

STRESSED FOR SUCCESS: DO SOCIAL PHOBICS FEAR POSITIVE  
EVALUATION?

By

Kate E. Rogers

Submitted to the

Faculty of the College of Arts and Sciences

of American University

in Partial Fulfillment of

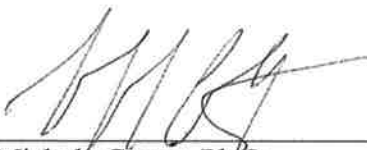
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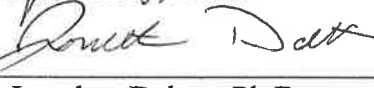
In


Psychology

Chair:

  
Michele Carter, Ph.D.

  
James Gray, Ph.D.

  
Jonathan Dalton, Ph.D.



Dean of the College of Arts and Sciences

November 14, 2012

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ABSTRACT

This study investigated the role of fear of positive evaluation (FPE) in social anxiety. Thirty socially anxious and 40 non-anxious undergraduate students were asked to predict the level of anxiety they expected to experience during a brief impromptu speech task. After completing the speech task, participants were given bogus positive feedback, bogus negative feedback, or no feedback about their performance. Participants were then asked to predict the level of anxiety they expected to experience during a second similar speech task. The pre-feedback and post-feedback self-predicted anxiety levels of participants in the various feedback conditions were compared. It was expected that self-predicted anxiety levels of socially anxious participants would increase following the receipt of positive feedback and negative feedback and would not change significantly in socially anxious participants who did not receive any feedback. As expected, self-predicted anxiety levels did not change significantly when socially anxious participants received no feedback. Results also showed that self-predicted anxiety levels of socially anxious participants did increase following the receipt of negative feedback, but this result was not significant. Unexpectedly, results showed that the self-predicted anxiety levels of socially anxious participants significantly decreased following the receipt of positive feedback.

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## INTRODUCTION

Social phobia is one of the most prevalent anxiety disorders in the general population, with a lifetime prevalence rate estimated to range from 3% to 13% (APA, 2000; Wittchen & Fehm, 2003). Social phobia has been associated with disability in major social roles, marked dissatisfaction with friends, leisure activities, and income, an increased risk of depression and substance abuse disorders, and an increased likelihood of dropping out of school, being unemployed, and being single or divorced (Wittchen & Fehm, 2003). Considering the high prevalence and debilitating nature of this disorder, it is imperative for researchers and clinicians to extend their understanding of the nature and experience of social phobia.

Past research regarding the cognitive components of social phobia has primarily focused on the construct of fear of negative evaluation (FNE). FNE can be defined as distress related to the possibility of being exposed to unfavorable scrutiny by others. This construct has been extensively investigated and deemed a core feature of social phobia. Some researchers, however, have proposed that fear of evaluation in general (both fear of positive and fear of negative evaluation) may be important in social anxiety (Weeks, Heimberg, & Rodebaugh, 2008). Fear of positive evaluation (FPE) can be defined as distress related to the possibility of being exposed to favorable scrutiny by others. Although previous research investigating FPE as a discrete construct associated with social anxiety is limited, findings suggest that further direct investigation is a logical next step.

Wallace and Alden (1997) found that, during either a successful social interaction or an unsuccessful social interaction, participants with social phobia experienced significantly more negative affect and significantly less positive affect than control participants. This suggests that individuals with social phobia may interpret successful social experiences as negative events. Wallace and Alden's (1997) experiment consisted of a condition in which participants experienced a successful social interaction and one in which participants experienced an unsuccessful social interaction. However, Wallace and Alden (1997) did not expose any participants to a neutral condition, in which the interaction is neither obviously positive nor obviously negative.

