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Social rank and social anxiety

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in
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ABSTRACT

Social Rank and Social Anxiety

Jennifer A. Chrystan

The purpose of the current study was to investigate a primary assumption of social rank theory. More specifically, the purpose was to determine whether the perception of social inferiority leads to increased anxiety during social interaction, with a heightened effect occurring among those who are more socially anxious. Although multiple studies have demonstrated shared covariates between social anxiety and perceptions of inferiority, virtually no research has been dedicated to scrutinizing the causal relationship proposed by social rank theory. One hundred undergraduate students at West Virginia University participated in this study. Participants engaged in three social interaction tasks with a same-gender peer and completed self-report measures designed to assess anxiety and perceptions of inferiority/superiority. Following each social interaction task, participants provided ratings of the highest level of distress they experienced during the task. The correlation between participants' social anxiety and perceptions of inferiority/superiority was examined. A significant, negative correlation was hypothesized between these two variables. This study also examined whether perceived inferiority/superiority in relation to a participant's interaction partner would significantly predict anxiety (general, physical, and cognitive) following each of the interaction tasks, each related to a different social domain (casual conversation, social influence, and task oriented collaboration), as well as highest level of distress experienced during each of these tasks. This study utilized an interaction term to investigate whether social anxiety would moderate the hypothesized effect of perceived inferiority/superiority on anxiety during social interaction. In accordance with social rank theory, it was hypothesized that perceived inferiority/superiority would significantly predict each of the dependent variables, with an increased effect occurring among those with higher baseline levels of social anxiety. Six regression analyses were performed to investigate the hypotheses. Though a significant, negative correlation was found between social anxiety and perceived inferiority/superiority, additional findings were contradictory to the hypotheses.

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Social Rank Theory and Social Anxiety

Social anxiety disorder is formally defined by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV; APA, 1994) as a “marked and persistent fear of one or more situations in which the person is exposed to unfamiliar people or to possible scrutiny by others and fears that he or she may do something or act in a way that will be humiliating or embarrassing” (p. 416). This fear is characterized by a variety of symptoms including avoidance of social situations, negative thoughts about social interactions, and physiological responses during social interactions such as increased heart rate and perspiration (Turner, Beidel, & Townsley, 1990). In order for one to meet the diagnostic criteria for social anxiety disorder, these symptoms must cause marked distress or interfere with routine functioning. Results from the National Comorbidity Survey suggest social anxiety disorder to be the third most common psychological disorder with a prevalence rate of 13.3% (Kessler, McGonagle, Zhao, Nelson, Hughes, Eshelman, Wittchen, & Kendler, 1994). Although some authors have identified the typical age of onset to be mid-adolescence (Turner, Beidel, & Townsley, 1990; Strauss & Last, 1993), social anxiety has been reported in samples as young as elementary school age (Beidel & Morris, 1995). Unfortunately, the course of social anxiety disorder typically has been found to be unremitting (Turner, Beidel, & Townsley, 1990).

Although fear of negative evaluation largely has been considered the hallmark feature of social anxiety disorder (Clark & Wells, 1995), social anxiety has been linked to interpersonal sensitivity (Elliott, 1984; Boyce & Parker, 1989; Davidson, Zisook, & Giller, 1989; Gilbert & Miles, 2000), submissive behavior (Santee & Maslach, 1982;

Alden & Phillips, 1990; Harb, Heimberg, Fresco, Schneier, & Liebowitz, 2002; Oakman, Gifford, & Chlebowsky, 2003; Weber, Wiedig, & Freyer, 2004), feelings of shame (Gilbert, Pehl, & Allan, 1994; Leary, Koch, & Hechenbleiker, 2001), and perfectionism (Schlenker & Leary, 1985). Perhaps not coincidentally, these same features have been highlighted by social rank theory in the context of social comparison.

Social Rank Theory

Bridging evolutionary theory, sociology, and developmental psychopathology, social rank theory suggests the presence of both dominant and submissive personalities within human society where those who are submissive work to avoid rejection by those who are more dominant (Keltner & Harker, 1998). Social rank theory is based upon an "agonic" model of society, a hierarchically organized model of society. According to social rank theory, individuals infer their position within the social hierarchy by monitoring the extent to which they, as compared to others, are able to elicit displays of social acceptance (i.e., approval, liking, and warmth) vs. signs of disapproval, criticism, and ridicule. Non-dominant (lower ranking) individuals are those who have inferred a lower social rank subsequent to consistent inferences of inferiority. The submissive behavior that characterizes these individuals is spurred by social anxiety. This social anxiety is protective, per social rank theory, as it facilitates the social acceptance of the lower ranking person by the group. Social rank theory further posits that, for reasons conducive to acceptance and survival, those who frequently perceive relative inferiority not only experience higher levels of social anxiety, but also become more attuned to and influenced by social comparison so that they may closely monitor behavior in the presence of higher ranking individuals (Gilbert, 1997).

The Construct of Social Rank

According to social rank theory, social rank is a subjective construct inferred by individuals based upon the aggregate ratio of signs of acceptance vs. rejection that an individual has elicited from others over the course of a lifetime where a higher ratio of acceptance to rejection cues will result in a relatively higher perceived rank. The perception that one is relatively inferior as compared to another, occurs when one perceives another's ability to elicit signs of acceptance as being greater than his or her own ability and is determined by judgments regarding his or her own and the other's general social attractiveness. Because social rank is not based on specific talents, it is not a domain specific construct, but rather, a global appraisal. Moreover, because social rank relies upon one's cumulative experiences, it is largely a trait variable, showing consistency over time. However, because an individual's perception of "higher" vs. "lower" social rank is largely dependent upon the individual with whom one is interacting, social rank is a relative concept. When an individual's self perception is that he or she is generally superior to another, he or she perceives him or herself to be of a higher social rank. Because it is the purpose of this study to investigate an isolated instance of social comparison, the terms "social rank" and "perceived inferiority/superiority" will be used synonymously from this point forward.

