants in the study) until they independently reached high levels of agreement in their ratings (exact agreement or within one point on the ASQ scale).

### Debriefing

At the end of the testing session, the experimenter informed the participant that the proposed interaction would not occur and that there were no student observers present. The experimenter also provided a written debriefing form for the participant to read over (see Appendix H). The experimenter made it clear that the ratings had been written ahead of time and standardized across participants, and had nothing to do with how the participant actually performed during the study. The experimenter then described the study's true purposes: to learn more about how people respond to the prospect of interacting with different potential partners and what might affect their decisions about whom they would like to have further contact with. The experimenter further explained that the protocol was designed to make the situation as realistic as possible under the circumstances in order to increase the chances that the results would generalize to real-life situations outside of the lab. The experimenter answered any remaining questions and then participants were asked not to share any information about the study with other students at the university. The steps of the experimental procedure, outlined above, are summarized in Figure 1.

As noted, throughout the study the experimenter referred to Observer A and Observer B. The order and content of the feedback was counterbalanced so that both Observer A and Observer B provided positive or negative messages a roughly equal number of times. The alleged observer (Observer A or Observer B depending on the counterbalancing procedure) who provided positive feedback will henceforth be referred to as the positive feedback partner (PFP) and the observer who provided negative feedback will hereafter be referred to as the negative feedback partner (NFP).



The experimenter briefly introduced the study and indicated that there were two other participants seated in the adjacent room (in actuality the adjacent room was empty).



#### **Trait questionnaires**

Participants completed measures of social anxiety, self esteem and depression in counterbalanced order.



#### Social task

Participants faced the one-way mirror and answered three questions about their interests. The experimenter led them to believe that there were two participants observing their answers.



#### **Feedback**

The experimenter gave participants one positive and one negative paragraph supposedly obtained from the two alleged participants (in actuality the feedback was identical across participants). The forms were labelled "Observer A" and "Observer B"...



#### Interaction partner choice and interest in further contact with both alleged feedback providers

Participants reviewed the feedback, chose one of the alleged participants for a short interaction, and rated their degree of interest in further contact with each across a range of contexts.



#### Response to feedback from the first alleged participant (labelled "Observer A")

Participants imagined interacting with Observer A and completed forms that assessed (a) their emotional responses, (b) their impressions of Observer A's traits, (c) their perception of what Observer A expected their social abilities to be like, and what they believed their actual social abilities would be like if they interacted with Observer A.



#### Response to feedback from the second alleged participant (labelled "Observer B")

Participants re-read Observer B's feedback and imagined interacting with Observer B. They completed forms that assessed (a) their emotional responses, (b) their impressions of Observer B's traits, (c) their perception of what Observer B expected their social abilities to be like, and what they believed their actual social abilities would be like if they interacted with Observer B.



#### **Exploratory questions**

Participants shared additional thoughts, feelings or impressions about the alleged other participants.



#### Debriefing

The experimenter informed participants that there were no other participants in the adjacent room and that there would not be a brief interaction. They explained the true nature of the study and the rationale.

Figure 1. Steps in the experimental procedure.

# **Data Analytic Approach**

## **Data Screening**

I checked the data for errors and examined the descriptive statistics and distribution properties of each variable. Extreme scores were identified and changed to the nearest non-outlying value so that these individual results would not unduly influence the overall findings (noted to be common practice in Myers & Well, 2003). I assessed the distribution properties of each variable for significant skew and kurtosis. Variables that did not meet the assumptions underlying the parametric tests were either transformed using the equation that best reduced the distribution's skew and kurtosis or assessed using non-parametric tests. Transformations for specific variables are described below.

### **Potential Covariates**

Potential covariates included: extraneous factors related to the experimental procedure (experimenter, order of feedback, handwriting on written feedback); demographic characteristics (ethnicity, gender, assumed gender of the two interaction partners); and psychological variables (self-esteem and depression: measured continuously). Analyses assessed the possible influence of these eight factors on the two primary variables of interest: choice of interaction partner and interest in further contact with either interaction partner. Chi-square analyses explored the influence of potential categorical covariates on participants' choice between the PFP and NFP. Logistic regressions assessed the influence of continuous potential covariates on interaction partner choice.

ANOVAs assessed the influence of potential categorical covariates on the participants' interest in interacting with the PFP and NFP (rated on a continuous scale). Pearson product-moment correlations (with normally distributed data) or Spearman rank-

order correlations (for variables not meeting the assumptions of the parametric tests) assessed the associations between continuous potential covariates and interest in the PFP and NFP. These analyses identified factors that significantly influenced the primary dependent variables. Where appropriate, these variables were included as covariates in further analyses.

### **Social Anxiety**

I examined the impact of participants' social anxiety on the dependent variables in two ways. The first set of analyses included data collected from all students who participated in the experiment (n = 276) and social anxiety symptoms were treated as a continuous variable. The second set of analyses included data collected from the three subgroups (HSA, MSA, and LSA) of the participants selected from the full sample based on their level of social anxiety in order to assess between and within group responses.

# Social anxiety group formation for between and within group analyses

The HSA group was formed based on research by Peters (2000), which identifies an SPAI difference score of 88 as the optimal cut-off point for identifying individuals with social anxiety (see the methods section for the SPAI sensitivity, specificity, and predictive power). Of the 276 undergraduate students, 23 individuals had SPAI difference scores above 88. This represents 8% of the total sample; a proportion consistent with the estimated prevalence of clinical levels of social anxiety in community samples. For instance, the 12-month prevalence rate of social phobia in adults aged 18 to 64 is 8% according to the US National Comorbidity Survey Replication (Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012). The HSA group's SPAI difference scores (M = 99.29, SD = 14.92) also indicated clinically significant levels of distress as they did not differ significantly from the mean SPAI difference score for diagnosed social phobics in the SPAI standardization sample, n = 121, M = 95, SD = 32.8 (Turner et al., 1989), t(22) = 1.38, p = .182.

The HSA groups' SPAI difference scores (minimum 88.30; maximum 142.52) were 1.34 standard deviations above the full sample's mean. Participants with SPAI difference scores 1.34 standard deviations below the mean made up the LSA group. This group also comprised 8% of the total sample with the lowest SPAI scores (n = 23; M = 8.45; SD = 10.05; minimum -25.67; maximum 20.92). The middle 8% of participants with SPAI difference scores within 0.14 standard deviations of the mean comprised the MSA group (n = 23, M = 54.21; SD = 2.23; minimum 50.88; maximum 2.23).

### **Interest Ratings and Choice of Potential Interaction Partners**

### Analysis of social anxiety as a continuous variable

Logistic regressions examined social anxiety's potential influence on interaction partner choice. Multiple regressions explored social anxiety's relationship to overall interest in contact with the PFP and NFP.

### Between and within group analyses

Mixed between-within subjects ANOVAs examined the HSA, MSA, and LSA groups' overall interest in interacting with the PFP versus the NFP. MANOVAs assessed interest in the PFP and NFP in the different social contexts that make up the overall interest measure.

### **Measures of Emotion and Cognition**

### Continuous variables analyses

Analyses examined participants' emotional response to imagining interacting with each potential interaction partner, their impressions of the interaction partners, and whether they felt they would be able to meet each interaction partner's expectations. Treating social anxiety continuously across the sample, multiple regressions assessed social anxiety's effect on participants' anxiety, positive affect, and negative affect when imagining interacting with the PFP and NFP as well as participants' ratings of the PFP's

and NFP's traits. Spearman rank-order correlations examined the relationship between social anxiety and participants' predictions about the PFP's and NFP's social abilities. Logistic regressions assessed social anxiety's influence on participants' beliefs about whether they could meet the PFP's and NFP's expectations.

### Analyses of group differences

Mixed between-within subjects ANOVAs examined the emotional and cognitive responses (i.e., anxiety, positive affect, negative affect, and ratings of the interaction partners' traits) of the three social anxiety groups (HSA, MSA, and LSA) to the two interaction partners (PFP and NFP). To further explore group differences in the rating of the PFP and NFP, separate mixed between-within subjects ANOVAs examined the components of the ratings measure (i.e. astuteness, trustworthiness, and appeal). Spearman rank-order correlations examined participants' expectations about the PFP's and NFP's social abilities.

Wilcoxon signed-rank tests assessed the social anxiety groups' perceptions of the PFP's and NFP's expectations of their social abilities and their perceptions of their own actual social abilities. McNemar's tests examined the social anxiety groups' predictions about whether they would meet the PFP's and NFP's expectations.

# **Exploratory Analyses**

Spearman's rank-order correlations assessed the relationship between experimenters' ASQ ratings of the participants' social abilities and the participants' self-rated ASQ expected social ability with the PFP and NFP.

The three social anxiety groups' responses to open-ended questions during the debriefing procedure were reviewed. Comments that came up repeatedly and any patterns that appeared to differ between groups are summarized in a qualitative description.

### Results

# **Experimental Procedure and Response to Interaction Partners**

The experimenter running the experiment was not significantly associated with the participants' choice of one interaction partner over the other for the proposed interaction,  $\chi^2(3, N=276)=2.22$ , p=.528, Cramer's V = .09, or overall interest in spending time with either the PFP, F(3, 271)=2.41, p=.067,  $\eta^2=.03$  or NFP, F(3, 270)=0.99, p=.398,  $\eta^2=.01$ , across a range of social scenarios. The order that experimenters gave participants the positive and negative feedback did not influence participants' choice of interaction partner,  $\chi^2(1, N=276)=2.05$ , p=.152,  $\phi=-.09$ , or their reported interest in the PFP, F(1, 275)<0.01, p=.949,  $\eta^2<.01$ , and NFP, F(1, 275)=1.04, p=.310,  $\eta^2<.01$ . The handwriting of the feedback paragraphs did not impact participants' choice of interaction partner,  $\chi^2(2, N=276)=4.95$ , p=.084, Cramer's V = .13 or their reported interest in the PFP, F(2, 274)=.13, p=.877,  $\chi^2<.01$  or NFP, F(2, 274)=2.99, p=.051,  $\eta^2<.01$ .

Of the 238 participants asked, 204 (86%) reported making assumptions about the interaction partners' genders. Many of the participants stated that their assumptions were made on the basis of the handwriting of the feedback. Chi-square findings confirm the participants' verbal reports. Handwriting had a significant and moderate effect on the assumptions about gender,  $\chi^2(4, n=476)=196.56$ , p<.001, Cramer's V = .45, while feedback content did not,  $\chi^2(2, n=476)=.50$ , p=.779, Cramer's V = .03. Forty-nine percent of the participants assumed the feedback was written by a female and 37% assumed it was written by a male. The remaining 14% of the participants said that they had not made any assumptions about gender. The gender of the participant was unrelated to his or her assumptions about the gender of the interaction partners,  $\chi^2(2, n=204)=0.48$ , p=.786, Cramer's V = .03. Participants' assumptions about interaction partners' genders did not influence which interaction partner they chose for the proposed

interaction,  $\chi^2(2, n = 476) = .11$ , p = .948, Cramer's V = .02, or their degree of interest in the PFP, F(3, 275) = .62, p = .604,  $\eta^2 < .01$ , or the NFP, F(3, 275) = 1.79, p = .149,  $\eta^2 < .01$ .

### **Examination of Potential Covariates**

Ethnicity did not significantly relate to participants' choice of interaction partner for the proposed interaction,  $\chi^2(3, n=276)=5.58$ , p=.134, Cramer's V = .14, or their interest in the PFP, F(3, 273)=1.11, p=.344,  $\eta^2<.01$ . Ethnicity, however, significantly related to participants' interest in the NFP, F(3,273)=3.45, p=.017,  $\eta^2=.04$ . Post hoc comparisons using Tukey HSD tests indicated that Asian participants (M=359.21; SD=128.85; 95% CI [334.86, 383.56]) reported significantly more interest in the NFP than Caucasian participants (M=304.92; SD=128.18; 95% CI [279.35, 330.48]). No other differences between ethnicities were observed (p>.05).