Alden, Mellings, and Lapos (2004) investigated whether directing attention to different types of social cues (specifically framing social experiences to highlight either the presence of positive or the absence of negative social cues) would affect self-related anxiety predictions. In this experiment, socially phobic participants engaged in a social interaction role-play. Following completion of the role-play, each participant received either (1) bogus feedback highlighting the positive aspects of his/her performance or (2) bogus feedback highlighting the absence of negative aspects of his/her performance. Each participant was then asked to predict his/her level of anxiety in a follow-up role-play. Alden et al. (2004) found that participants who received feedback highlighting positive performance aspects predicted that they would experience greater anxiety in a follow-up role-play than the anxiety they experienced during the initial role-play. Conversely, participants who received feedback highlighting the absence of negative performance aspects did not predict that they would experience higher anxiety in a follow-up role-play



compared to the anxiety experienced in the initial role-play. These findings suggest that the receipt of positive feedback leads to increased anxiety in individuals with social phobia. A notable limitation of Alden et al.'s (2004) study is the lack of a condition in which participants received feedback highlighting negative performance aspects. This limitation prevents a direct comparison between FPE and FNE. In the absence of this direct comparison, results can be misleading, encouraging a mistaken inference that FPE has a stronger impact on anxiety than FNE. Furthermore, the construct being represented by the feedback highlighting the absence of negative performance aspects is not entirely clear. Such feedback could be interpreted as (1) a different kind of positive feedback than the positive feedback highlighting positive performance aspects, (2) the same positive feedback as the feedback highlighting positive performance aspects presented in a different way, or (3) a lack of any feedback regarding aspects of the performance that were present.

Alden, Taylor, Mellings, and Laposa (2008) compared socially anxious participants to control participants in terms of their interpretations of positive social events. Results showed that negative interpretation of positive social events was significantly greater in socially anxious participants than in control participants. This suggests that individuals with social phobia may actually perceive positive feedback as negative feedback.

Wallace and Alden (1995) have proposed a theory to explain the apparent influence of positive evaluation in social phobia. They have theorized that socially anxious individuals worry that positive evaluation raises the social standards by which they will be evaluated in the future, and they do not believe that their typical performance

will change for the better. However, this theory raises the possibility that fear of future negative evaluation may account for fear of positive evaluation. In other words, rather than experiencing anxiety in direct response to and in reference to the receipt of positive evaluation, the social phobic may actually experience anticipatory anxiety about receiving negative evaluation, which is expected to be exacerbated by the receipt of positive evaluation. The present study focuses on Wallace and Alden's (1995) theory.

#### *Direct Support for FPE*

Weeks, Heimberg, and Rodebaugh (2008) were the first to examine FPE as a distinguishable cognitive feature of social phobia. These researchers examined the amount of variance in social interaction anxiety accounted for by the Fear of Positive Evaluation Scale (FPES) above and beyond the variance in social interaction anxiety accounted for by the Brief Fear of Negative Evaluation Scale (BFNES). Results indicated that the FPES did account for significant variance in social interaction anxiety beyond that already accounted for by the BFNES. This finding suggests that FPE and FNE are two distinct constructs, each of which makes a unique contribution to the prediction of social anxiety. This finding also serves to refute the idea that FPE is actually accounted for by fear of future negative evaluation. It should be noted, however, that the quasi-experimental design of this study limits the power of its findings.

Weeks, Heimberg, Rodebaugh, and Norton (2008) examined the relationships between social anxiety, FPE, and responses to bogus positive social feedback (i.e., discomfort experienced and perceived accuracy of feedback). Participants in this study were instructed to write an open-ended paragraph on a topic of their own choosing, and complete the FPES, the BFNES, the Social Phobia Scale (SPS), and the Social Interaction

Anxiety Scale (SIAS). Participants then received “personality profiles,” which they were led to believe were derived from the open-ended paragraphs they submitted. The “personality profiles” consisted of ten bogus positive feedback statements, pertaining to a wide range of social evaluative contexts. Participants were instructed to rate the accuracy of each statement and the discomfort they experienced when reading each statement. Providing support for Wallace and Alden’s (1995) theory, results indicated that FPE was associated with discomfort experienced and a tendency to view positive social feedback as inaccurate. Results also suggested that, in response to positive social feedback, social anxiety leads to increased FPE, increased discomfort, and decreased perceived accuracy of feedback. Furthermore, Weeks et al. (2008) did not find that FNE predicted responses to positive social feedback. This finding provides support for FPE as a distinct construct from FNE. Weeks et al. (2008) concluded that FPE leads (in part) to exacerbations of emotional and cognitive state responses to positive social feedback.