Social Anxiety and Perceived Low Social Rank: Shared Covariates

According to the literature, perceived low social rank (i.e., a perception of social inferiority) and social anxiety share common correlates. Although it is not an aim of this study to examine or investigate the shared covariates of social anxiety and social rank, a brief discussion of these covariates is provided to establish the rationale for the current

study. Studies have linked low self-esteem both to social anxiety and to perceptions of low social rank. The first identifiable study to explicitly demonstrate the relationship between self-esteem and social anxiety was conducted by Geist and Borecki (1982). These authors explored the degree to which college students' Social Avoidance and Distress scale (SAD) scores related to students' level of self-esteem, as measured by the Feelings of Inadequacy scale. Consistent with the authors' predictions, students who scored high on the SAD scale endorsed lower levels of self-esteem. The authors interpreted these results as suggesting that individuals with low self-esteem are less confident in their ability to interact with others in a desirable fashion and therefore, more likely to experience anxiety during social situations. Three subsequent studies confirmed the findings of Geist and Borecki (1982). Elliott (1984), Kocovski and Endler (2000), and deJong (2002) all demonstrated an inverse relationship between self-esteem and social anxiety within a sample of college students using self-report measures. Gilbert and Miles (2000) found a perception of low social rank also to be negatively correlated with self-esteem as indicated by self-report measures administered to undergraduate college students. More specifically, participants who endorsed higher levels of social inferiority, as measured by the Social Comparison Scale (SCS; Allan & Gilbert, 1995), endorsed lower levels of self-esteem.

Interpersonal sensitivity also has been linked both to a perception of inferior social status and to social anxiety. Elliott (1984) is the first identifiable author to have linked the distinct constructs of social anxiety and interpersonal sensitivity. Elliott's findings from a structural equation analysis suggested interpersonal sensitivity to be a cause of self-reported social anxiety. Other studies that have demonstrated this link have

employed correlational methodology. For example, in the process of developing the Interpersonal Sensitivity Measure (IPSM), Boyce and Parker (1989) found interpersonal sensitivity to be positively correlated with self-reported fear of criticism, a form of negative evaluation, within a sample of college students. Davidson, Zisook, and Giller, (1989) corroborated the correlation between social anxiety and interpersonal sensitivity and identified self-reported feelings of social inferiority to also be a correlate of interpersonal sensitivity using a sample of depressed hospital patients. The authors thereby linked the constructs of interpersonal sensitivity, social anxiety, and social inferiority within the context of one study. In addition, Gilbert and Miles (2000) found a positive correlation between interpersonal sensitivity and a perception of low social rank by administering self-report measures to undergraduate college students. The authors interpreted these findings as suggesting those who view themselves as socially inferior are more likely to identify the criticisms they receive from others as truthful. They further elaborated that, among those who view themselves as socially inferior, the salience of potential interpersonal rejection leads to increased anxiety during social encounters. In other words, the authors suggested a perception of low social rank to be an indirect cause of social anxiety.

Other shared correlates of social anxiety and perceived social inferiority include shame and perfectionism. Using self-report measures, Wyatt and Gilbert (1998) found a positive correlation between college student participants' self-oriented perfectionism and perceived inferior social status. Also using self-report measures and a college student sample, Rosser, Issakidis, Peters, and Lorna (2003) found a positive correlation between social anxiety and perfectionism. Finally, Gilbert and Miles (2000), found self-reported

shame to be a positive correlate of both social anxiety and perceived low social-status among a college student sample.

The Casual Assumption of Social Rank Theory

Although there is scant discussion in the literature regarding how the shared covariates of social anxiety and social rank may be conceptually linked, social rank theory suggests that perceived inferiority and social anxiety share common correlates (and are correlated with one another) because the latter is a consequence of the former. The theory further suggests that the social discomfort resulting from perceived inferiority functions to motivate submissive behavior so that subordinate individuals may prevent aggression from more dominant, powerful, members of society, thereby averting rejection from the social group. For those who perceive an inferior social status, a tendency to engage in social comparison is kindled so that, when interacting with an individual of higher social rank, the cue to behave submissively is not missed. In short, those who perceive an inferior social rank become more attuned, and are therefore more influenced by, perceptions related to social comparison.

Although social anxiety and a perception of low social rank share multiple correlates, there is no empirical evidence to support the claims made by social rank theory. The causal relationship suggested by social rank theory has yet to be rigorously scrutinized. In fact, only two identifiable studies have directly examined the relationship between perceived inferiority/superiority and social rank. Using a college student sample, Gilbert and Trower (1990) found self-reported feelings of general inferiority to be positively associated with self-reported anxiety. Of course, because this relationship was demonstrated using correlational analysis, a causal relationship is impossible to infer.

Antony, Rowa, Liss, Swallow, and Swinson (2005) obtained similar findings to those of Gilbert and Trower. Using self-report measures, these authors found a higher frequency of perceived inferiority to be associated with higher levels of social anxiety among a college student sample. In addition, these authors analyzed participants' daily diary reports for instances of perceived inferiority and found these instances to precede increased levels of anxiety according to participants' daily self-monitoring forms. Although evidence suggests a link between the perceived social inferiority and social anxiety, this evidence is scant in quantity. Moreover, while it is possible that, as social rank theory suggests, perceived inferiority causes social anxiety, it is equally possible that those who experience social anxiety may be more likely to perceive others as being socially superior. Alternatively, a third variable (i.e., social skill) might explain the relationship between the two variables.

Contrary to social rank theory and the findings of Gilbert and Trower (1990) and Antony et al. (2005), studies within the social psychology literature suggest that, because individuals are motivated to avoid feelings of inferiority and preserve a positive self-image, they generally refrain from comparing themselves to those they believe to be superior and tend to exhibit a positive self-bias (Larson, 1977; Schlenker & Miller, 1977). While this tendency may not apply to the same extent among those who experience social anxiety, the contradictory tenets of social rank theory and social psychology merit further analysis. Moreover, although the diary study findings of Antony et al. suggest perceived inferiority be an antecedent of increased anxiety, these results have yet to be replicated in a controlled setting.

The Use of a Social Interaction Task to Directly Test the Causal Assumption of Social Rank Theory

If the perception of social inferiority during an immediate social interaction results in increased social anxiety, as purported by social rank theory, then individuals should report more distress when interacting with those they believe to be superior as opposed to those they identify as socially inferior. One possible way to empirically investigate the causal relationship proposed by social rank theory might therefore entail the use of a social interaction task. Previous relevant studies that have used this technique for the purpose of examining covert reactions to social interaction include Papageorgiou and Wells (2002), Alden and Mellings (2004) and Gramer and Berner (2005).

To study the effect of heart rate feedback during a five-minute social interaction task on self-ratings of social performance and anxiety, Papageorgiou and Wells provided college student participants with the following instructions:

"This is a study of the effects of general conversation on people's feelings and behavior. I would like you to hold a brief conversation with one another. You may talk about whatever you like, but please do not talk about the experiment. Please make conversation about the kind of things that you normally would in social situations. It is *very* important that you start the conversation and try to keep it going."