Gender significantly influenced participants' choice of interaction partner for the proposed interaction,  $\chi^2(1, n=276)=6.74$ , p=.009,  $\phi=.16$ . Women chose to interact with the PFP 65.8% of the time, which was significantly more often than their 34.2% preference for interacting with the NFP,  $\chi^2(1, n=202)=20.28$ , p<.001. In contrast, men were equally likely to choose the PFP (48.6%) as the NFP (51.4%),  $\chi^2(1, n=74)=0.05$ , p=.816. Female and male participants' self-rated interest in interacting with the PFP across a range of contexts however, did not significantly differ, F(1, 275) < .01, p=.997,  $\eta^2 < .01$ . Males expressed more interest in the NFP than females did, F(1, 275)=4.00, p=.047,  $\eta^2=.01$ , but the mean difference between females' (M=325.21; SD=126.74; 95% CI [307.63, 342.80]) and males' (M=360.20; SD=134.31; 95% CI [329.09, 391.32]) self-rated interest in the NFP was small.

Self-esteem was not related to participants' choice of an interaction partner for the proposed interaction,  $\chi^2(1, N = 276) = 1.68$ , p = .194. Self-esteem also did not significantly relate to interest in the NFP, r = .04, n = 276, p = .516; however, self-esteem was positively correlated with interest in the PFP, r = .18, n = 276, p = .002.

Participants' ages and their self-reported symptoms of depression did not significantly affect their choice of one interaction partner over another or their interest in either the PFP or NFP: p > .05 for all.

### **Social Anxiety Symptoms in the Present Sample**

Social Phobia and Anxiety Inventory (SPAI; Turner et al., 1989) scores for each demographic category as well as for the sample overall are displayed in Table 1.

Table 1. Participants' Ethnicity, Gender, and SPAI scores

Characteristic	n	SPAI M	SD	Minimum	Maximum
Asian/Pacific Islander	111	60.75	23.65	0.00	142.52
Caucasian	98	49.97	23.18	1.15	139.62
East Indian	36	47.99	27.05	-7.62	107.40
Other Ethnicity	31	52.10	28.26	-25.67	113.10
Female	202	54.98	25.46	-25.67	142.52
Male	74	52.40	23.60	3.00	103.32
Total	276	54.29	24.96	-25.67	142.52

## Hypothesis 1a: Social Anxiety Will Relate to More Frequently Choosing to Interact With the NFP Over the PFP

Social anxiety did not predict interaction partner choice,  $\chi^2(1, n=276)=0.44$ , p=0.509, OR = 1.00. Given that gender was found to be a significant covariate influencing participants' choices of interaction partner, responses of each gender were also assessed separately. Social anxiety did not predict participants' choice of interaction partner in either females,  $\chi^2(1, n=200)=0.09$ , p=0.771, OR = 1.00, or males,  $\chi^2(1, n=73)=1.22$ , p=0.269, OR = 1.01. Regardless of social anxiety, participants were more likely to choose the PFP than the NFP,  $\chi^2(1, n=276)=13.93$ , p<0.001. Of the 276 participants, 169 (61%) choose the PFP and 107 (39%) chose the NFP.

### Hypothesis 2a:

# Social Anxiety Will Predict Increased Interest in the NFP and Decreased Interest in the PFP

As predicted, social anxiety related to reduced overall interest in contact with the PFP,  $b^* = -.12$ ,  $R^2 = .02$ , F(1, 272) = 4.12, p = .043. Social anxiety did not significantly relate to interest in contact with the NFP,  $b^* < .01$ ,  $R^2 < .01$ , F(1, 271) = 0.02, p = .885.

In the covariance analysis, social self-esteem was also strongly significantly related to overall interest in the PFP; as well, social self-esteem and social anxiety were strongly negatively correlated, r = -.67, n = 276, p < .001. A second regression assessed social self-esteem's and social anxiety's influence on interest. Multicollinearity was not a concern; tolerance is .55, and the variance inflation factor (VIF) is 1.82. Together social anxiety and social self-esteem explained 3.4% of the variance in overall interest in the PFP, F(2, 272) = 4.72, p = .010. Only social self-esteem significantly and uniquely predicted overall interest in the PFP, p = .023; social anxiety no longer significantly contributed to the prediction of overall interest, p = .023.

## **Hypothesis 2b:**

# HSAs Will Be More Interested in Further Interactions with the NFP than the PFP; Particularly When Asked to Consider More Intimate Relationships

Social anxiety did not interact with feedback type to affect participants' overall interest in contact with the interaction partners, Wilks's lambda = .98, F(2,66) = 0.60, p = .553,  $\eta^{p2} = .02$ . A large main effect revealed that participants reported significantly more interest in the PFP (M = 414.62, SD = 132.34, 95% CI [383.06, 446.18]) than in the NFP (M = 327.03, SD = 135.33, 95% CI [294.35, 359.71]), Wilks's lambda = .67, F(1,66) = 32.03, p < .001,  $\eta^{p2} = .33$ . Social anxiety groups did not differ in their overall interest across interaction partners, F(2,66) = 1.25, p = .293,  $\eta^{p2} = .04$ .

Social anxiety did not significantly influence interest in the interaction partners over the combined social contexts assessed (i.e., a five-minute interaction, doing a group project, spending an evening together, forming a friendship, considering an

intimate relationship), Wilks's lambda = .80, F(10, 124) = 1.49, p = .150,  $\eta^{p2} = .11$  for the PFP and Wilks's lambda = .79, F(10, 126) = 1.58, p = .119,  $\eta^{p2} = .11$  for the NFP. When considered separately, only interest in a five-minute interaction with either interaction partner reached or approached significance, F(2, 66) = 5.19, p = .008,  $\eta^{p2} = .14$  for the PFP and F(2, 66) = 3.75, p = .029,  $\eta^{p2} = .10$  for the NFP. HSAs reported the least interest in the 5-minute interaction with both the PFP (M = 77.73, SD = 34.17) and the NFP (M = 65.91, SD = 30.27). LSAs reported the greatest interest in the interaction with both the PFP (M = 107.35, SD = 25.92) and the NFP (M = 90.74, SD = 40.57). MSAs' interest fell in between for both the PFP (M = 96.65, SD = 33.91) and NFP (M = 88.54, SD = 30.75).

### **Hypothesis 3a:**

Social Anxiety Will Predict Higher Negative Affect and Lower Positive Affect When Individuals Are Thinking of Talking With a Potential Interaction Partner Regardless of the Valence of Previous Feedback (Positive or Negative)

Participants' negative affect scores in response to the PFP and the NFP were positively skewed (1.75 and 1.13 respectively). Following an inverse transformation, the distribution of negative affect scores was relatively normal (-.41 and -.02 for the PFP and NFP respectively).

As hypothesized, when asked to imagine interacting with either interaction partner, social anxiety predicted higher self-reported state anxiety with both the PFP,  $b^*$  = .47,  $R^2$  = .23, F(1, 257) = 76.34, p < .001, and the NFP,  $b^*$  = .44,  $R^2$  = .20, F(1, 257) = 64.62, p < .001; and higher negative affect (transformed inverse scores) with both the PFP,  $b^*$  = -.40,  $R^2$  = .16, F(1, 274) = 52.38, p < .001, and the NFP,  $b^*$  = -.38,  $R^2$  = .15, F(1, 274) = 46.97, p < .001. Higher social anxiety also predicted less positive emotion with both the PFP,  $b^*$  = -.16,  $R^2$  = .03, F(1, 274) = 7.38, p = .007, and the NFP,  $b^*$  = -.17,  $R^2$  = .03, F(1, 274) = 8.39, p = .004.

### **Hypothesis 3b:**

Regardless of Social Anxiety, LSA, MSA, and HSA Individuals Will Feel More Positive Affect and Less Negative Affect When Thinking of the PFP as Opposed to the NFP

### State anxiety

As hypothesized, participants' social anxiety grouping did not interact with feedback type to influence their self-reported state anxiety when thinking of the interaction partners, Wilks's lambda = .99, F(2,59) = 0.24, p = .791,  $\eta^{p2} < .01$ . A large main effect showed that participants reported significantly more anxiety in response to the NFP (M = 55.68, SD = 29.63, 95% CI [49.41, 61.94]) than the PFP (M = 42.31, SD = 30.25, 95% CI [36.02, 48.60]), Wilks's lambda = .78, F(1,59) = 16.75, p < .001,  $\eta^{p2} = .22$ . Social anxiety groups differed in their anxiety averaged across interaction partners, F(2,59) = 21.12, p < .001,  $\eta^{p2} = .42$ . HSD post hoc tests revealed that HSAs reported significantly more anxiety than MSAs and LSAs: p < .001. See Table 2 for each social anxiety group's self-reported state anxiety in response to the PFP and NFP.

### **Negative affect**

Similar to state anxiety, participants' social anxiety grouping did not interact with feedback type to affect self-reported global negative affect (transformed inverse scores used throughout) when thinking about the interaction partners, Wilks's lambda = .96, F(2,67) = 1.33, p = .271,  $\eta^{p2} = .04$ . Participants averaged across social anxiety groups reported significantly more negative affect in response to the NFP (M = 0.07, SD = 0.02, 95% CI [0.07, 0.07]) than the PFP (M = 0.08, SD = 0.02, 95% CI [0.08, 0.08]), Wilks's lambda = .75, F(1,67) = 22.18, p < .001,  $\eta^{p2} = .25$ . Social anxiety groups differed, however, in their negative affect averaged across interaction partners, F(2,67) = 17.46, p < .001,  $\eta^{p2} = .34$ . HSD post hoc tests revealed that HSAs reported more negative affect than MSAs and LSAs: p < .003. See Table 2 for each social anxiety group's self-reported negative affect in response to the PFP and NFP.

#### **Positive affect**

Social anxiety significantly interacted with feedback type to influence positive affect towards the interaction partners, Wilks's lambda = .91, F(2,67) = 3.32, p = .042,  $\eta^{p2}$  = .09. Neither the main effect for positive affect, Wilks's lambda = .96, F(1,67) = 0.99, p = .324,  $\eta^{p2} = .02$ , nor the difference between groups, F(2.67) = 1.56, p = .219,  $\eta^{p2} = .219$ .04, were significant. Post hoc t-tests to further explore the significant interaction revealed that HSA participants reported more positive affect when thinking of the PFP than when thinking of the NFP, t(22) = 2.15, p = .043,  $n^2 = .17$ . MSAs and LSAs did not report differential positive affect towards either interaction partner regardless of feedback type, t(22) = .65, p = .520,  $\eta^2 = .02$  and t(22) = -1.18, p = .249,  $\eta^2 = .06$ , respectively; though the effect size for LSAs higher mean positive affect with the NFP compared to the PFP was moderate. HSAs reported significantly less positive affect than LSAs in reaction to the NFP, t(44) = -2.42, p = .020,  $\eta^2 = .12$ , though they did not differ from LSAs in their positive affect in reaction to the PFP, t(44) = -.90, p = .373,  $\eta^2 = .02$ . HSAs did not differ from MSAs in their positive affect in reaction to either interaction partner: t(44) = -.40, p = .689,  $\eta^2 < .01$  for the PFP and t(44) = -1.35, p = .185,  $\eta^2 = .04$  for the NFP. See Table 2 for each social anxiety group's self reported positive affect in response to the PFP and NFP.