Carter, Sbrocco, Riley, and Mitchell (in press) examined the relative contributions of fear of positive evaluation and fear of negative evaluation in predicting response to an impromptu speech task. Participants were then asked to perform a 3-minute impromptu speech about “any perceived negative aspect of their body.” Participants were informed that their speech would be videotaped and rated by a panel of judges. They were then provided bogus positive or bogus negative feedback about their performance and were informed that they were chosen to deliver their speech to the judges directly. Results indicated that FNE was a significant predictor of state anxiety following the initial speech task, and FPE was not. However, FPE was a significant predictor of anxiety during the second speech task, regardless of feedback type. Based on the findings of this study,

Carter et al. (in press) have suggested that FNE is the principle construct associated with anxiety for novel performances, while FPE is primarily responsible for increased anxiety when performances are repeated.

Although researchers have provided promising preliminary evidence of the importance of FPE in social anxiety, the existing FPE literature is plagued by some noteworthy limitations. The existing literature includes only one investigation of FPE using a speech task (Carter et al., in press). This gap in the research may be a significant limitation, considering the evidence suggesting that public speaking is an especially common situation in which social anxiety is experienced (Blote, Kint, Miers, & Westenberg, 2009). Furthermore, only one study (Carter et al., in press) has directly compared social anxiety in positive feedback, negative feedback, and no-feedback conditions. The purpose of the present study is to fill these gaps in the literature, while testing Wallace and Alden's (1995) theory and further investigating the role of FPE in social anxiety.

The present study examines whether self-predicted anxiety levels of socially anxious individuals increase following the receipt of positive feedback. This change in self-predicted anxiety levels is also compared to the change in self-predicted anxiety levels following the receipt of negative feedback and the receipt of no feedback. The present study also investigates how socially anxious individuals rate their own performances when faced with positive feedback or negative feedback, and how they predict the feedback will impact the standards by which they will be evaluated in the future.

It was hypothesized that, following an impromptu speech task, the receipt of positive or negative feedback will result in a significant increase in self-predicted anxiety levels among socially anxious participants, while the receipt of no feedback will result in no significant change in self-predicted anxiety levels among socially anxious participants. This finding would suggest that social anxiety involves a fear of evaluation in general, rather than a fear of only negative evaluation. Consistent with Wallace and Alden's (1995) theory, it was also expected that socially anxious individuals would rate negative feedback as more accurate than positive feedback, and would report that positive feedback would raise the standards by which they would be evaluated in the future.

## METHODS

### *Participants*

One hundred and two undergraduate students at American University participated in the present study. However, the above number does not include one participant who dropped out of the study upon receiving initial instructions for the speech task. Among the 102 participants who completed the entire study, only those participants who were considered socially anxious (as defined by a minimum total score of 22 on the Social Phobia Scale) or non-socially anxious (as defined by a maximum total score of 13 on the Social Phobia Scale) were included in analyses. The purpose of this was to ensure a clear delineation between socially anxious and non-socially anxious participants. Those participants included in the analyses of the present study were 30 socially anxious and 40 non-socially anxious undergraduate students. Participants were recruited from a variety of undergraduate psychology courses and were compensated for their participation with extra credit points. All participants were at least 18 years of age.

### *Measures*

*Subjective Units of Discomfort Scale (SUDS).* The SUDS is a single-item self-report measure designed to track changes in distress. The SUDS uses a scale, ranging from 0 (no anxiety) to 100 (severe anxiety). This measure is widely used by both researchers and clinicians to measure an individual's level of state anxiety. However, participants in the present study used the SUDS to "predict the level of anxiety you will experience during the upcoming speech task" (see Appendix C).