The authors found that, among participants with a high degree of social-evaluative anxiety, a false indication of participant heart rate increase (displayed to participants via a heart rate monitor) negatively affected participants' self-ratings of social performance as well as increased participants' self-reported anxiety. Thus, in this particular study, the use

of a simple social interaction task combined with contrived physiological feedback was found to significantly influence participants' self reported social anxiety.

Alden and Mellings (2004) used a similarly unstructured social interaction task in order to explore the factors college student participants' use to determine self-rated social performance. Participants in this study were instructed to begin speaking with a "clinical research assistant" so that the participant and assistant would "get to know each other as if you had been recently introduced." This interaction task continued for five minutes. Results from this study indicated that anxiety-related self-information had a greater influence on the self-rated performance of those who endorsed relatively more social anxiety. Thus, the brief 5-minute interaction task was sufficient to evoke and reveal differential social self-analysis between those with high and low levels of social anxiety.

To investigate the effect of social dominance on cardiovascular reactivity during and after a social interaction task requiring attempted social influence, Gramer and Berner (2005) utilized a social interaction task designed to elicit a range of dominant and submissive behaviors. High-school participants were instructed to assume opposite positions on whether or not alcohol should be sold to those who are under the age of 21. Participants were allotted five minutes to form their argument. They were then instructed to try to persuade their interaction partner to agree with their position during a 5-minute discussion period. Those who self-reported higher levels of dominance prior to the interaction task exhibited lower increases in diastolic blood pressure following the task. This finding suggests that a brief interaction task is sufficient to evoke and reveal physiological response differences between dominant and submissive individuals.

Although the nature of social interaction in the laboratory may be contrived and temporally limited, the research described above suggests that individual differences across various socially relevant behaviors can be elicited and observed during even a brief social interaction task. Furthermore, the findings of Antony et al. (2005; discussed above) suggest that one instance of perceived inferiority is sufficient to induce increased anxiety. Therefore, it seems plausible that the relationship between a perceived social inferiority and social anxiety might be revealed and examined within the context and constraints of a social interaction task.

The Potential Value of Further Exploring Social Rank Theory

If the experience of social anxiety commonly results from perceptions of inferiority, as suggested by social rank theory, identifying this relationship would pose important clinical implications. Consider that many commonly used social anxiety measures do not assess social comparison behaviors (i.e., the Fear of Negative Evaluation scale; Watson & Friend, 1969, and the Social Phobia and Anxiety Inventory; Turner, Beidel, & Dancu, and Stanley, 1989). Because the goals of treatment are a direct product of assessment, perceptions of social inferiority are currently less likely to be incorporated into treatment goals. Furthermore, studies of treatment outcome with socially anxious participant samples have not assessed changes in perceived social inferiority (Bobes, 1998; Feldman & Rivas-Vazquez, 2003). This is unfortunate given the possibility that such perceptions may influence quality of life subsequent to "effective" treatment. Because, as Bobes (1998) has pointed out, quality of life typically has been overlooked in defining recovery from social anxiety disorder, it is not possible to know the extent to which failing to monitor and address issues surrounding social comparison have

compromised the adequacy of treatment. If a perception of social inferiority is a behavioral antecedent to social anxiety, clarifying this relationship might promote knowledgeable dissemination leading to the inclusion of this construct in social anxiety assessment tools and in treatment.

Statement of the Problem and Hypotheses

According to social rank theory, individuals exhibit social anxiety, and many of the correlates of social anxiety (e.g., low self-esteem, perfectionism, anger, interpersonal sensitivity, and shame), subsequent to a perception of social inferiority. In addition to proposing that an acute perception of inferiority leads to the acute experience of social anxiety, social rank theory also suggests that persons who experience chronic, elevated levels of social anxiety do so as a result of chronic perceived inferiority (in other words, a perception of low social rank). Although empirical findings have not contradicted this theory, a paucity of methodologically rigorous research leaves the relationship between feelings of inferiority and social anxiety uncertain. A purpose of the current study was to empirically examine social rank theory by determining whether those who report higher levels of social anxiety are more likely to rate an interaction partner as being relatively more superior as measured by a revised version of the Social Comparison Scale (SCS-R; Allan & Gilbert, 1995). The language of the SCS was revised for this study for the purpose of eliciting social comparison in relation to participants' social interaction partners as opposed to participants' self-comparative feelings in relation to others in general. It was hypothesized that a negative correlation would be found between participants SPAI and SCS-R scores (Hypothesis 1).

A second purpose of the current study was to investigate the assumption of social rank theory (e.g., that an acute perception of inferiority leads to increased anxiety) by determining whether self-reported feelings of inferiority vs. superiority as measured by the SCS-R, would significantly predict self-reported general, physical, and cognitive symptoms of anxious distress, as measured by SUDS ratings, *following* three social interaction tasks after controlling for the level of self-reported general, physical, and cognitive anxiety *prior* to these interactions tasks. Consistent with social rank theory, it was hypothesized that the SCS-R would significantly, negatively predict general, physical, and cognitive anxiety following the three social interaction tasks (Hypothesis 2).

Per social rank theory, in addition to causing social anxiety, a chronic perception of inferiority (low social rank) causes increased sensitivity to perceptions of social comparison so that lower ranking individuals may be alerted to closely monitor their behavior when more dominant individuals are present in order to avoid rejection. Therefore, individuals of a lower social rank are not only characterized by higher levels of social anxiety, but also by increased attention and susceptibility to social comparison. An additional purpose of this study was to investigate this assumption by determining whether social anxiety would moderate the effect of perceived inferiority/superiority on anxiety symptoms (general, physical, and cognitive). Consistent with social rank theory, it was hypothesized that social anxiety would moderate the effect of perceived inferiority/superiority, with perceived inferiority more strongly predicting anxiety at T2 among those with higher levels of social anxiety (Hypothesis 3).

To examine the effects of social comparison among a variety of social tasks, and in order to provide a length and breadth of social interaction sufficient to facilitate social comparison, the current study examined whether highest level of distress during tasks related to three separate social domains (casual conversation, social influence, and task oriented collaboration) would be significantly and negatively predicted by participants' SCS-R scores. Given the non-domain specific, overarching nature characterizing the concept of social rank, it was hypothesized that perceived inferiority/superiority would significantly predict participants' highest level of anxiety during each of these tasks (Hypothesis 4). No prediction was made regarding which tasks would elicit the highest level of anxiety nor was a prediction made regarding which task-related highest anxiety would be most strongly predicted by perceived inferiority/superiority. Because, according to social rank theory, persons who experience higher levels of social anxiety supposedly develop a heightened sensitivity to perceptions regarding social comparison, it was hypothesized that perceived inferiority/superiority would more strongly predict highest level of task-related anxiety at higher levels of participant social anxiety (Hypothesis 5).