Table 2. Socially Anxious Groups' Mean Self-Rated Emotional Responses When Imagining Interacting With the PFP and the NFP

		PFP				NFP			
Group		M SD $\frac{95\% \text{ Cl}}{LL \text{ UL}}$ M SD $\frac{95\% \text{ Cl}}{LL}$	95% CI			0.5	95%	95% CI	
	IVI		LL	UL					
				State	Anxiety				
HSA	63.80	23.03	53.02	74.58	74.95	19.14	66.24	83.66	
MSA	42.83	29.09	30.25	55.41	59.50	27.01	47.52	71.48	
LSA	19.57	19.41	10.73	28.41	33.00	25.59	21.35	44.65	
	Negative Affect (transformed inverse scores)								
HSA	0.07	0.02	0.06	0.07	0.06	0.02	0.05	0.06	
MSA	0.08	0.02	0.07	0.09	0.07	0.02	0.06	0.08	
LSA	0.09	0.01	0.08	0.09	0.08	0.02	0.76	0.09	

		Р	FP			N	FP	
Group		0.0	95% CI			0.0	95% CI	
	. М	SD	SD LL	UL	М	SD	LL	UL
	Positive Affect							
HSA	21.91	7.95	18.47	25.35	19.61	6.60	16.76	22.46
MSA	22.83	7.73	19.57	26.10	22.33	7.23	19.28	25.39
LSA	24.04	8.09	20.55	27.54	25.22	8.94	21.35	29.09

*Note.* For all social anxiety groups n = 23. CI = confidence interval; LL = lower limit, UL = upper limit.

# Hypothesis 4a:

# Social Anxiety Symptoms Will Predict More Negative Impressions of the PFP and More Favourable Impressions of the NFP

Consistent with hypothesis 4a, higher social anxiety predicted more negative overall ratings of the PFP's traits,  $b^* = -.32$ ,  $R^2 = .10$ , F(1, 274) = 30.64, p < .001, and more favourable overall ratings of the NFP's traits,  $b^* = .28$ ,  $R^2 = .08$ , F(1, 274) = 22.79, p < .001. When asked what they expected the PFP's social abilities to be like, participants' social anxiety was not found to have a significant effect,  $r_s = .01$ , n = 276, p = .880. In contrast, social anxiety was positively related to higher expectations of the NFP's social abilities,  $r_s = .17$ , n = 276, p = .004.

# Hypothesis 4b:

# Unlike LSAs and MSAs, HSAs Will Find the NFP More Astute, Trustworthy, and Appealing Than the PFP

### **Overall ratings**

As hypothesized, social anxiety interacted with feedback type to affect overall ratings of the interaction partners, Wilks's lambda = .77, F(2, 67) = 10.12, p < .001,  $\eta^{p2}$  = .23. See Figure 2 for a plot of each social anxiety group's overall ratings by interaction partner.

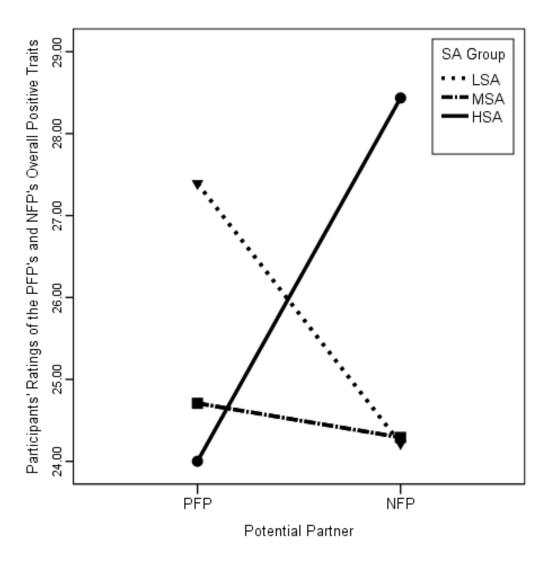


Figure 2. Social anxiety group mean ratings of the PFP's and NFP's overall positive traits.

Social anxiety groups did not differ in the overall positivity of their ratings averaged across interaction partners, F(2,67) = 1.37, p = .261,  $\eta^{p2} = .04$ , and the main effect for the interaction partner being rated (i.e. the PFP or NFP) was not significant, Wilks's lambda = .99, F(1,67) = 0.16, p = .687,  $\eta^{p2} < .01$ . Post hoc t-tests further explored the significant social anxiety by trait ratings interaction revealed that, as predicted, HSA participants rated the PFP significantly less favourably than the NFP, t(22) = -3.73, p = .001,  $\eta^2 = .39$ . HSAs and MSAs' ratings of the PFP did not differ, t(45) = -0.53, p = .602,  $\eta^2 < .01$ ; though HSAs' ratings of the PFP were significantly more

negative than LSAs' ratings of the PFP, t(23) = -2.40, p = .021,  $\eta^2 = .12$ . Also as predicted, HSAs rated the NFP significantly more positively than both the MSAs, t(45) = 3.25, p = .002,  $\eta^2 = .19$ , and LSAs did, t(45) = 3.17, p = .003,  $\eta^2 = .19$ . Conversely, LSA participants rated the PFP significantly more favourably than the NFP, t(22) = 3.28, p = .003,  $\eta^2 = .33$ . The MSA participants did not rate the PFP and NFP differently in terms of the traits they believed they possessed, t(23) = 0.30, p = .767,  $\eta^2 < .01$ . See Table 3 for each social anxiety group's overall ratings of the PFP and NFP. Given the significant results for the overall ratings of the interaction partners, the three components of the interest measure were further explored.

#### **Astuteness**

Social anxiety interacted with feedback type to affect ratings of the interaction partners' astuteness, Wilks's lambda = .67, F(2,67) = 16.53, p < .001,  $\eta^{p2}$  = .33. See Figure 3 for a plot of each social anxiety group's ratings of the interaction partners' astuteness.

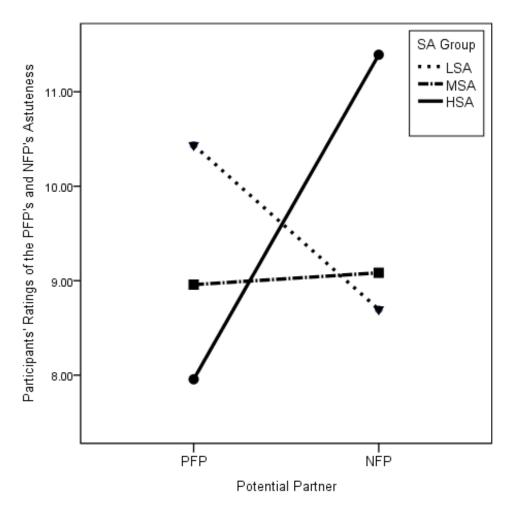


Figure 3. Social anxiety group mean ratings of the PFP's and NFP's astuteness.

Averaged across social anxiety groups, participants' ratings of the interaction partners' astuteness did not differ, Wilks's lambda = .96, F(1,67) = 2.70, p = .105,  $\eta^{p2}$  = .04, and social anxiety groups' ratings averaged across interaction partners did not differ, F(2,67) = 1.29, p = .283,  $\eta^{p2}$  = .04. Post hoc t-tests showed that HSAs rated the NFP as significantly more astute then the PFP, t(22) = 4.69, p < .001,  $\eta^2$  = .50. HSAs rated the NFP significantly higher than did the MSAs, t(45) = 3.80, p < .001,  $\eta^2$  = .24, and LSAs, t(44) = 4.24, p < .001,  $\eta^2$  = .29. In contrast, LSAs rated the NFP as significantly less astute than the PFP, t(22) = 3.87, p = .001,  $\eta^2$  = .41, while MSAs' ratings of interaction partners astuteness did not differ, t(23) = -0.18, p = .859,  $\eta^2$  < .01. See Table 3 for each social anxiety group's ratings of the PFP's and NFP's astuteness.

#### **Trustworthiness**

Social anxiety interacted with feedback type to affect ratings of the interaction partners' trustworthiness, Wilks's lambda = .86, F(2, 67,) = 5.30, p = .007,  $\eta^{p2} = .14$ . See Figure 4 for a plot of the social anxiety grouping by interaction partner trustworthiness ratings.

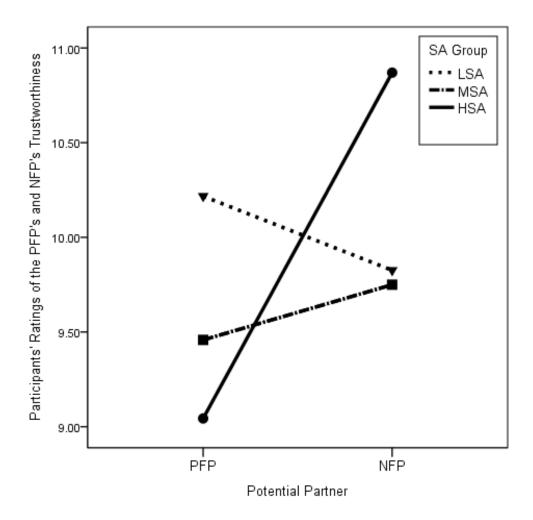


Figure 4. Social anxiety group mean ratings of the PFP's and NFP's trustworthiness.

An examination of Figure 4 reveals that the significant main effect, Wilks's lambda = .94, F(1,67) = 4.13, p = .046,  $\eta^{p2}$  = .06, does not meaningfully reflect the differences in the social anxiety groups' responses. Social anxiety groups' ratings of trustworthiness averaged across interaction partners did not significantly differ, F(2,67) =

0.43, p = .653,  $\eta^{p2} = .01$ . Post hoc t-tests showed that HSAs found the NFP more trustworthy than the PFP, t(22) = -3.43, p = .002,  $\eta^2 = .35$ . There was a trend for HSAs to rate the NFP as more trustworthy than did the MSAs, t(45) = 2.00, p = .051,  $\eta^2 = .08$ , and LSAs, t(44) = 1.86, p = .070,  $\eta^2 = .07$ . MSAs and LSAs did not did not rate the interaction partners differently on trustworthiness, p > .05. See Table 3 for each social anxiety group's ratings of the PFP's and NFP's trustworthiness.

### **Appeal**

Social anxiety did not interact with feedback type to affect ratings of the interaction partners' attractiveness and likeability, Wilks's lambda = .99, F(2,67) = 0.13, p = .883,  $\eta^{p2} < .01$ . See Figure 5 for a plot of the social anxiety by interaction partner appeal ratings.

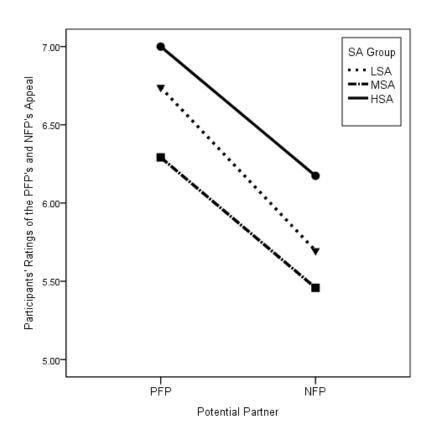


Figure 5. Social anxiety group mean ratings of the PFP's and NFP's appeal.

Collapsed across social anxiety groups, participants found the PFP (M=6.68, SD=1.35, 95% CI [6.36, 7.00]) more appealing than the NFP (M=5.78, SD=1.25, 95% CI [5.48, 6.07]), Wilks's lambda = .77, F(1,67)=20.07, p<0.001,  $\eta^{p2}=0.23$ . Social anxiety groups' average ratings of interaction partners' appeal significantly differed, F(2,67)=5.95, p=0.049,  $\eta^{p2}=0.09$ . Unexpectedly, post hoc HSD analyses revealed that HSAs rated the interaction partners as significantly more appealing on average than MSAs did, p=0.015. LSAs did not significantly differ from HSAs or MSAs, p>0.05 for both. See Table 3 for each social anxiety group's ratings of the PFP's and NFP's appeal.