*Social Phobia Scale (SPS; Mattick & Clarke, 1998).* The SPS is a commonly used 20-item self-report measure designed to assess anxiety associated with being observed by

others. Examples of SPS items include “I get panicky that others might see me to be faint, sick or ill” and “I become anxious if I have to write in front of other people” (see Appendix A for full measure). The SPS uses a 5-point Likert-type scale, ranging from 0 (not at all characteristic or true of me) to 4 (extremely characteristic or true of me). The SPS has demonstrated high internal consistency ( $\alpha = 0.94$ ) (Mattick & Clarke, 1998), which is consistent with the internal consistency demonstrated among the present study’s sample ( $\alpha = 0.87$ ). The SPS has also demonstrated 12-week test-retest reliability ( $r = 0.93$ ) (Mattick & Clarke, 1998). The SPS has been shown to discriminate between clinical samples, and between socially phobic and control samples (Mattick & Clarke, 1998), demonstrating the discriminant validity of this measure. The construct validity of the SPS and its sensitivity to treatment effects have also been supported by (Mattick & Clarke, 1998). The present study used the SPS as an initial screening tool for social anxiety. Those participants who received a minimum score of 22<sup>1</sup> on the SPS were considered socially anxious, while those participants who received a score of 13<sup>1</sup> or below on the SPS were considered non-socially anxious.

*Demographics Survey.* The demographics survey is a 6-item self-report measure created for the purposes of the present study. This measure asks participants to indicate gender, age, current year at American University, ethnicity, and whether mental health treatment has ever been received for social anxiety or any psychological condition.

*Negative Feedback Questionnaire & Positive Feedback Questionnaire.* The feedback questionnaires are 7-item self-report measures created for the purposes of the present study. The feedback questionnaires are designed to assess the interpretations of

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<sup>1</sup> Cut-off based on the findings of Carleton, Collimore, Asmundson, McCabe, Rowa, & Antony (2009).

bogus feedback statements. The first 4 items on the feedback questionnaires use a Likert-type scale, ranging from 1 (I disagree with the statement) to 5 (I agree with the statement), and are designed to measure the participant's degree of agreement with each bogus feedback statement. The sum of these items yields a total agreement score, ranging from 0 (complete disagreement with the feedback) to 20 (complete agreement with the feedback). These items demonstrated high internal consistency ( $\alpha = 0.90$ ) among the present study's sample. The remaining 3 items are multiple-choice questions (see Appendix D and Appendix E).

### *Procedure*

All participants completed the SPS as a means of screening them for social anxiety. At this time, participants also completed the demographics measure. Participants were randomly assigned to one of three experimental conditions—the positive feedback condition, the negative feedback condition, or the control condition. In each condition, the experimenter informed the participant that (s)he will be performing a brief speech task. Prior to this task, the participant was asked to predict his/her level of anxiety during the upcoming speech task. Anxiety predictions were rated on a Subjective Units of Discomfort Scale (SUDS), ranging from 0 (no anxiety) to 100 (severe anxiety).

The participant was then asked to perform a 3-minute speech about any aspect(s) of his/her physical appearance. The participant was told that his/her speech would be videotaped and evaluated by a panel of judges based on speaking pace, speaker's composure, and vocal projection, but not on the content of the speech. The participant delivered his/her speech while standing and facing a video camera, which appeared to be functioning and recording the speech. In reality, the video camera was nonfunctional, the



sole purpose of the camera being to increase the anxiety level of the participant. During the speech task, the experimenter was seated behind the participant. With the aid of a stopwatch, the experimenter alerted the participant when 3 minutes had elapsed. The above is a slightly altered version of the protocol used by Carter, Sbrocco, and Ayati (2009), which has been shown to significantly increase state anxiety in a nonclinical sample. This protocol was chosen with the assumption that it would encourage participants to focus on the evaluative features of the speech task and on his/her self-image.