Method

Participants

One hundred undergraduate students, ages 18-21, participated in this study. Participants were limited to a fairly narrow age range in order to avoid the potential confound of large age differences between interaction partners. Participants were recruited from within the Department of Psychology at West Virginia University via psychology classroom announcements and the SONA electronic research participant

recruitment system. This program directed participants to choose an experimental time-slot based on their gender. Each time-slot involved two same-sex participants.

Participants were instructed *not* to participate with a partner whom they already knew. To ensure that preexisting relationships did not exist between interaction partners, a question regarding familiarity with the interaction partner was included on the demographic form and reviewed by the experimenter prior to commencing the study. On three occasions, participants who indicated a preexisting relationship with their interaction partner were rescheduled to participate in the experiment with another partner.

Measures

A chart is presented in Figure 1 to provide clarification to the reader regarding the order in which the following described self-report measures were administered to participants.

Demographic Form. Participants completed a demographic form that included questions regarding gender, age, sexual orientation, ethnicity, and year in college. This form is presented in Appendix A.

The Social Comparison Scale (SCS; Allan & Gilbert, 1995). The SCS, as shown in Appendix B, is an 11-item self-report measure designed to assess global judgments of social rank, attractiveness, and group fit regarding the self in comparison to others. The SCS utilizes semantic differential methodology. That is, the scale items require participants to complete a sentence beginning "In relationship to others I generally feel..." by indicating where they believe they fall on a 10-point scale anchored by two bipolar terms (i.e., less competent-more competent). In addition to completing the SCS, participants completed a revised version of the SCS that was modified for the purposes of

the current study (SCS-R). On this measure, the sentence fragment of the SCS was changed to "In relationship to my interaction partner I feel...". This measure is presented in Appendix C.

Among a normative sample of 263 undergraduate college students, Allan and Gilbert (1995) found the Cronbach alpha of the SCS to be .91. Test-retest reliability of the SCS has been found to be .84 at four months (Allan & Gilbert). The SCS has been found to be negatively correlated with multiple measures of psychopathology including the following subscales of the Symptom Checklist 90-R: Obsessive-Compulsive (-.30), Interpersonal Sensitivity (-.46), Depression (-.39), Phobic Anxiety (-.38), and Paranoid Ideation (-.32; Allan & Gilbert).

Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989). The Social Phobia and Anxiety Inventory is a 32-item, self-report inventory, designed to assess the cognitive, physiological, and behavioral dimensions of social anxiety. Items on the SPAI require respondents to provide frequency ratings of distress associated with thoughts, situations, and somatic symptoms on the basis of a 7-point scale. Higher numbers indicate more frequent experiences of distress. In order to provide differentiation between social related and agoraphobia related fear, the SPAI contains a 13-item Agoraphobia subscale. A difference score is computed by subtracting the Agoraphobia subscale value from the total SPAI score in order to yield a more “pure” measure of social anxiety as compared to the overall total. Because the difference score is the primary SPAI value reported and analyzed by those who have studied social anxiety disorder, and because it could be considered the most “pure” measure of social anxiety

yielded by the SPAI, the SPAI difference score is the variable of interest at hand and will be referred to from this point forward simply as the “SPAI score.”

In order to determine the psychometric properties of the SPAI, Turner, Beidel, Dancu, and Stanley (1989) administered the measure to a sample of 59 socially anxious and 123 non-socially-anxious undergraduate college students. Cronbach's alpha was computed to determine internal consistency for both the Social Phobia and Agoraphobia subscales. Values of .96 and .85 were obtained, respectively. Test-retest reliability for the entire sample was determined to be .86. The strong psychometric properties of the SPAI have been demonstrated in numerous studies since 1989 including Clark, Turner, Beidel, Donovan, Kirisci, and Jacob (1994). These authors evaluated the psychometric properties of the SPAI using a sample of 223 adolescents ranging in age from 12 to 18 years; 102 (59 female) of these participants were recruited from inpatient and outpatient psychiatric facilities and 121 (63 female) participants were recruited from the community. A Cronbach's alpha of .97 demonstrated excellent internal consistency of the SPAI. Also, the SPAI was found to correlate moderately with all subscales of the Fear Survey Schedule for Children-revised with values ranging from .29 to .47.

Subjective Units of Distress (SUDS). Prior to the first interaction task and following the third interaction task, participants were asked to provide a rating of the amount of cognitive, physical, and general anxious distress they felt on the basis of a scale ranging from 0-100 with higher numbers representing higher degrees of distress. Participants indicated this number on SUDS form 1 contained in Appendix D. Following each interaction task, participants were asked to provide a global rating of their anxious distress on SUDS form 2, presented in Appendix E.

Procedure

This study took place in the Developmental Psychopathology Lab of the Life Sciences Building at West Virginia University. Each experimental session involved two participants comprising a same-sex dyad. Same-sex participants were paired in order to limit heterosexual attraction and flirtation, behaviors that might otherwise have influenced the nature of the social dynamic. Although it was presumed that some homosexual and bisexual participants would participate in this study, because prevalence rates of these sexual orientations are relatively lower, it was assumed that any variance introduced by the attraction of same sex participants would be minimal in nature. Only five participants identified their sexual orientation as being bisexual or homosexual.

Upon arrival at the lab, participants read and signed consent forms. Participants were provided SUDS form 1 that explained SUDS ratings and instructed participants to indicate their current general, physical, and cognitive SUDS ratings. Participants then completed the Social Phobia and Anxiety Inventory and the Social Comparison Scale.

Similar to the social interaction task administered by Papageorgiou and Wells (2002), participants were then told the following:

"This is a study of the effects of general conversation on people's feelings and behavior. I would like you to hold a brief conversation with one another for the duration of five minutes. You may talk about whatever you like, but please do not talk about the experiment. Please make conversation about the kind of things that you normally would in social situations. It is *very* important that you start the conversation and try to keep it going. You may start by introducing yourselves to one another."

Although some participants may have had difficulty making conversation, verbal inhibition represents a behavior by which interaction partners may evaluate one another. Therefore, after stating the importance of continuing the conversation, the investigator did not intervene when lulls in participants' conversation occurred. Following the five-minute period of interaction, participants completed SUDS form 2, a measure of the highest level of anxiety experienced during the task.