Table 3. Social Anxiety Groups' Mean Ratings of the PFP's and NFP's Traits

PF			FP			N	FP	
Group	М	SD	95%	√ CI	М	SD	95%	6 CI
			LL	UL			LL	UL
				All Posit	ive Traits			
HSA	24.00	3.97	22.29	25.71	28.43	4.23	26.61	30.26
MSA	24.71	5.16	22.53	26.89	24.29	4.50	22.39	26.19
LSA	27.39	5.51	25.01	29.77	24.22	4.77	22.16	26.28
				Astut	eness			
HSA	7.96	2.14	7.03	8.88	11.39	2.04	10.51	12.27
MSA	8.96	2.20	8.03	9.89	9.08	2.12	8.19	9.98
LSA	10.43	2.15	9.51	11.36	8.70	2.27	7.71	9.68
				Trustwo	rthiness			
HSA	9.04	2.03	8.16	9.92	10.87	1.94	10.03	11.71
MSA	9.46	2.30	8.49	10.43	9.75	1.89	8.95	10.55
LSA	10.22	2.19	9.27	11.17	9.83	1.87	9.02	10.64
	Appeal							
HSA	7.00	1.00	6.57	7.43	6.17	1.03	5.73	6.62
MSA	6.29	1.27	5.76	6.83	5.46	1.28	4.92	6.00
LSA	6.74	1.66	6.02	7.46	5.70	1.36	5.11	6.29

*Note*. For all social anxiety groups n = 23. CI = confidence interval; LL = lower limit, UL = upper limit.

### Hypothesis 5a:

# Social Anxiety Symptoms Will Relate to Predictions That One Will Fail to Meet the PFP's Expectations but not the NFP's Expectations

Social anxiety predicted participants' belief that their social abilities would fall below the PFP's expectations,  $b^* = .02$ ,  $\chi^2(1, n = 276) = 18.30$ , p < .001, OR = 1.02. There was a trend for social anxiety to predict that participants' social abilities would also fall below the NFP's expectations,  $b^* = .02$ ,  $\chi^2(1, n = 276) = 3.44$ , p = .064, OR = 1.02; though, only 15 of the 276 participants believed they would not meet the NFP's expectations. Social anxiety negatively correlated with participants' predictions about what the level their social ability would be in an interaction with the PFP,  $r_s = -.39$ , n = 274, p < .001 and NFP,  $r_s = -.35$ , n = 274, p < .001, but social anxiety did not significantly influence participants' assessment of either interaction partners' expectations of them (p > .05 for both).

## Hypothesis 5b: HSAs Will Predict That the PFP Expects More From Them Than the NFP

HSAs felt that the PFP had higher expectations of their social abilities than the NFP did, as did MSAs and LSAs. See Table 4 for the Wilcoxon signed-rank test results.

## **Hypothesis 5c:**

# HSAs Will Predict That Their Social Abilities Will Not Differ in Their Interactions With Either the PFP or NFP

As predicted, HSAs did not predict that their social abilities would differ depending on the interaction partner. There was a trend for MSA participants to believe their actual social performance would be better with the PFP than the NFP, but this contrast was not significant in any of the three subgroups. See Table 4 for the Wilcoxon signed-rank test results.

Table 4. Contrast Between Participants' Perceptions of PFP's and NFP's Expectations of Them and Their Perceptions of Their Actual Social Abilities

Group	PFP	NFP	7		
	Mdn	Mdn Z		Р	r
	ı	Perception of inte	raction partners'	expectations	
HSA	7	4	-3.60	< .001	.53
MSA	7	4	-3.76	< .001	.54
LSA	7	4	-4.04	< .001	.60
		Perception	of actual social	ability	
HSA	6	5	-1.47	.143	.22
MSA	7	6	-1.84	.067	.26
LSA	7	7	-0.82	.414	.12

Note: For HSA, MSA, and LSA groups, n = 23

# Hyothesis 5d: HSAs Will Predict That They Are More Likely to Fail to Meet the PFP's Expectations Than the NFP's Expectations

Using McNemar's test, it was found that HSAs and MSAs believed they were significantly more likely to meet the NFP's expectations of their social abilities than the PFP's expectations, p = .003 and p = .008 respectively. No LSAs believed they would fail to meet the NFP's expectations so the McNemar's test could not be run on this group. See Table 5 for the numbers and proportions of social anxiety group participants who felt they would meet the PFP's and NFP's expectations.

Table 5. Number and Proportion of Participants Who Believed They Would Meet the PFP's and NFP's Expectations

PFP			NFP		
Group	N	Percent	N	Percent	
HSA	10	43.5	21	91.3	
MSA	14	60.9	22	95.7	
LSA	16	69.6	23	100	

Note: For HSA, MSA, and LSA groups, total n = 23.

### **Summary of Results**

Assessed continuously, social anxiety symptoms did not predict interaction partner choice or interest in further contact with the NFP. Similarly, social anxiety symptoms did not uniquely predict interest in further contact with the PFP. Between and within group analyses revealed that regardless of social anxiety, participants reported more interest in further contact with the PFP than the NFP.

Social anxiety symptoms predicted higher state anxiety and negative affect, and lower positive emotion when imagining interacting with either partner. Between and within group analyses revealed that regardless of social anxiety, participants reported less state anxiety and negative affect when they imagined interacting with the PFP than the NFP. Social anxiety interacted with feedback type to influence positive affect towards the interaction partners. HSA participants reported more positive affect when imagining interacting with the PFP compared to the NFP; whereas, MSA and LSA participants' self- reported positive affect did not significantly differ across partners.

Social anxiety symptoms predicted more negative ratings of the PFP's traits and more positive ratings of the NFP's traits. Between and within analyses revealed that social anxiety significantly interacted with feedback type to influence overall ratings of the interaction partners. HSAs rated the NFP significantly more favourably than the PFP. LSAs showed the opposite pattern rating the PFP significantly more favourably than the NFP. MSAs ratings of the two potential partners' traits did not differ. An examination of the sub-components of the trait ratings measure revealed that social anxiety significantly interacted with feedback type to influence participants' ratings of the interaction partners' astuteness and trustworthiness. HSAs found the NFP significantly more astute and trustworthy than the PFP. LSAs rated the PFP partner as more astute than the NFP. MSAs' astuteness ratings and LSAs' and MSAs' trustworthiness ratings did not significantly differ across the two interaction partners. Despite these differential ratings on astuteness and trustworthiness, social anxiety did not interact with feedback type to influence ratings of the partners' appeal. Instead, collapsed across social anxiety groups, participants found the PFP more appealing than the NFP.

Social anxiety symptoms predicted participants' belief that their social abilities would fall below the PFP's expectations; whereas, this relationship failed to reach significance with the NFP. Social anxiety symptoms did not affect participants' perceptions of either feedback partners' expectations of them; however, social anxiety negatively correlated with participants' predictions about their level of social ability. Between and within group analyses revealed that, regardless of social anxiety grouping, participants believed that the PFP had higher expectations of their social abilities than the NFP did. HSAs and MSAs believed they were more likely to meet the NFP's expectations about their social abilities then the PFP's expectations. No LSAs believed that they would fall short of the NFPs expectations so the analysis could not be run. <sup>1</sup>

### **Exploratory Analyses**

Experimenters' and participants' perceptions of social ability. Experimenters' ratings of the participants' social abilities significantly correlated with the participants' self-ratings of their expected social ability with the PFP, rs = .31, n = 134, p < .001, and NFP, rs = .22, n = 132, p = .011, with medium and small effect sizes respectively.

Participants' additional comments: Qualitative summary and interpretation. Participants' answers to the exploratory open-ended questions revealed various interpretations and attributions that maintain self-views and lead to differential evaluations of potential interaction partners. Roughly half of the HSAs

Analyses including all participants divided based on a tertile split of SPAI scores (n = 92 per group) largely replicated the between and within group results of the present study using extreme subgroups (i.e., HSA, MSA, LSA). Two exceptions to this pattern of findings related to positive affect and self-rated social ability; for the extreme subgroups analyses see hypothesis 3b and 5c of the results respectively. With the social anxiety tertile split, averaged across social anxiety groups, participants reported more positive affect with the PFP than the NFP, Wilks's lambda = .96, F(1,273) = 10.13, p = .002,  $\eta^{p2} = .04$ . As well, social anxiety tertile groups differed in their positive affect averaged across interaction partners, F(1,273) = 3.62, p = .028,  $\eta^{p2} = .03$ , with the highest social anxiety tertile reporting significantly less positive affect than the lowest social anxiety tertile. Regarding social ability, the three social anxiety tertile groups expected their social ability to be better with the PFP than the NFP: for the high social anxiety tertile Z = -2.90, p = .004, r = .30; for the mid social anxiety tertile Z = -3.55, p > .001, r = .37; for the low social anxiety tertile Z = -4.09, p > .001, r = .43.

spontaneously mentioned that the PFP seemed nice and friendly and a quarter mentioned that the PFP seemed like he or she would be easy to talk to. Several HSAs also alluded to the PFP's motivation to be helpful stating that they: "were being kind," "didn't want to hurt my feelings," and were "supportive of me." Two HSAs noted that the PFP is probably shy and one presumed that this led him or her to "picture me as more social." Other comments included that the PFP "described my more ideal self – someone she would like to be more like" or stated "a common (but inaccurate) first impression".

HSAs also made favourable guesses about the NFP. The most frequent comments related to how perceptive he or she was followed by comments noting his or her honesty and intelligence. For example, HSAs comments about the NFP included that he or she "is very good at reading people at first glance," "was very correct and got what kind of person she was," "got her personality dead on", and "is very smart, intelligent and very perceptive." Several HSAs also believed that the NFP was older, tall and confident.

For contrast, LSAs responses are reviewed. Only two LSAs spontaneously mentioned that the PFP was nice. Several LSAs noted that the PFP was intelligent and perceptive. They apparently felt the favourable feedback was a result of the observer accurately assessing their true strengths. As a result, niceness became less relevant. A few LSAs made spontaneous remarks that were framed in a way that suggests they may not value obsequious comments. For instance, they felt the PFP: "sugarcoats things," "was trying to please and doesn't like confrontation," "was average," and "null, obvious, and didn't have much to say." In talking about the NFP, over half of the LSAs proposed alternate explanations to discount the NFP's feedback. For instance, LSAs commented on the NFP's critical and judgemental nature, lack of attention to them or what they were saying, projection of his or her own traits onto the participant, competitive feelings towards the participant that made them "less willing to rate higher", or suggested that the negative feedback might be the result of a "language barrier" that led the NFP not to see how sociable the participant is. Despite LSAs' generally negative reactions to the NFP, a few LSAs expressed a desire to meet with him or her. These LSAs mentioned varied reasons for their interest including "to talk to them because of their different views," "to set her straight," and "she's attractive, judgemental, has standards. I'm excited to meet her."

Similar to HSAs, almost half of MSAs made comments related to the PFP being easy to get along with. They stated that the PFP seemed "nice", "easy going", "friendly" and happy to "please others." Several MSAs also imagined that the PFP is less socially active or less socially skilled than the NFP suggesting that they felt the observers rated them relative to their own social skills. When speaking about the NFP, roughly half of MSAs suggested that he or she is confident, popular or a good student. The next most frequent comments referred to the NFP being more "analytical" and critical than the PFP. In contrast to HSAs, none of the MSAs noted the NFP to be particularly perceptive or accurate. In contrast to the LSAs, MSAs did not discount the NFP's feedback using various explanations, aside from noting them to be more analytical than the PFP. Relative to HSAs and LSAs, MSAs' comments seemed muted. This makes intuitive sense given that their self-views are likely in-between both paragraphs and not entirely consistent or discrepant from either.

### **Discussion**

The present study was the first to assess how social anxiety influenced preferences for further contact with others who provided self-enhancing or self-verifying feedback. Further, this study explored the potential consequences of these preferences by assessing emotional and cognitive responses to both types of potential partners.

# Hypotheses 1 and 2: The Universal Self-Enhancing Desire for Contact with Others Who Say Positive Things

Contrary to the predictions of self-verification theory, socially anxiety had no effect on the choice of interaction partner for the proposed brief interaction. Consistent with self-enhancement theory, when interest was measured on a continuous scale from 0 to 100, all participants reported significantly and considerably more interest in interacting with the PFP than the NFP. Neither social anxiety nor social self-esteem were related to interest in interacting with the NFP. Negative social self-esteem related to a slightly reduced interest in interacting with the PFP, though this accounted for a negligible amount of variance and the level of interest in interacting with the PFP still greatly exceeded interest in interacting with the NFP. These results are inconsistent with past findings that individuals with negative self-views choose to interact with others who confirm those views (Hixon & Swann, 1993; Kwang & Swann, 2010; Robinson & Smith-Lovin, 1992; Swann et al., 1992; Swann et al., 1999).