Following the completion of the speech task, the experimenter took the video camera and left the room, telling the participant that it was being taken to the panel of judges to be evaluated. The experimenter returned after 5 minutes had elapsed. Upon the experimenter's return, each participant in the positive feedback condition received a handwritten list of bogus positive comments (see Appendix D) pertaining to the participant's performance and was asked to provide agreement ratings (i.e., his/her degree of agreement with each feedback statement), while each participant in the negative feedback condition received a handwritten list of bogus negative comments (see Appendix E) pertaining to the participant's performance and was asked to provide agreement ratings. Participants in the positive feedback condition and participants in the negative feedback condition were also asked to report (1) whether they perceived the feedback as positive, negative, or neutral, (2) whether or not they believed that the feedback they received was a genuine assessment of their performance, (3) if they felt that the feedback would influence the standards by which they would be evaluated in the future, and (4) what type of feedback they thought they would receive after completing

another speech task. Participants in the control condition did not receive any feedback upon the experimenter's return to the room.

Next, each participant was asked to predict his/her level of anxiety during a second brief speech task. Again, anxiety predictions were indicated via SUDS ratings, ranging from 0 (no anxiety) to 100 (severe anxiety). Participants were not actually asked to engage in a second speech task. Finally, all participants were asked what they thought the purpose of the study was and were fully debriefed (see Appendix F). During debriefing, participants were also asked whether they suspected any deception.

## RESULTS

### *Demographics*

Demographic information is reported separately for socially anxious participants and non-socially anxious participants (see Table 1). The present study's sample of socially anxious participants had a mean age of 19.70 (3.51) and was primarily Caucasian (63.3%), followed by Asian (13.3%) and multi-racial (13.3%), African American (3.3%), Hispanic (3.3%), and other (3.3%). The present study's sample of non-socially anxious participants had a mean age of 19.78 (2.20) and was primarily Caucasian (75%), followed by African American (7.5%), Asian (7.5%), multi-racial (7.5%), and other (2.5%). Socially anxious participants scored a mean of 29.60 (6.72) on the SPS, while non-socially anxious participants scored a mean of 7.93 (2.80) on the SPS. Socially anxious participants and non-socially anxious participants also did not differ significantly on gender ( $\chi^2 (1) = 3.43, p = .064$ ), age ( $F (1, 68) = .01, p = .913$ ), ethnicity ( $\chi^2 (6) = 5.44, p = .489$ ), or history of psychological treatment of social anxiety ( $\chi^2 (1) = .65, p = .421$ ).

Between feedback conditions, socially anxious participants did not differ significantly on gender ( $\chi^2 (2) = 1.68, p = .432$ ), age ( $F (2, 27) = .77, p = .474$ ), ethnicity ( $\chi^2 (10) = 14.13, p = .167$ ), history of psychological treatment of social anxiety ( $\chi^2 (2) = 1.72, p = .424$ ), or total scores on the SPS ( $F (2, 27) = 1.39, p = .266$ ). Between feedback conditions, non-socially anxious participants did not differ significantly on gender ( $\chi^2 (2) = 1.47, p = .479$ ), age ( $F (2, 37) = .55, p = .580$ ), ethnicity ( $\chi^2 (8) = 14.10, p = .079$ ), history of psychological treatment of social anxiety ( $\chi^2 (2) = 3.91, p = .142$ ), or total scores on the SPS ( $F (2, 37) = .45, p = .643$ ).