For the purpose of eliciting a range of dominant and submissive behaviors, so as to facilitate social comparison behaviors, participants then engaged in a social interaction task designed by Gramer and Berner (2005; discussed above) that required participants to engage in social persuasion. Participants' whose name alphabetically preceded that of the other participant were instructed to persuade their interaction partner that alcohol should be sold to those who are under 21 years of age. Their partner was instructed to take the opposite stance. This interaction task lasted for the duration of 10 minutes. Participants were allotted a relatively longer period of time for this task to allow time for planning their argument during the initial five minutes. Participants' were largely able to talk for the required duration. However, a few of the dyad pairs required prompting. When these pairs discontinued the discussion, the investigator provided a prompt by stating, "Please continue to persuade your partner of the view you have been assigned to argue." Following this interaction task, both participants again completed SUDS form 2.

Because collaboration is a common form of necessary social interaction (e.g., job related tasks) and because collaborative, team-work type tasks set a stage for eliciting the dominant, leadership behaviors associated with high social rank as well as the submissive, passive behaviors, associated with lower social rank, participants were

instructed to engage in a final interaction task requiring collaboration with their partner. During this five-minute task, interaction partners worked together to replicate a previously constructed model using a Magnetix building set. When presented with the building set, participants were instructed as follows: "Please construct a model just like this one using these materials. Please make sure that you work together and try to make sure that your model is exactly like this one." Following a five-minute period, participants once again completed SUDS form 2. Finally, participants completed the SCS-R and SUDS form 1.

Results

Demographic characteristics of the 100 participants (78% female) are listed in Table 1. Though the sample consisted of largely female participants, the sample is representative of the gender ratio of undergraduate psychology majors. No significant differences were found in participants' SPAI or SCS-R scores or SUDS ratings based on different values across ethnicity, age, year in college, or income of primary household based on *t*-test analyses. Differences across sexual orientation were not analyzed because of the small number of homosexual and bisexual participants. Female participants obtained a significantly higher SPAI score ($M = 49.73$, $SD = 21.94$) than did male participants ($M = 38$, $SD = 27.64$), $t(99) = 4.36$, $p < .05$.

Table 2 lists descriptive statistics for the main dependent and independent variables. Because of close monitoring by the experimenter who was present for all experimental sessions, no data were missing. With regard to the independent variables, the study sample was similar as compared to other undergraduate student samples. There was not a significant difference between participants' mean SPAI score ($M = 47.15$, SD

= 23.67) when compared to a similar sample of 434 undergraduate college students (65% female) at West Virginia University based on a *t*-test analysis (Anhalt & Morris, 2002).

The mean score obtained by the comparison sample was 50.56 (*SD* = 28.56).

Correlations between Independent and Dependent Variables

Table 3 lists Pearson product-moment correlations between all major dependent and independent variables. A majority of the correlations between variables were found to be significant. As predicted in the first hypothesis, a significant, negative correlation was found between the two independent measures, the SCS-R and the SPAI. The following dependent variables were positively and significantly associated with participants' SPAI scores: Level of Anxiety T1, Negative Thoughts T1, Highest Anxiety Task 1, Highest Anxiety Task 2, Highest Anxiety Task 3, Level of Anxiety T2, and Negative Thoughts T2. The following dependent variables were negatively and significantly associated with the SCS-R: Level of Anxiety T1, Negative Thoughts T1, and Negative Thoughts T2.

Statistical Analysis of Dyad Pairs

Dyad pairs were investigated for non-independence with regard to both of the dependent variables, the SPAI and the SCS-R, by the computation of a Pearson product-moment correlation. Because the assessment of interdependence was not found to be significant for either of the independent variables, it was concluded that participants' scores on the independent variables were independent of the dyads to which participants were assigned. For this reason, consistent with the recommendations of Kenny (1995), participant data, as opposed to dyad data, were investigated as the primary unit of analysis.

Regression Analyses

Because female participants' SPAI scores were significantly higher than male participants' SPAI scores, gender was entered into each regression analysis as a control variable. Six hierarchical multiple regression analyses were performed entering gender, the independent variables, the SCS-R and the SPAI, and an interaction term based on these two measures, into three separate blocks to separately investigate the prediction of participants' dependent variable values (Level of Anxiety T2, Physical Symptoms T2, Negative Thoughts T2, Highest Anxiety Task 1, Highest Anxiety Task 2, Highest Anxiety Task 3). Block 1 consisted of gender and, when testing the prediction of anxiety scores at T2 (general, physical, or cognitive), the respective anxiety score at T1 was also entered into this block. Block 2 consisted of the SCS-R and the SPAI. Block 3 consisted of the interaction term. Participants' SCS-R and SPAI scores were centered prior to computing the interaction term. To investigate the possible influence of outlying cases, participants with a dependent variable value three standard deviations above or below the value predicted by the respective regression model were identified for each of the regression analyses performed. No more than two outliers were identified for any one analysis. Each regression analysis was conducted twice, first including, then excluding any outlying cases. No differences were found in the results based on the inclusion or exclusion of outliers with regard to significance of the predictor variables. The data presented below represent analyses that were conducted with the inclusion of outliers.

Tables 4-6 contain the analyses of hypotheses 2 and 3. They present both the standardized (β) and unstandardized (B) regression coefficients as well as the standard error, p , and R^2 change values in the prediction of anxiety SUDS ratings (general,

physical, and cognitive) following the interaction tasks. Block 1, gender and respective anxiety at T1, accounted for a significant amount of the variance in the prediction of participants' general anxiety SUDS at T2, $R^2 = .39$, $F(5, 94) = 30.32$, $p < .05$, physical anxiety SUDS at T2, $R^2 = .39$, $F(5, 94) = 30.46$, $p < .05$, and cognitive anxiety SUDS at T2, $R^2 = .52$, $F(5, 94) = 53.45$, $p < .05$. After controlling for gender and level of anxiety at T1 (general, physical, or cognitive, depending upon the respective dependent variable), neither block 2 (the SCSR and the SPAI) nor block 3 (the interaction term) accounted for a significant amount of variance in the prediction of anxiety ratings at T2.

In terms of significant individual variable effects, SUDS at T1 significantly predicted participants' general anxiety SUDS at T2, $\beta = .61$, $t(94) = 7.73$, $p < .05$, physical anxiety SUDS at T1 significantly predicted physical anxiety SUDS at T2 $\beta = .60$, $t(94) = 7.55$, $p < .05$, and cognitive anxiety SUDS at T1 significantly predicted cognitive anxiety SUDS at T2, $\beta = .68$, $t(94) = 10.26$, $p < .05$.