The reasons for the lack of evidence for self-verifying partner choices in individuals with social anxiety are unclear. As expected, social anxiety (as measured on the SPAI) negatively correlated with social self-esteem (as measured by the TSBIA) and many participants classified as HSAs also had low self-esteem (78% of HSA were in the bottom 30% on the TSBIA; 100% of HSAs fell in the bottom 40% of the TSBI). The failure to replicate past findings is not attributable to the main aspects of the

methodology. Several older studies that suggest that individuals with low self-esteem prefer to interact with more critical partners were also conducted on university students, used the TSBI to measure social self-esteem, and used the same verbatim feedback paragraphs and comparable experimental designs (Robinson & Smith-Lovin, 1992; Swann et al., 1992).

One factor that appears to supersede self-verification strivings according to the literature is the need for a relationship to continue (Baumeister & Leary, 1995; Kwang & Swann, 2010). When explicit information on potential partners' acceptance or rejection is provided along with positive or negative feedback, individuals with low social self-esteem are primarily driven to interact with the person who accepts them; whereas, individuals with high social self-esteem more often choose partners based on other considerations such as the partner's favourable view of them (Rudich & Vallacher, 1999) or his or her high social status (Rudich et al., 2007). It seems possible that participants in the present study associated positive feedback with a greater chance of acceptance. Although it does not explain the inconsistency with past findings, a link between favourable comments and acceptance seems straightforward so long as individuals are not worried about being unable to meet the other's positive expectations. Having a potential partner express high regard is likely to feel encouraging in the moment. If the partner's view seems unfounded, however, then the individual may also feel uneasy about what might occur when his or her self-perceived flaws become apparent (Leary, 2007).

Past research suggests that individuals are more likely to seek self-verification in longer relationships in which, presumably, the likelihood of their true attributes being revealed is greater and of greater consequence (Swann et al., 1994). Nevertheless, in the current study participants predicted that their preference for the PFP over the NFP would remain strong across relational contexts in which higher levels of intimacy are expected and pragmatic concerns are more relevant (e.g., friendship and romantic relationships). Over half of the HSA participants believed that it was unlikely they would continue to meet the PFP's expectations; however, their strong and consistent preference to interact with that person anyway suggests this was not a primary consideration in their choice of partner. In contrast to past research (Swann et al., 1992), concern about being with a partner who accurately perceives their weaknesses and sources of discomfort did not drive the HSAs' interaction partner preferences. The

implications of this are unclear. While it might be comforting for HSAs with doubts about their social abilities to hear they came across well in the moment, it is unlikely that they would want a partner who would consistently treat them like a person without social insecurities. Such a partner might, for instance, expect them to regularly attend social functions with unfamiliar individuals or ask them to perform tasks that make them the focus of social attention (e.g., make a toast). Indeed, in one study, individuals with social anxiety cited being pressured to socialize with others as one of the main costs of being in a relationship (Gordon, Heimberg, Montesi, & Fauber, 2012). As well, if a partner with a highly positive view of the individual with social anxiety is present during a stressful social situation, that individual experiences greater anxiety (Gordon et al., 2013). It is possible that HSA undergraduate students have had less experience with relationships, such as marriage, in which mismatches between their self-views and their partner's understanding of their strengths and limitations become an issue. Alternatively, HSAs' perceptions that the PFP is positive, supportive, and nice could lead them to feel comfortable with the idea of interacting with that person regardless.

# Hypotheses 3 and 4: HSAs' Conflicted Cognitive and Affective Responses to Self-Verifying and Self-Enhancing Others

In line with past research on the cognitive-affective crossfire (Swann et al., 1987), the HSAs' emotional responses were consistent with self-enhancement theory, while their cognitive responses were in keeping with self-verification theory. Regardless of social anxiety and self-views, all participants reported feeling less negative affect when imagining interacting with the PFP compared to the NFP. Social anxiety related to reporting substantially more anxiety and negative affect and slightly less positive affect when thinking of interacting with either interaction partner. Nevertheless, HSAs reported significantly more positive affect when they imagined interacting with the PFP compared to the NFP. In contrast, MSAs' and LSAs' self-rated positive affect did not differ whichever interaction partner they imagined. Thus, in line with finding that HSAs anticipate being more affected by positive events (Gilboa-Schechtman et al., 2000), they were most significantly, positively affected by the interaction partner who provided favourable feedback. This greater positive emotional response to positive social events

is consistent with previous research in which global positive and negative affect has been measured (Lake & Arkin, 1985; Wallace & Alden, 1997). The HSAs reported more negative emotions in general, but this tendency was ameliorated when they imagined talking with a positive interaction partner.

In line with self-verification theory (Swann, 1983), HSAs' cognitive attributions appear to maintain the way they see themselves, but lead to differences in their evaluations of the traits of potential partners. HSAs felt that the interaction partner who rated them positively was less astute and trustworthy than the interaction partner who rated them negatively. This also provides further evidence of HSAs' tendency to attribute positive social outcomes to external factors and the characteristics of the person with whom they interacted (Lake & Arkin, 1985; Weeks & Howell, 2012). In contrast to the findings of some other studies (Kwang & Swann, 2010; Robinson & Smith-Lovin, 1992), the HSAs found the PFP significantly more attractive and likeable despite their negative view of some of their other characteristics. Their responses to open-ended questions revealed a tendency for them to make positive assumptions about the PFP's intentions. Several HSAs felt that the PFP was being "nice," "kind," "supportive," or "considerate of their feelings." In contrast, MSA and LSA participants had unconflicted positive evaluations of the PFP. They found the PFP more likeable and felt that he or she was equally or more astute and trustworthy than the NFP. They did not need to make a compromise in which positive traits they were likely to find in a partner; as they believed that someone who is bright, perceptive, and genuinely truthful could also see them positively.

# **Hypothesis 5:**

# A Universal Perception that Complimentary Others Expect More and Social Anxiety's Impact on the Belief that One Will Fall Short

All participants believed that the interaction partner's feedback gave an indication of his or her expectations of the participant in a future interaction, and that the PFP expected greater social ability than the NFP. Higher social anxiety related to lower self-reported social ability and less confidence that one would meet the PFP's expectations;

though the differences between the social anxiety groups were not significant. Perhaps surprisingly, a sizable minority of HSAs (43.5%) believed that they could meet the PFP's high expectations. Experimenters told participants that the feedback they received was based on their performance on the social task; but participants may have come up with alternate ways to make sense of the feedback they received. For instance, HSAs might have attributed their apparent success to the PFP's traits (e.g., a lack of perceptiveness or excess of niceness) or their own ability to perform well and hide their lack of ability in a brief initial meeting. Some HSAs commented that the PFP's feedback was a common "first impression" but that the NFP "was very correct and got what kind of person she was." There was a trend for MSAs to believe they would actually behave in more socially skilled ways with the PFP than the NFP and HSAs' mean ratings of their expected social abilities were also in this direction; however, these differences did not reach significance with the extreme groups used in the present study. Related research suggests that individuals with social anxiety exhibit more positive social behaviours in interactions with friendly individuals and are perceived to be more likeable as a result (Alden & Wallace, 1995). Regardless, over half of the HSAs (56.5%) did not believe they could meet the PFP's high expectations in a second interaction. Over 90% of the participants at all levels of social anxiety believed they could meet the expectations of the NFP. Having already received negative feedback, even HSA participants felt assured their social abilities would match or exceed the NFP's expectations.

# What Might This All Mean? The Possible Motivations and Implications of HSAs' Interest in a Self-Enhancing Partner Over a Self-Verifying One

In some ways, HSAs responded in a similar way to other participants; they felt better imagining an interaction with the person who thought well of them and they preferred to have further contact with the person whose complimentary comments made them feel good. However, unlike participants with lower anxiety who saw the PFP in a globally positive way, HSAs downgraded the PFP's ability to perceive things accurately and doubted that he or she had genuinely expressed his or her true thoughts in the feedback. Why a person who provides complimentary comments is appealing and what the implications of this are may differ for individuals with different levels of anxiety. Given

the HSAs' positive emotional response to the PFP but more negative ratings of them in some domains, their choice of either interaction partner required compromises. It appears that individuals with HSA are in the difficult position of deciding whether they want further contact with the person who makes them feel good or the one they feel is more astute, authentic, and trustworthy. Their strong preference for the PFP may reveal something about what they value in potential partners or at least what they presume is the best case scenario.

### Preferring the partner that makes one feel better

HSA participants' choice of the interaction partner that made them feel better is in contrast to past findings that individuals with low social self-esteem choose self-verifying partners despite feeling more negative affect with them (Hixon & Swann, 1993; Robinson & Smith-Lovin, 1992; Swann et al., 1992). Individuals with HSA's lack of interest in the partner who evokes negative feelings could have a positive effect on their emotional state and functioning. These findings are relevant to the mixed results linking individuals with social anxiety's experience of positive emotion to their willingness to interact with others. Trew and Alden (2012) found that increased positive affect is related to reduced avoidance in HSAs who are anticipating a brief interaction with an unfamiliar person (Trew & Alden, 2012). A diary study tracking individuals with social anxiety's daily experiences failed to replicate the link between positive emotion and reduced avoidance, but found that positive emotion predicted relationship satisfaction (Alden & Trew, 2013). Conversely, Brown and colleagues (2011) found that HSAs choose to sit further away from an unfamiliar interaction partner following a positive mood induction. The authors interpreted this as coming from a desire to maintain positive affect in those who associate social situations with anxiety (Brown, Diekman, Tennial, & Solomon, 2011). In the current study, the HSAs expressed greater interest in the person who led them to feel good than the one who engendered negative feelings in them, but the extent to which they would have felt motivated to approach this individual if they were given the option of avoiding social contact is unknown. On average they rated their interest in the positive person at the midpoint (M = 51.84, SD = 116.34) between being not at all interested and extremely interested.

### HSAs' apparently unavoidable compromises and catch-22s

### They don't really know me but I am fine with that: Unperceptive partners may fit with HSAs' self-protective motives

HSAs' greater interest in the PFP, who they considered to be less observant and discerning than the NFP, fits well with HSAs' frequently cited self-protective motivation (Arkin, 1987) and reduced disclosure in social interactions (Papsdorf & Alden, 1998; Voncken & Dijk, 2013). Indeed, partners who are less apt to see someone clearly may seem like ideal matches to HSAs because of their desire to conceal themselves (Rodebaugh, 2009). This finding adds to research suggesting that HSAs are not interested in others truly knowing them, or at least make it a lesser priority than avoiding negative evaluation (Rodebaugh, 2009). In contrast to HSAs, people without social anxiety do not face a perceived conflict between being known and feeling good and receiving complimentary feedback; thus their choice of the PFP did not involve a tradeoff between these.

HSAs' belief that they exhibit inferior social abilities and that others will notice this about them is generally accurate (Christensen et al., 2003; Papsdorf & Alden, 1998; Voncken & Dijk, 2013; Voncken et al., 2008; Voncken, Dijk, de Jong, & Roelofs, 2010). They do, however, tend to overestimate the magnitude of others' negative perceptions (Alden & Wallace, 1995; Christensen et al., 2003; Kashdan & Savostyanova, 2011). In the present study, the experimenters' ratings of the participants' social abilities were significantly positively correlated with participants' self-ratings to a small to moderate degree suggesting they saw the participants how the participants saw themselves to some degree. Hence HSAs' tendency to doubt the perceptiveness or honesty of interaction partners who make highly positive comments about their social abilities may be realistic to a degree based on their life experiences. In the study the HSAs appeared to hold onto their view of themselves by devaluing the PFP's reflections. Still, they steered clear of the alternative partner who they believed saw and understood them more accurately. HSAs appear to be in a catch-22. They can interact with someone who is astute and attuned to who they feel they actually are or they can interact with someone who says positive things about their social abilities and makes them feel good, but they believe that they cannot find both in one interaction partner.