Table 1

*Demographics in Socially Anxious and Non-Socially Anxious Participants*

|                  | Socially Anxious |      | Non-Socially Anxious |      |
|------------------|------------------|------|----------------------|------|
| Gender           |                  |      |                      |      |
| Male             | 4                |      | 13                   |      |
| Female           | 26               |      | 27                   |      |
| Ethnicity        |                  |      |                      |      |
| Caucasian        | 19               |      | 30                   |      |
| African American | 1                |      | 3                    |      |
| Asian            | 4                |      | 3                    |      |
| Hispanic         | 1                |      | 0                    |      |
| Other            | 1                |      | 1                    |      |
| Multi-Racial     | 4                |      | 3                    |      |
|                  | $\bar{x}$        | $sd$ | $\bar{x}$            | $sd$ |
| Age              | 19.70            | 3.51 | 19.78                | 2.20 |
| SPS**            | 29.60            | 6.72 | 7.93                 | 2.80 |

**\*\* indicates a significant difference ( $p < .01$ ) between socially anxious and non-socially anxious participants.**

*Pre-Feedback Anxiety*

A series of ANOVAs were conducted to test the variance of self-predicted anxiety levels between feedback conditions prior to experimental manipulation. As expected, socially anxious participants did not differ significantly between feedback conditions on self-predicted anxiety levels prior to the receipt of feedback ( $F(2, 27) = 1.36, p = .274$ ). Between feedback conditions, non-socially anxious participants also did not differ significantly on self-predicted anxiety levels prior to the receipt of feedback ( $F(2, 37) = .41, p = .669$ ).

*Positive Feedback Condition*

It was expected that, among socially anxious participants, receipt of positive feedback would result in a significant increase in self-predicted anxiety levels. A paired

samples t-test was performed to test this hypothesis (see Table 2). Unexpectedly, when pre-feedback and post-feedback SUDS scores were compared, it was discovered that the self-predicted anxiety levels of socially anxious participants actually decreased significantly ( $t(10) = -3.34, p < .01$ ) following the receipt of positive feedback.

A paired samples t-test was also performed to compare pre- and post-feedback self-predicted anxiety levels of non-socially anxious participants. Following the receipt of positive feedback, self-predicted anxiety levels of non-socially anxious participants also decreased significantly ( $t(11) = -2.21, p = .049$ ) (see Table 2).

It was also expected that socially anxious participants would report that positive feedback would raise the standards by which they would be evaluated in the future. Among the socially anxious participants who received positive feedback ( $n = 11$ ), 7 of them reported that the feedback would raise future standards, while the remaining 4 participants reported that the feedback would not influence future standards. Among the non-socially anxious participants who received positive feedback ( $n = 12$ ), 3 of them reported that the feedback would raise future standards, while the remaining 9 participants reported that the feedback would not influence future standards. Among all participants who received positive feedback ( $n = 23$ ), a chi-square was conducted to determine whether or not there was a significant difference between socially anxious and non-socially anxious participants in the predicted influence of feedback received on future standards of performance. Although at first glance it appears that socially anxious participants were more likely than non-socially anxious participants to expect that the receipt of positive feedback would raise future standards, there was no significant

difference in predicted influence on future standards between socially anxious and non-socially anxious participants ( $\chi^2 (1) = 3.49, p = .062$ ).

#### *Negative Feedback Condition*

It was expected that, among socially anxious participants, receipt of negative feedback would result in a significant increase in self-predicted anxiety levels. When pre-feedback and post-feedback SUDS scores of socially anxious participants were compared using a paired samples t-test, it was discovered that self-predicted anxiety levels did increase following the receipt of negative feedback, but this result was not significant ( $t (10) = .84, p = .420$ ). Following the receipt of negative feedback, there was also a negligible change in self-predicted anxiety levels ( $t (13) = .70, p = .496$ ) among non-socially anxious participants.

Among the socially anxious participants who received negative feedback ( $n = 11$ ), 5 of them reported that the feedback would raise future standards, while another 5 of them reported that the feedback would not influence future standards, and a single participant reported that the feedback would lower future standards. Among the non-socially anxious participants who received negative feedback ( $n = 14$ ), 4 of them reported that feedback would raise standards, while the remaining 10 participants reported that feedback would not influence future standards. Among all participants who received negative feedback ( $n = 24$ ), a chi-square was conducted to determine whether or not there was a significant difference between socially anxious and non-socially anxious participants in the predicted influence of feedback received on future standards of performance. There was no significant difference in predicted influence on future

standards between socially anxious and non-socially anxious participants ( $\chi^2 (1) = 1.14, p = .285$ ).