Tables 7-9 contain the analyses of hypotheses 4 and 5. They present both the standardized (β) and unstandardized (B) regression coefficients as well as the standard error, p , and R^2 change values in the prediction of the highest anxiety experienced during tasks 1, 2, and 3. After controlling for gender, Block 2 (the SCS-R and SPAI), accounted for a significant amount of variance in the prediction of participants' highest level of anxiety during task 1, $R^2 = .13$, $F(4, 95) = 7.04$, $p < .05$, task 2, $R^2 = .12$, $F(4, 95) = 6.59$, $p < .05$, and task 3, $R^2 = .06$, $F(4, 95) = 3.06$, $p < .05$. In terms of significant individual variable effects, the SPAI significantly and positively predicted participants' highest anxiety during task 1, $\beta = .61$, $t(95) = 3.39$, $p < .05$, task 2, $\beta = .60$, $t(95) = 3.28$, $p < .05$, and task 3, $\beta = .68$, $t(95) = 2.0$, $p < .05$.

Discussion

Examination of the Proposed Hypotheses

Consistent with the proposed hypotheses, a negative correlation was found between participants' SPAI and SCS-R scores. That is, participants who endorsed higher levels of social anxiety endorsed lower levels of perceived superiority when comparing themselves to their interaction partners. In other words, participants who endorsed higher levels of social anxiety endorsed higher levels of perceived inferiority. This finding is consistent with the findings of Antony, Rowa, Liss, Swallow, and Swinson (2005).

Given the social nature of the experimental tasks, it is not surprising that participants' SPAI scores significantly correlated with participants' self-reported anxiety prior to, during, and following each task. In light of the negative correlation between the SPAI and the SCS-R and the positive correlations between the SPAI and participants' anxiety SUDS ratings, the negative correlations obtained between the SCS-R and participants' General Anxiety T1, Negative Thoughts T1, and Negative Thoughts T2 SUDS ratings are also not surprising. It is remarkable, however, that significant correlations were not identified between the SCS-R and participants' General Anxiety T1, Physical Anxiety T1, and Physical Anxiety T2 SUDS ratings. Though no explanation can be offered with certainty, perhaps anxiety related to perceived inferiority is more likely to manifest itself cognitively as opposed to physically. Alternatively, perhaps those who experience anxiety cognitively are more likely to perceive inferiority as compared to those who experience anxiety in a largely physical fashion.

Contrary to the proposed hypotheses, neither participants' SCS-R scores nor interaction term values significantly predicted general, physical, or cognitive anxious

distress following the three interaction tasks. As participants' interaction term values did not significantly predict general, physical, or cognitive anxiety at T2, participant social anxiety was not found to be a moderator of the effect of perceived inferiority/superiority on anxiety at T2 as predicted.

Also contrary to the proposed hypotheses, neither participants' SCS-R scores nor interaction term values significantly predicted highest anxiety experienced during task 1, 2, or 3. However, participants' SPAI and SCS-R scores together did account for a significant amount of variance in the prediction of participants' highest anxiety during tasks 1, 2, and 3. As participants' interaction term values did not significantly predict highest anxiety during task 1, 2, or 3, participant social anxiety was not found to be a moderator of the effect of perceived inferiority/superiority on highest anxiety level as predicted.

While the limitations of this study (discussed below) may partially explain the lack of significant findings, an additional explanation might be found in the large amount of variance removed by anxiety measured at T1 prior to entering the primary independent variables into the regression analyses. Because the effect of social comparison on anxiety could have initiated prior to measurement at T1, upon participants' arrival in the lab, controlling for anxiety at T1 may have removed the power to detect this effect. This interpretation would be consistent with the high correlations between anxiety values at T1 and T2.

Study Limitations

Multiple limitations of the current study should be considered in the interpretation of the findings. With regard to the significant negative correlation found between

perceived inferiority/superiority and social anxiety, a primary limitation is inability to infer causality. Although self-reported perceptions of superiority were found to be negatively associated with participants' social anxiety, the direction of causality is uncertain. While it is possible that, as social rank proposes, perceptions of inferiority lead to the experience of social anxiety, this causal relation was not supported by the current experimental analysis. Therefore, it remains equally plausible that the experience of social anxiety leads one to perceive other, perhaps less anxious people, as being superior. Alternatively, a third variable may account for this correlation.

Additionally, this study was mono-methodological in that it utilized only self-report instruments to measure the independent and dependent variables. Self-report measures are vulnerable to the biases of participants and may not have accurately portrayed participants' true values on the dependent and independent variables.

Another limitation of the current study was that it did not utilize a clinical sample. Moreover, because potential participants were notified that this study entailed participation in a social interaction task, it is possible that those with particularly high levels of social anxiety choose not to participate. Given that the typical human tendency, according to literature from the sub-discipline of social psychology, is to protect oneself with a self-serving perceptual bias, a floor effect with regard to perceived inferiority may have contributed to the limited number of significant findings. This interpretation would be consistent with the fact that, on average, participants rated themselves as being generally superior to their interaction partner. In fact, the lowest participant score on the SCS-R (53) indicates the perception of slight self-superiority. Perhaps among a clinical sample with higher levels of social anxiety, the self-serving bias would have been less

evident. Consistent with social rank theory, socially anxious participants might have been more highly influenced by the induction of social comparison.

Implications and Directions for Future Research

Because the findings from this investigation were largely insignificant, the implications of this study are fairly synonymous with the recommendations for future research discussed below. Given the limitations of this study and the scant amount of literature examining the tenets of social rank theory, additional research would be preferable to assuming the null hypothesis.

Given the vulnerability of self-report measures to participant bias, this method may not have been sufficient to detect anxiety experienced by the participants in an accurate fashion. It is recommended that future research investigating the effects of social comparison on anxiety might utilize additional assessment methods, for example, physiological methods (e.g., polar heart monitor or skin conductance), to assess participant social anxiety.

Because the amount of time required for individuals to form social comparison judgments' about themselves in relation to another is unknown, it is possible that controlling for anxiety at T1, which was measured *after* participants had already had contact with one another, may have decreased the ability to identify significant predictors of anxiety at T2. Because it is possible that social-comparative evaluation may occur immediately, it is recommended that future research investigating the effect of perceived inferiority/superiority on social anxiety measure participants' baseline anxiety prior to contact between interaction partners.

Finally, because a self-serving bias was evident in participants' evaluations of self-comparison, and because social rank theory implies higher levels of perceived inferiority among socially anxious, it is recommended that the effects of perceived inferiority on social anxiety include clinically socially anxious individuals. If the assumptions of social rank theory are correct, this sampling strategy might be more likely to include more participants' with higher levels of perceived inferiority, thus lending more power in the detection of the possible effects of this perception.