### I don't know what they truly think but they are so nice: Interaction partner selection as a possible precursor to reduced intimacy and heightened dependence in HSAs' relationships

HSAs' desire to interact with the PFP who they assume is "nice" because of his or her positive feedback makes intuitive sense given their self-doubts and anxiety. Although, they appeared to face another catch-22 in that they perceived the PFP to be positive and supportive, but believed that he or she was less genuine and trustworthy than the NFP. Again, for individuals without social anxiety, the favourable implications of their choice of the PFP are more straightforward because they do not perceive a conflict between hearing another's true thoughts and hearing positive, supportive feedback about themselves. In contrast, HSAs feel good about the PFP's apparently kind response, but doubt the PFP because of it; yet they avoid contact with the NFP who seems more forthright and trustworthy.

In addition to the desire to conceal themselves, it is possible that the HSAs tended to choose the PFP because they prefer not to hear a partner's true thoughts, but hope instead for positive feedback and reassurance. This possible interpretation of the HSAs' partner preferences is consistent with past research showing lower intimacy and higher dependence in HSAs' relationships (Davila & Beck, 2002; Sparrevohn & Rapee, 2009; Weisman, Aderka, Marom, Hermesh, & Gilboa-Schechtman, 2011). Heerey and Kring (2007) found that this dynamic could be ascertained within the first 5 minutes of observation of an interaction between an individual with social anxiety and a partner. Individuals with social anxiety seek more reassurance and ask their non-socially anxious partners fewer questions about themselves; their partners respond by providing more empathy and support than they would in an interaction with another non-socially anxious partner. According to Heerey and Kring (2007), this results in individuals with social anxiety feeling better; however, their self-focused talk and reassurance-seeking leaves their partners feeling that the interaction was low in quality. Thus, the non-socially anxious partners of individuals with social anxiety experience less positive emotion than those paired with other non-socially anxious individuals (Heerey & Kring, 2007). Related studies on the friendships of individuals with negative self-views have produced similar results and suggested further complications for both insecure individuals and their partners. Partners of individuals with negative self-views respond to them by providing less authentic, more exaggerated expressions of affection suggesting there may be reason to doubt their honesty (Lemay & Clark, 2008; Lemay & Dudley, 2011). These overly positive responses make the insecure individual feel better, but have a negative effect on the partner's satisfaction (Lemay & Dudley, 2011). Thus, the reassurance obtained is likely to become increasingly unwarranted as the partner becomes worn out due to the perhaps accurate perception that he or she can either provide untruthful high praise or upset the insecure individual with more authentic responses.

# Response to Potential Interaction Partners and the Course of Social Anxiety: Conclusions, Complexities, and Clinical Implications

The finding that HSA individuals show greater interest in the PFP than the NFP suggests that they are likely to seek out interactions that will result in them receiving favourable feedback about their social abilities and experiencing more positive emotions. Others' favourable views might help to bring out the best in HSAs (Murray et al., 1996; Murray, Holmes, & Griffin, 2000). Positive social experiences have been linked to increases in individuals with social anxiety's ability to evoke more favourable views of themselves (Hulme et al., 2012) and improvements in their social behaviour, which in turn brings about more favourable reactions from others (Alden & Wallace, 1995). Nevertheless, the potential benefits of being around someone who views one positively are dependent upon perceiving the partner's positive regard (Murray et al., 2000; Murray, Holmes, Griffin, Bellavia, & Rose, 2001). In the present study, participants responded to feedback by altering their views of the feedback providers in ways that made the feedback less relevant to them. HSAs found the PFP to be less astute and less trustworthy than the NFP. Yet, there may be some solace in finding a nice person who does not see one's faults or at least does not mention the negative things they do notice. HSAs are left feeling good about receiving positive feedback, but they are limited in their ability to take it in. As well, even though the PFP has a favourable view in a given moment, the majority of the HSAs in the study believed they would fail to meet the PFP's expectations in the future.

These findings highlight the limitations of HSAs' interaction partner choices and the complexity of change. Others with positive views are unlikely to seem honest and

genuine so long as individuals with social anxiety hold negative self-views (Christensen et al., 2003). Negative self-views are unlikely to change without the benefit of feedback from others that supports and reinforces positive change (Swann et al., 2007; Zayas et al., 2002). Individuals with social anxiety's negative views of their social abilities (Zayas et al., 2002) are at least to some degree based in reality, and they and the people they interact with see that (Voncken et al., 2008; Voncken, Dijk, de Jong, & Roelofs, 2010); but individuals with social anxiety use their more negative perceptions as a guide and overestimate the degree to which others view them unfavourably (Christensen et al., 2003).

HSAs' negative emotional response to others' more critical comments, which they consider to be accurate and believable, and their doubt and distrust of those who provide positive comments leaves both HSAs and their potential interaction partners in a bind. Their ability to make progress in treatment for social anxiety is likely to be complicated by similar factors. Valentiner and colleagues (2011) found that individuals with social anxiety's negative self-views and their inclination to solicit negative feedback about the self predicted ongoing symptoms following treatment (Valentiner et al., 2011). Within the treatment context, individuals are more likely to accept a therapist's feedback if it fits with what they already believe about themselves, though this predisposition is attenuated if clients have positive views about the value of therapy or believe that their therapist is experienced and accomplished (Collins & Stukas, 2006). Unfortunately, maintaining authority and improving self-views is a delicate endeavour when, as the present study suggests, those who express positive views about individuals with social anxiety tend to be discredited. Lemay and O'Leary (2012) explored these complex dynamics in the relationships of individuals with low self-esteem who reported greater faith in their partner's authenticity when the partner expressed moderately frequent criticism even though the critical comments made them feel bad and engendered negative feelings towards their partners. If the criticism was about something unimportant this minimized the negative emotional and interpersonal consequences, but it still improved individuals with low self-esteem's trust in their partner and their ability to benefit from the partner's praise (Lemay & O'Leary, 2012). Perhaps ironically, friends' inauthentic and exaggerated expression of positive feelings also helped individuals with low self-esteem to feel better and more secure. However, this was not without cost to the

relational partners whose fervent efforts to shore up insecure partners' self-esteem reduced their own satisfaction with the relationship (Lemay & Dudley, 2011).

The present findings that, like individuals with low self-esteem, HSAs struggle with incongruent cognitive and affective responses to others whether they provide enhancing or verifying feedback raise many questions. It is unclear how individuals with social anxiety's interaction partner choices influence their intrapersonal and interpersonal functioning over time or what could be done to assuage their conflicted responses. It is likely that changes in individuals with social anxiety's negative self-views, their actual abilities, and interpersonal choices that increase the chances of sustainable levels of supportive feedback must co-occur to best facilitate and maintain improvement of their social anxiety.

#### **Limitations and Future Directions**

The present study explored the influence of social anxiety symptoms continuously in a university student population and in an HSA group identified based on an SPAI cut-off score that optimizes sensitivity (.87) and specificity (.91) (Peters, 2000). While the use of student populations is common practice in research on social anxiety (e.g., Davila & Beck, 2002; Heerey & Kring, 2007; Trew & Alden, 2012; Voncken & Dijk, 2013; Weeks, Heimberg, Rodebaugh, & Norton, 2008), the extent to which the findings can be generalized to individuals of different ages and educational backgrounds cannot be assumed. As well, while past research suggests it is probable that participants above the SPAI cut-off have social anxiety disorder (PPP = 96%; Peters, 2000), the proportion of individuals who actually met the formal diagnostic criteria in the current study and thus the extent to which these findings could be generalized to clinical samples was not ascertained. The exclusive use of self-report measures to assess traits and emotional and cognitive responses is also a limitation of this study. Further research incorporating multimethod assessments, such as structured interviews, behavioural observations, and physiological measures of emotion, would enhance the current understanding of the effects of social anxiety on interaction partner choice.

The main aims of the current study did not include a full assessment of the influence of potential covariates (i.e., the experimenter, order of feedback, handwriting of the feedback, assumed gender of the observers, and the participants' ethnicity, gender, self-esteem, and symptoms of depression). The potential influence of these factors was only evaluated with the two primary dependent variables: who do individuals with social anxiety choose for a brief interaction and what is their level of interest in further contact with self-enhancing and self-verifying partners across social contexts? The findings related to the secondary variables may not be specific to social anxiety. Given the considerable overlap between social anxiety, low social self-esteem, and depression, assessing how these factors are interconnected and mutually influence outcomes would be most useful.

The structured experimental design limited the influence of extraneous variables, but also reduced the similarity between the conditions in the lab and natural social settings. The artificiality of the social task, lack of information about the potential partners, provision of feedback in writing, and reliance on self-reported interest in further contact may compromise the findings' generalizability to everyday interactions. There are also factors outside the scope of this study that may affect and interact with its findings. For instance, in the study, the contrast between the two feedback paragraphs was clear and unambiguous. In typical interactions, however, individuals with social anxiety receive a wide array of verbal and non-verbal feedback. A potential partner could write or say positive things but behave in ways that indicate a more negative view of the individual. How individuals with social anxiety respond to non-verbal cues of regard and whether they would spontaneously contrast negative feedback with an alternative positive evaluation and partner options is unknown. Nevertheless, past research on individuals with low self-esteem suggests there is considerable consistency between the results of simplified laboratory studies and observations of everyday relationships (Kwang & Swann, 2010; Swann et al., 1992; Swann et al., 1994; Swann & Pelham, 2002).

Future research could assess whether individuals with social anxiety's anticipated preferences are realized in terms of the kinds of people they actually bring into their lives through diary studies and interviews with their friends and partners. In addition to noting the valence of others' feedback in their interpersonal environments,

exploring individuals with social anxiety's degree of belief in the comments made about them by the people in their lives as well as those peoples' professed and actual views would be informative given past findings that there is some truth to insecure individuals' doubts about the authenticity of their relational partners' positive feedback (e.g., Lemay & Clark, 2008; Lemay & Dudley, 2011).

Individuals with social anxiety's responses to and selection of enhancing or verifying interaction partners are important largely due to their implications for their own wellbeing. This has only been speculatively discussed in the current study. A longitudinal study assessing social anxiety individuals' self-views and how the significant people in their lives view them would be informative. Whether HSAs surround themselves with individuals who enhance or with individuals who verify their self-views, it would be useful to know how this affects their emotional functioning, negative self-views, intensity of social anxiety symptoms, and the health of their relationships. As well, how relational partners respond to individuals with social anxiety's conflicted feelings and thoughts about their compliments or acknowledgement of perceived weaknesses would help to further elucidate how things are for individuals with social anxiety and the people they choose to have in their lives.

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# Appendix A.

# **Demographic Questionnaire**

Please answer the following questions about your background. Where multiple options are given, please indicate your desired response with an X.

Gender:	Age:		
Male	Today's Date:		
Female	Date of Birth:		
Marital Status:			
Single	Separated		
In a relationship	Divorced		
Cohabiting	Widowed		
Married			
Languages:			
First:			
Second:			
Third:			
Ethnicity:			
Caucasian	Asian/Pacific Islander		
Hispanic	African American		
First Nations	Other		
East Indian			
Education:			
Year in program:			
Major:			

## Appendix B.

# **Study Protocol**

#### GENERAL THINGS TO KEEP IN MIND THROUGHOUT THE STUDY:

\*Think and act as though there are truly two student participants in the office\*.

\*Remember the rationales and purpose of various components of the study when answering any questions from participants (as we did in our practice run-throughs)\*

Feel free to call my cell phone at any time if you have any questions.

#### PRIOR TO THE PARTICIPANTS' ARRIVAL:

Log into the RPS system and check how many vacancies there are during your shift. Students can sign up at any point during the day so the bookings at the beginning of your shift may change. Be ready to run the study at each potential vacancy.

Prepare the initial pile of questionnaires you will give participants. Make a package for each vacancy during your shift. All the materials for this are in the filing cabinet in the office. You'll see the following:

- An envelope for questionnaires and forms. Paste an envelope label on the front of the envelope if this is not done already. Fill in a Participant # (the next number after the last participant). You can find the appropriate number on the data file on the computer or look at the last envelope in the filing drawer. Then fill in the Researcher # (1,2,3,4) and date.
- Information for Participants/Consent Form
- Demographic Information Questionnaire
- All trait questionnaires. Please ensure these are arranged in counterbalanced order (the Latin square we went over is also provided below)
  - 1. SPAI
  - 2. BDI-II
  - 3. TSBIA

Please start at the next point each day and work your way through various orders.

$$\begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 1 \\ 3 & 1 & 2 \end{bmatrix}, \begin{bmatrix} 1 & 2 & 3 \\ 3 & 1 & 2 \\ 2 & 3 & 1 \end{bmatrix}, \begin{bmatrix} 1 & 3 & 2 \\ 2 & 1 & 3 \\ 3 & 2 & 1 \end{bmatrix}, \begin{bmatrix} 1 & 3 & 2 \\ 3 & 2 & 1 \\ 2 & 1 & 3 \end{bmatrix}, \begin{bmatrix} 2 & 1 & 3 \\ 3 & 2 & 1 \end{bmatrix}, \begin{bmatrix} 2 & 3 & 1 \\ 1 & 2 & 3 \\ 3 & 1 & 2 \end{bmatrix}, \begin{bmatrix} 2 & 3 & 1 \\ 3 & 1 & 2 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 2 & 3 & 1 \\ 3 & 1 & 2 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 2 & 1 \\ 2 & 1 & 3 \\ 1 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 1 & 2 & 3 \\ 2 & 1 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 1 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 2 & 3 & 1 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 2 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 2 & 3 & 1 \\ 3 & 3 & 2 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 2 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 1 & 2 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 2 & 1 \\ 3 & 3 & 3 \\ 3 & 3 & 3 \end{bmatrix}, \begin{bmatrix} 3 & 2 & 1 \\ 3 & 3 & 3 \\ 3$$

Put the envelope with the questionnaires on the desk in the main room. The Information for Participants/Consent Form should be on top, then the demographic information, and finally the questionnaires in counterbalanced order.

\*Put only the low lights on in office\*.

Open the filing cabinet and leave it open since it can be noisy.

\*Make sure the office door is closed (so they can't see who's in there)\*.

\*Check that they won't be able to see in the office when you lift the blinds in front of the one-way mirror (if you can see anything then ensure that only the low lights are turned on\*.

\*Please make it a habit to keep the doors to the office and main room closed at all times.

After walking through, close them immediately behind you\*.

#### WHEN PARTICIPANTS ARRIVE:

Participants may be early. Please make sure you're in the lab at least 15 minutes before their scheduled time. Depending how early they are, either bring them immediately into the main room, or have them leave and come back closer to the time of their appointment. Don't allow participants to wait in the waiting room alone as it may seem less likely that other students are also participating in the study. For the same reason, if someone shows up asking to change their session time on short notice, please tell them

it's not possible. Answer any questions as though we need to coordinate having three students there at the same time.

Bring the participant into the main room and have them sit at the chair in front of the computer.

Tell them: "There is still one participant we are waiting for (or if they arrived very early say that we are still waiting for both of the other participants), but you're going to be in this room by yourself so we can get you started. Go ahead and read over the Information to Participants Form and the Consent Form on the back. I'm going to go check the hallway for the remaining student, but I'll be back in a minute to see if you have any questions."

Leave the main room and open and close all the necessary doors you'd need to in order to get someone from the hallway and bring them into the office room. When you're in the hallway area, speak as though you are actually greeting a student. Say the same things that you said to the participant, e.g. "Hi, you'll be right in this room". You can stop speaking aloud after you close the door to the office.

After a few minutes, go back to the participant and ask if they have any questions.

Explain how their anonymity will be maintained with the following questionnaires, e.g. "Once you've signed the consent forms I'll fill out the researcher part and put it in the first box. Then once the study is completed, you can take all your questionnaires and forms and put them in the envelope which will go in the second box. Don't put your name on any of the questionnaires even if it says to do, like on the BDI (cross out the name section on this form for them so they remember). We'll know that all the forms correspond to the same participant number because they'll be in the same envelope, but we won't know which participant is it. Your name and participant number are kept separate at all times."

Tell them to fill out all the questionnaires, and show them that the SPAI and BDI are double-sided.

Then leave the participant and go into the front office (remember to close all doors behind you).

Get two sheets of feedback immediately following the "ORDER OF FEEDBACK PAIR" tab (this ensures that the feedback paragraphs are counterbalanced). Double-check the following:

- Check that you have the right gender and that both feedback sheets are the same gender.
- Check that you have one Observer A form and one Observer B form.
- Check that the forms are in different handwriting.
- Check that one feedback paragraph is positive feedback and the other is negative.

Then move the "ORDER OF FEEDBACK PAIR" tab past the pair you just used (so that you or the next experimenter know where to start).

Place the feedback face down on a clipboard and leave it in the office.

Go to the backroom and prepare the measures for rating Observer A and Observer B for the next part of the study.

Get out the interaction partner choice sheet.

Make two piles of sheets (Observer A and Observer B) for the post-partner choice questionnaires. The Observer A pile should have the following forms in this order:

- 1. SUDA-P Observer A
- 2. PANAS Observer A
- 3. Ratings of Observer A
- 4. ASQ Observer A

Similarly, the Observer B pile should have the same forms, but for Observer B:

- 1. SUDA-P Observer B
- 2. PANAS Observer B
- 3. Ratings of Observer B
- 4. ASQ Observer B

When the participant indicates that they are done with the trait questionnaires, orient them to the social task (leave the observer rating forms in the backroom until they are needed).

e.g. "Thanks for filling the questionnaires out. As mentioned in the Information for Participants/Consent Form, the goal of this study is to look at how people form initial impressions of each other based on different types of information.

There are two students behind the one-way mirror behind the blinds. First, we'd like you to answer some questions, and they will get to observe those answers. Then they'll be asked to give you a short bit of feedback about their impressions. You'll also be asked to give your impressions of them based on that.

So for now, we'd like you to answer some questions which they will observe. You both have copies of these same questions. You can take a look at them; they're about your likes and dislikes (give them the First Impressions Questions).

This is a microphone, so I'm going to move it towards you so they can hear you. I'll also pull up the blinds in a moment. I just need to go to the other room for a minute to turn on the microphone. Then I'll come back and let you know when you can start."

\*If there are any questions about why the social task is done using the one-way mirror, you can explain that we want both observers to form their impressions based on the same amount of information about the participant. You can also let them know that they'll be asked to fill out forms about the observers and that we'd like those completed before they meet them in person.\*

Go to the office. Stay in there for the length of time that it would take you to say a couple sentences and turn on a microphone.

Go to the main room, pull up the blinds, and tell them to go ahead with answering the questions.

Go to the backroom and covertly observe their answers. In addition to their verbal responses, you can see their reflection in the one-way mirror to assess their non-verbal behaviour. Record your rating of their social skill on the ASQ scale.

Once the participant is finished answering the questions, close the blinds and turn off the microphone switch. Tell them that "The participants now have a few minutes to write

some short feedback for you, so I'll get the feedback in a moment; turn off the microphone. There's nothing that you need to do in this time, so if you'd like to just check that you filled out both sides of the questionnaires and answered all the questions, and then place them in the envelope, that would be great. Just don't seal the envelope yet because there are more forms coming."

Wait for a minute. Go to the office. Wait until it's been about 3 minutes total since the participant stopped speaking (ensure you leave long enough for the "other participants" to think of what they would want to say about the participant and write a feedback paragraph).

Carry the two feedback sheets face down on a clipboard, and let the participant know that they will now read "two short paragraphs from the observers who were asked to comment on their impressions of your social ease, confidence, and competence." Flip the sheets right side up, and tell them to read Observer A first and Observer B second. Let them know you will be in the backroom, and ask them to let you know when they are finished reading the two feedback forms.

Provide them with the interaction partner choice form. Give them a brief introduction to the instructions.

E.g. "Now we'd like to get an idea of your response to what you read and how you feel about having contact with the observers. We'll ask you to fill out a number of measures about how you feel and think about the observers. After all the forms are complete, we'll ask one of the observers to come out to have a 5-minute interaction with you.

The observers do not know what you've been asked to fill out, they will not be told who you chose, and they will not be given access to anything that you fill out. After you've filled out all your forms they will go in the envelope, which will be placed directly into the second box.

On this first form, we'd like you to indicate who you would prefer to have the 5-minute interaction with at the end. Then we'd like you to rate the extent to which you would be interested in having contact with Observer A and then Observer B in various scenarios that correspond to different levels of contact. For example, the 5-minute interaction, a group project for class, spending an evening, forming a friendship. This does not literally mean that you actually want to form a friendship with the student behind the mirror, but

rather your reaction and interest in having that contact based on the types of things they wrote. You place a tick mark in the appropriate place for all the scenarios for Observer A, and then do the same for Observer B. Just let me know when you're done, and I'll bring out the next forms".

Go to the front office and stay there for as long as it would take you to explain some brief instructions for the "other participants".

Go into the backroom until they are done filling out the form. Once they are ready, bring out the post-choice questionnaire package for Observer A (i.e., SUDA-P – Observer A, PANAS – Observer A, Ratings of Observer A, ASQ – Observer A) and give the following instructions:

E.g. "Before the interaction, we just have some more questionnaires to find out more about your responses to each of the observers. First, I'd like you to forget about Observer B for a moment. Re-read Observer A's comments, and imagine that they are about to walk through that door and sit with you at the chairs over here. Hold the image of having an interaction with Observer A in mind, and rate how you feel on the first two forms. Go ahead and let me know when you're done." (Try to emphasize this part if you're not sure they're getting it. It's important that they think of the interaction with Observer A).

Next instruct them to "fill out your impressions of Observer A based on their feedback on various traits such as perceptiveness. Then just let me know when you're done, because there is something on the computer that relates to the fourth form."

When they are done, turn on the computer screen. Give a brief intro to the ASQ form.

E.g. "This next questionnaire is similar to the other ones in that it has a Likert scale, but in this case the values are anchored by video clips instead of verbal labels. The scale ranges from 1 to 9, with higher values corresponding to more skilful and comfortable social behaviour. The point 2 video illustrates the type of behaviour that would be associated with a 2 on scale, the point 5 video corresponds to 5, and finally there is a video for point 8.

The observers have watched the same three video tapes and have completed the same ratings that you will. Observer A rated what they think you would be like if they interacted with you. In the first section you are asked to guess what you think their rating was. In

the third section you rate them and make a guess of what Observer A would be like if you interacted with them. The middle section asks you to rate what you think you would actually be like if you had the interaction with Observer A. Does that make sense?"

If so, start the video entitled POINT 2. Tell them to watch the other videos for points 5 and 8 after that one finishes.

Go to the office, and stay there for roughly the same amount of time you have spent with the participant to explain some of the questionnaires.

After they are finished with the ASQ for Observer A, ask them to put their ratings so far in the envelope along with their other questionnaires.

Then tell them: "Now we're going to do the same four forms for Observer B. I'd like you to forget about Observer A for now. Re-read Observer B's comments, and imagine that they are about to walk through that door and sit with you at the chairs over here. Hold the image of having an interaction with Observer B in mind, and rate how you feel on the first two forms. Go ahead, and when you're done you can move on to the next two forms. You can refer back to the video anchors if you'd like a reminder of what points 2, 5, and 8 represent, but you don't need to."