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Appendix A
Demographic Form

Please check the answers that apply to you and fill in all answer spaces:

1. Gender:

- ☐ (1) Male
☐ (2) Female

2. Age: _____

3. Ethnic Group:

☐ (1) Caucasian	☐ (4) Asian-American
☐ (2) African-American	☐ (5) American Indian
☐ (3) Hispanic	☐ (6) Other (specify) _____

4. Status in College:

☐ (1) Freshman	☐ (3) Junior
☐ (2) Sophomore	☐ (4) Senior

5. Sexual Orientation

- ☐ (1) Heterosexual
☐ (2) Homosexual
☐ (3) Bisexual

6. What is the yearly income of the primary household in which you grew up?

- ☐ (1) Less than \$20,000
☐ (2) between \$20,000 - \$40,000
☐ (3) between \$40,000 – \$80,000
☐ (4) between \$80,000 - \$120,000
☐ (5) between \$120,000 – \$160,000
☐ (6) more than \$160,000

7. Do you know the other person who is also participating in this study?

- ☐ (1) No
☐ (2) Yes (please describe how you know this person below)

Appendix B

The Social Comparison Scale (SCS)

In relation to others, I generally feel:

1.)	1	2	3	4	5	6	7	8	9	10
	Inferior								Superior	
2.)	1	2	3	4	5	6	7	8	9	10
	Incompetent								Competent	
3.)	1	2	3	4	5	6	7	8	9	10
	Unlikeable								Likeable	
4.)	1	2	3	4	5	6	7	8	9	10
	Left out								Accepted	
5.)	1	2	3	4	5	6	7	8	9	10
	Different								Same	
6.)	1	2	3	4	5	6	7	8	9	10
	Untalented								More Talented	
7.)	1	2	3	4	5	6	7	8	9	10
	Weaker								Stronger	
8.)	1	2	3	4	5	6	7	8	9	10
	Unconfident								More Confident	
9.)	1	2	3	4	5	6	7	8	9	10
	Undesirable								More Desirable	
10.)	1	2	3	4	5	6	7	8	9	10
	Unattractive								More Attractive	
11.)	1	2	3	4	5	6	7	8	9	10
	As an Outsider								As an Insider	

Appendix C

The Social Comparison Scale (Revised; SCS-R)

In comparison to my interaction partner I feel:

1.)	1	2	3	4	5	6	7	8	9	10
	Inferior								Superior	
2.)	1	2	3	4	5	6	7	8	9	10
	Incompetent								Competent	
3.)	1	2	3	4	5	6	7	8	9	10
	Unlikeable								Likeable	
4.)	1	2	3	4	5	6	7	8	9	10
	Left out								Accepted	
5.)	1	2	3	4	5	6	7	8	9	10
	Different								Same	
6.)	1	2	3	4	5	6	7	8	9	10
	Untalented								More Talented	
7.)	1	2	3	4	5	6	7	8	9	10
	Weaker								Stronger	
8.)	1	2	3	4	5	6	7	8	9	10
	Unconfident								More Confident	
9.)	1	2	3	4	5	6	7	8	9	10
	Undesirable								More Desirable	
10.)	1	2	3	4	5	6	7	8	9	10
	Unattractive								More Attractive	
11.)	1	2	3	4	5	6	7	8	9	10
	As an Outsider								As an Insider	

Appendix D

SUDS form

1.) For many different reasons, people sometimes feel nervous, uptight, or anxious. Using the scale below as a guide, please write the number that represents the level of anxiety you feel right now. You may choose any number between 0 and 100. _____

0	10	20	30	40	50	60	70	80	90	100
I feel calm and relaxed. I'm not at all nervous or anxious.									I feel extremely anxious, as though I can't relax at all.	

2.) Sometimes when people feel nervous, they experience **physical symptoms** such as sweating, upset stomach, rapid heart beat, etc. Please write the number that represents the extent to which you are experiencing physical symptoms of anxiety using the scale below. You may choose any number between 0 and 100. _____

0	10	20	30	40	50	60	70	80	90	100
I am not experiencing any physical symptoms of anxiety.									I am experiencing intense physical symptoms of anxiety.	

3.) Sometimes when a person feels nervous, he or she might have **negative thoughts** about his or her social behavior. For example, he or she might worry "I'll probably say something stupid" or "People can tell that I felt nervous and uncomfortable." Please write the number that represents the extent to which you are experiencing negative thoughts about yourself. You may choose any number between 0 and 100. _____

0	10	20	30	40	50	60	70	80	90	100
I am not experiencing negative thoughts about myself.									I am experiencing many negative thoughts about myself.	

Appendix E

SUDS Form 2

1.) Sometimes people feel nervous or anxious when they are interacting with someone they don't know very well. Please think about the interaction task you just participated in and write down the number that represents the highest level of anxiety or nervousness you felt during the interaction. Use the scale below as a guide.

0	10	20	30	40	50	60	70	80	90	100
I didn't feel anxious or nervous at any point during the interaction.									At one point, I felt extremely anxious or nervous.	

What number represents the highest anxiety you felt during the interaction task you just participated in? You may choose any number between 0 and 100. _____

Table 1.

Demographic Characteristics of Participants

Characteristic	Frequency	Percentage
Gender		
Female	78	78.0
Male	22	22.0
Status in College		
Freshman	38	38.0
Sophomore	34	34.0
Junior	16	16.0
Senior	20	20.0
Ethnic Group Identification		
Caucasian	91	91.0
African-American	3	3.0
Asian-American	5	5.0
Other	1	1.0
Sexual Orientation		
Heterosexual	95	95.0
Homosexual	3	3.0
Bisexual	2	2.0

(table continues)

Table 1 (continued).

Characteristic	Frequency	Percentage
Yearly income of Primary Childhood Household		
Less than \$20,000	10	3.3
\$20,000-\$40,000	12	12.3
\$40,000-\$80,000	19	39.5
\$80,000-\$120,000	26	25.8
\$120,000-\$160,000	15	9.0
More than \$160,000	17	8.3
Did not answer.	1	1.0

Table 2.

Descriptive Statistics for Independent and Dependent Variables

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Social Phobia and Anxiety Inventory (SPAI)				
Total	100	67.41	32.09	0-50
Agoraphobia	100	20.26	11.27	0-45
Difference Score	100	47.15	23.67	-20-116
Social Comparison Scale (SCS)	100	73.54	14.04	31-96
SUDS 1 at T1 (Prior to social interaction tasks)				
Level of anxiety	100	20.19	21.15	0-90
Physical Symptoms	100	12.84	18.47	0-80
Negative Thoughts	100	13.51	18.06	0-70
SUDS 2 (Highest level of anxiety experienced during social interaction task)				
Social Interaction Task 1	100	20.70	21.05	0-95
Social Interaction Task 2	100	23.87	22.78	0-100
Social Interaction Task 3	100	10.05	13.49	0-70
SUDS 1 at T2 (Following social interaction tasks)				
Level of Anxiety	100	9.48	14.45	0-70
Physical Symptoms	100	6.99	11.82	0-70
Negative Thoughts	100	7.74	13.97	0-80

(table continues)

Table 2 (continued).