Once they are done, tell them you have a few brief questions before the next part of the study. Ask the participant if they made any assumptions about the observers' gender. If so, note what they assumed. When ask: "When you were asked to think of the observers and fill out the various ratings what images, impressions, or thoughts did you have about what they might be like?" Record all the comments they make verbatim on the form provided.

Then, take the RPS receipt and a debriefing form, and give them a brief description of the debriefing form.

E.g. "So we're actually not going to do the 5-minute interaction. The goal of this research is to learn more about how people feel when they are about to interact with different potential partners and who they prefer to have contact with, and we're not assessing anything related to how people actually interact with each other, so that's not a part of this study. The ratings we gave you were kept standard across all the participants so that everyone is responding to the same feedback. It was constructed ahead of time to make sure that the two paragraphs you got differed. What was written has nothing to do

with you or how you answered the previous questions. However, we needed to try to make it seem as realistic as possible to increase the chances that the results of this study generalized to what would happen if people were actually responding to other individuals. Do you have any questions?

Feel free to read the debriefing form, but we will need to keep it in the lab. Given the design of this study, it is really important that you, please, do not tell other students who could potentially be participants in this research, this semester or next semester, what happened in the study, because then they would be participating under different circumstances which would affect their responses. We will be asking students if they have heard about the study from anyone, and if they have, they will not be able to participate. Unfortunately that's necessary to protect the integrity of this research. Do you have any questions about that?

Here is your receipt for the RPS credits. We will be adding 2% to your name, and you shouldn't need to do anything with that. But if for some reason the credits don't show up, then you can take that to the undergraduate assistant as your proof that you were here and did participate."

## Appendix C.

## Information and Consent Form

Investigator: Marlena Szpunar, Dept. of Psychology, Simon Fraser University

Primary Supervisor: Dr. Arlene Young, Dept. of Psychology, Simon Fraser University

The goal of this study is to gain a better understanding of the factors that may influence how people form impressions of each other based on initial and limited information and how they respond to different potential interaction partners. The study will attempt to clarify what kind of information influences first impressions the most and the desire for further contact an individual. If you choose to participate, you will be asked to fill out questionnaires related to demographic information, emotions, and your feelings and expectations when anticipating different social interactions. You will also participate in social activities. You will receive feedback based on your verbal responses to three questions about your likes and dislikes, and you will rate other participants based on their feedback. The full study will take approximately an hour to complete.

There are no known risks involved in participating in this study. The benefits to participating are that this study will contribute to our understanding of how people feel in different interpersonal contexts and respond to each other.

All the measures you fill out will be marked with a number as opposed to your name so they may not be traced back to you. This information will be kept in a locked filling cabinet in our secure lab and only researchers directly involved in the study will have access to it. If the results of this research are reported in any scientific publication or presentation they will focus on overall findings when considering all participants together. Your privacy will be protected and your identity will not be revealed. I may obtain a summary of the research results of this study by contacting the investigator (Marlena Szpunar:

Simon Fraser University and those conducting the project subscribe to the ethical conduct of research and to the protection at all time of the interests, comfort, and safety of participants. Any complaints about the study may be brought to the director of the office of research ethics (Dr. Hal Weinberg;

Please let the researcher know if you have any further questions and flip this form over to read the attached consent form.

Thank you!

## **Consent Form**

Your signature on this form will indicate that you agree with the following statem	nents:
I have read and understand the procedures, possible risks, and benefits of this	study.
I have been informed that the university and the investigators subscribe to the conduct of research and to the protection at all time of the interests, comfort, a of participants and know I may bring complaints to the director of the office of ethics (Dr. Hal Weinberg; ; ) if relevant.	and safety
I know that my identity will be kept confidential, the forms I fill out will be secure without identifying information, and my privacy will be protected.	ely stored
I am aware that I can obtain a summary of the research results of this contacting the investigator (Marlena Szpunar; , ).	study by
I voluntarily agree to participate in this study and understand that I may with consent at any time.	ndraw my
Name of participant:	
Participant signature:	
Date:	
Investigator who explained this consent:	
Investigator signature:	

## Appendix D.

## Sample Feedback Forms

**Observer A** 

#### Feedback Form

Instructions:

Based on observing this individual speak through the one way glass, please comment on your impressions of what they are like in social situations considering factors such as social ease, confidence, and general social competence.

This person seems socially self-confident. She appears at ease with people she doesn't know very well. She seems to have little doubt about her social competence. That's pretty much all I can tell about her from her answers to the questions.

## Observer B

### Feedback Form

Instructions:

Based on observing this individual speak through the one way glass, please comment on your impressions of what they are like in social situations considering factors such as social ease, confidence, and general social competence.

From this person's answers, she appears to be ill at ease in social situations. There are probably times when she is around other people and just doesn't know quite what to do or say. There are times when she likes being around people, but in some social situations she is uncomfortable and anxious.

## Appendix E.

### **Interaction Partner Choice and Interest Measure**

After completing a series of measures, you will be asked to take part in a 5-minute social interaction. Please state who you would prefer to have the interaction with. Prior to the interaction, the experimenter will tell one of the two Observers to come out of the room to participate in a 5-minute social interaction. They will not be told that you had the option to select either of them or what you said. In fact, at no point in time will the Observers be given any further information about you or allowed access to any of the following ratings. You may review the feedback forms you were given by these individuals and then circle whom you would like to interact with below:

Observer A Observer B

The experimenter will ask you for your choice of interaction partner prior to the 5-minute interaction with the person you selected. At this point we cannot guarantee that you will interact with the person you chose, but we would like to know your preferences.

The rest of the questions are to get an idea of the extent to which you would gravitate towards Observer A or Observer B in various situations given what they wrote. *Don't worry about having limited information from them as we are interested in initial impressions and reactions based on different kinds of limited information.* 

#### Observer A

Please place an X along each of the following lines to indicate the extent to which you imagine you would be interested in doing each of the following with <u>Observer A</u> based on their feedback:

Participate in the upcoming 5-minute interaction

0 100
Not at all Extremely interested

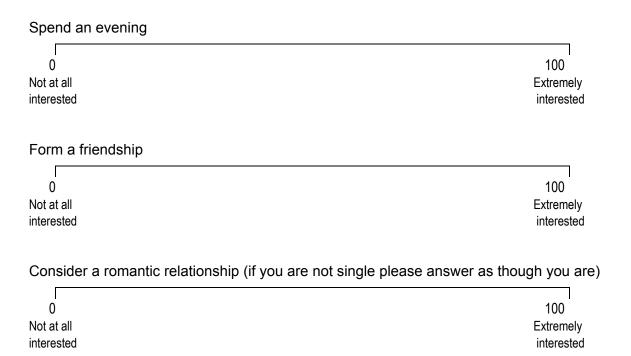
Work together on a group project for a class

Not at all

interested

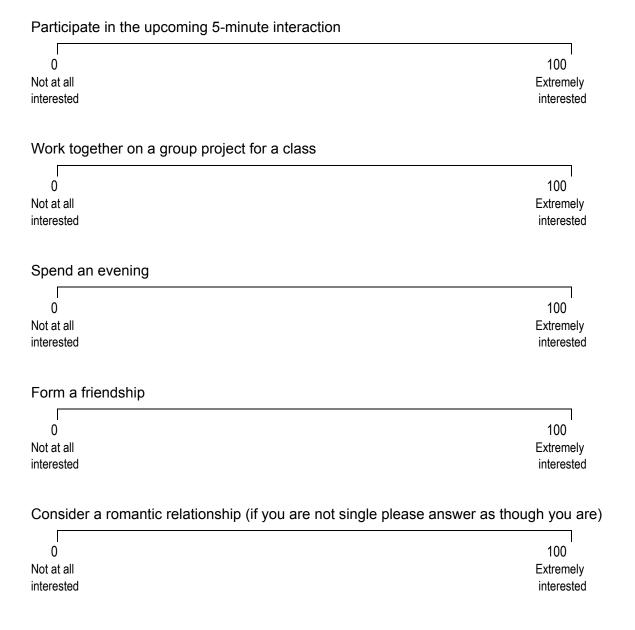
Extremely

interested



#### **Observer B**

Please place an X along each of the following lines to indicate the extent to which you imagine you would be interested in doing each of the following with <u>Observer B</u>:



# Appendix F.

# **PANAS: List of Emotions Assessed**

Interested Irritable Distressed Alert Excited Ashamed Upset Inspired Strong Nervous Guilty Determined Scared Attentive Jittery Hostile Enthusiastic Active Proud Afraid

## Appendix G.

# Ratings Questionnaire: Observer A Example

Look at the feedback you have from Observer A and please rate how they seem to you. Don't worry about having limited information from them as we are just asking for your best guess of what they might be like given what they wrote. Your ratings will be kept confidential and Observer A will have no way to access how you've rated them. To what extent do you imagine that Observer A is:

Insightful				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Honest				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Perceptive				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Dependable				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Intelligent				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Likeable				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Genuine				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely
Attractive				
1	2	3	4	5
Not at all	A little bit	Somewhat	Very much	Extremely

## Appendix H.

## Ability Standards Questionnaire: Observer A Example

The following questions will ask you to rate social behaviour on a scale ranging from 1 to 9, with higher scores corresponding to greater social skill, comfort, and ease of interaction. The 9-point scale is anchored by video clips instead of verbal labels. You are going to watch three short videotaped interactions that vary in terms of social behaviour. The first video is rated a 2 on the following 9-point scale, the second video represents a 5 on the scale, and the third video is an 8.

Please watch the videos corresponding to point 2, point 5, and point 8 now.

The observers watched the same three video tapes that you have, corresponding to points 2, 5, and 8 on the 9-point scale. The observers were told to imagine that they are going to have the 5-minute interaction with you and asked to rate what they think your social behaviour will be like if they interact with you for the first time.

Think of Observer A and review their feedback. Observer A rated what they expect your social behaviour to be like if they imagined interacting with you. They gave a rating somewhere in-between 1 and 9. What do you think Observer A expects your performance to be like?

1 2 3 4 5 6 7 8 9

What do you think your behaviour would actually be like if you interacted with Observer A for the first time? Please rate what you feel your actual performance would be with Observer A on the 9-point scale.

1 2 3 4 5 6 7 8 9

What do you guess that Observer A's behaviour would be like when you interacted with them for the first time? Please rate your expectations of Observer A's social ability on the 9-point scale.

1 2 3 4 5 6 7 8 9

## Appendix I.

## **Debriefing Form**

This study is being conducted to assess how other people's views of you influence your feelings, thoughts, and interest in having contact with them. We will be putting all participants' responses together and seeing how various attributes (e.g., general level of social comfort) may influence how people respond to others who have evaluated them in different ways.

Given that we are primarily interested in factors that influence people's choice of interaction partners, there is no need to actually participate in the anticipated interaction. In fact, there were no potential interaction partners behind the one-way glass. The feedback you received was standardized across all participants and was written prior to your arrival and is unrelated to you or how you answered the questions earlier. The ratings were constructed to provide differing feedback to participants. Past research has shown that people's imagined responses to situations are not necessarily the same as their responses when they are actually in the situation. Given this, we tried to make the scenario as believable as possible to increase the chance that this research tells us something about the way people would respond in their everyday lives.

We will assess how the type of feedback participants received influenced their feelings about and desire to interact with the potential partners. We hope that this research will shed light on how people react to feedback and make interpersonal decisions.

Now that you have read the debriefing statement and are aware of the true meaning of the protocol, please let us know if you do not wish to remain in the study and would like your data withdrawn. If so, the investigator will remove your data immediately.

Please do not mention the true nature of the study to any SFU students until after September 2010. It is essential that people who may potentially participate do not know the information on this debriefing form until after they participate, as their responses would be affected. We will be asking students if they have heard anything about the study from anyone upon their arrival, and they will not be allowed to take part in the study if they have. This is necessary to protect the integrity of this research.

Please feel free to ask any further questions you may have. Thank you for your participation!