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Range
SUDS 1 Change Scores				
Level of Anxiety	100	-10.71	16.74	-60-10
Physical Symptoms	100	-5.85	14.80	-50-30
Negative Thoughts	100	-5.77	12.54	-70-20
SUDS 2 Change Scores				
Change Following Task 1	100	.51	18.54	-77-41
Change Following Task 2	100	3.17	17.40	-41-70
Change Following Task 3	100	-13.82	19.64	-80-35
Social Comparison Scale Revised	100	71.25	12.13	53-99

Table 3.

Correlations of Independent and Dependent Variables

	1	2	3	4	5	6	7	8	9	10	11
1. SCS		-.45**	-.29**	-.25*	-.28**	-.15	-.16	-.20*	-.20*	-.14	.39**
2. SPAI Difference			.30**	.17	.37**	.33**	.39**	.22*	.22*	.15	.30**
3. Level of Anxiety T1				.76**	.69**	.61**	.43**	.28**	.62**	.53**	.44**
4. Physical Symptoms T1					.59**	.51**	.38**	.24*	.56**	.77**	.39**
5. Negative Thoughts T1						.67**	.54**	.50**	.77**	.59**	.72**
6. Highest Anxiety Task 1							.69**	.48**	.72**	.61**	.65**
7. Highest Anxiety Task 2								.51**	.65**	.60**	.64**
8. Highest Anxiety Task 3									.58**	.56**	.61**
9. Level of Anxiety T2										.80**	.84**
10. Physical Symptoms T2											.72**
11. Negative Thoughts T2											

* $p < .05$ ** $p < .01$

(table continues)

Table 3 (continued).

	12	13	14	15
1. SCS	.20*	.20*	.06	.58**
2. SPAI Difference	-.19	-.09	-.20*	-.23*
3. Level of Anxiety T1	-.73**	-.52**	-.51**	-.23*
4. Physical Symptoms T1	-.48**	-.77**	-.42**	-.09
5. Negative Thoughts T1	-.21*	-.27**	-.64**	-.24*
6. Highest Anxiety Task 1	-.16	-.15	-.25*	-.15
7. Highest Anxiety Task 2	.02	.01	-.06	-.15
8. Highest Anxiety Task 3	.14	.19	-.04	-.15
9. Level of Anxiety T2	.09	-.05	-.17	-.13
10. Physical Symptoms T2	.02	.05	-.04	-.10
11. Negative Thoughts T2	.17	.09	.08	-.28**

* $p < .05$ ** $p < .01$

(table continues)

Table 3 (continued).

	12	13	14	15
12. Change in General Anxiety		.61**	.49**	.18
13. Change in Physical Anxiety			.50**	.03
14. Change in Negative Thoughts				.04
15. SCS-R				

* $p < .05$ ** $p < .01$

Table 4.

Regression Analysis of Independent Variables Predicting Participants' General Anxiety T2

Variable	<i>B</i>	SE <i>B</i>	β	<i>p</i>	ΔR^2	<i>p</i>
Block 1					.39	.00
Gender	-3.35	2.88	-.10	.25		
General Anxiety T1	.42	.06	.61	.00		
Block 2					.00	.76
SCS-R	-.09	.24	-.08	.70		
SPAI Difference	-.14	.32	-.23	.66		
Block 2					.00	.57
SPAI Difference * SCS-R	.00	.00	.29	.57		

Table 5.

Regression Analysis of Independent Variables Predicting Participants' Physical Symptoms T2

Variable	<i>B</i>	SE <i>B</i>	β	<i>p</i>	ΔR^2	<i>p</i>
Block 1					.39	.00
Gender	-5.31	2.33	-.19	.03		
Physical Symptoms T1	.38	.05	.60	.00		
Block 2					.01	.51
SCS-R	-.23	.20	-.23	.25		
SPAI Difference	-.24	.26	-.48	.36		
Block 2					.01	.27
SPAI Difference * SCS-R	.00	.00	.56	.27		

Table 6.

Regression Analysis of Independent Variables Predicting Participants' Negative Thoughts T2

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>	ΔR^2	<i>p</i>
Block 1					.52	.00
Gender	-2.38	2.44	-.07	.33		
Negative Thoughts T1	.53	.06	.68	.00		
Block 2					.01	.28
SCS-R	-.10	.20	-.09	.62		
SPAI Difference	.05	.27	.09	.85		
Block 3					.00	.91
SPAI Difference * SCS-R	.00	.00	-.05	.91		

Table 7.

Regression Analysis of Independent Variables Predicting Participants' Highest Anxiety T1 (Task 1)

Variable	<i>B</i>	SE <i>B</i>	β	<i>p</i>	ΔR^2	<i>p</i>
Block 1					.00	.58
Gender	-6.10	4.96	-.12	.22		
Block 2					.13	.00
SCS-R	.07	.41	.04	.44		
SPAI Difference	.59	.54	.66	.01		
Block 2					.00	.59
SPAI Difference * SCS-R	-.00	.00	-.32	.59		

Table 8.

Regression Analysis of Independent Variables Predicting Participants' Highest Anxiety T2 (Task 2)

Variable	<i>B</i>	SE <i>B</i>	β	<i>p</i>	ΔR^2	<i>p</i>
Block 1					.00	.78
Gender	-2.44	5.40	-.05	.65		
Block 2					.12	.00
SCS-R	-.36	.45	-.20	.43		
SPAI Difference	.01	.59	.01	.00		
Block 2					.00	.60
SPAI Difference * SCS-R	.01	.01	.32	.60		

Table 9.

Regression Analysis of Independent Variables Predicting Participants' Highest Anxiety T3 (Task 3)

Variable	<i>B</i>	SE <i>B</i>	β	<i>p</i>	ΔR^2	<i>p</i>
Block 1					.00	.82
Gender	-2.42	3.30	-.08	.47		
Block 2					.06	.05
SCS-R	-.35	.28	-.32	.20		
SPAI Difference	.04	.12	-.40	.05		
Block 2					.01	.33
SPAI Difference * SCS-R	.02	.01	.61	.33		

Figure Caption

Figure 2. Sequence of self-report measures administered.