Table 2

*Self-Predicted Anxiety Levels in Socially Anxious and Non-Socially Anxious Participants*

|                   |      | Socially Anxious | Non-Socially Anxious |
|-------------------|------|------------------|----------------------|
|                   |      | <i>M</i> (SD)    | <i>M</i> (SD)        |
| Positive Feedback | Pre  | 60.64 (10.56)**  | 31.67 (19.69)        |
|                   | Post | 49.91 (16.43)**  | 27.10 (14.88)        |
| Negative Feedback | Pre  | 55.05 (18.66)    | 32.50 (13.87)        |
|                   | Post | 59.50 (17.81)    | 35.14 (18.79)        |
| No Feedback       | Pre  | 67.94 (20.88)    | 38.00 (24.43)        |
|                   | Post | 62.38 (19.78)    | 34.75 (20.68)        |

**\*\* indicates a significant difference ( $p < .01$ ) between pre- and post-feedback self-predicted anxiety levels.**

*Predictions of Future Feedback*

Given such unexpected findings, a chi-square was also conducted to determine whether socially anxious participants who received positive feedback were more likely to predict positive future feedback, compared to those socially anxious participants who received negative feedback (see Table 3). Results indicated that socially anxious participants who received positive feedback were more likely to predict future positive feedback, compared to socially anxious participants who received negative feedback. However, this finding was not quite significant ( $\chi^2 (2) = 5.77, p = .056$ ).

A chi-square was also conducted to determine whether non-socially anxious participants who received positive feedback were more likely to predict positive future feedback, compared to those non-socially anxious participants who received negative feedback (see Table 3). Results indicated that non-socially anxious participants were also more likely to predict positive future feedback, compared to those non-socially anxious

participants who received negative feedback. However, this finding was again not significant ( $\chi^2 (2) = 4.07, p = .131$ ).

Table 3  
*Self-Predicted Future Feedback*

|                             | Socially Anxious           |                            | Non-Socially Anxious       |                            |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                             | Positive Feedback Received | Negative Feedback Received | Positive Feedback Received | Negative Feedback Received |
| Neutral Feedback Predicted  | 3                          | 5                          | 2                          | 4                          |
| Positive Feedback Predicted | 8                          | 3                          | 10                         | 7                          |
| Negative Feedback Predicted | 0                          | 3                          | 0                          | 3                          |

**\*indicates a significant difference ( $p < .05$ ) between feedback conditions.**

*Control Condition (No Feedback)*

It was expected that, among socially anxious participants ( $n = 30$ ), an absence of feedback would result in no significant change in self-predicted anxiety levels. As expected, no significant difference was found between pre- and post-SUDS scores of socially anxious individuals who did not receive any feedback ( $t (7) = -1.84, p = .108$ ) (see Table 2). Similarly, no significant difference was found between pre- and post-self-predicted anxiety levels among non-socially anxious participants ( $n = 14$ ) who did not receive any feedback ( $t (13) = -1.19, p = .257$ ) (see Table 2).

*Agreement Ratings*

Hypotheses of the current study were based on the assumption that socially anxious participants tend to evaluate their own skills and performances especially poorly (Rapee & Lim, 1992; Valentiner, Skowronski, McGrath, Smith, & Renner, 2011; Cody & Teachman, 2011; Brozovich & Heimberg, 2011; Schmitz, Kramer, & Tuschen-Caffier, 2011). Thus agreement scores of participants in the current study were evaluated (see



Table 4). The first four items on the feedback questionnaire used a Likert-type scale, ranging from 1 (I disagree with the statement) to 5 (I agree with the statement), and were designed to measure participants' degree of agreement with each bogus feedback statement. The sum of these four items yields a total agreement score, ranging from 0 (complete disagreement with the feedback) to 20 (complete agreement with the feedback). An ANOVA was conducted to compare agreement scores of socially anxious participants between feedback conditions. Results indicated that agreement scores did not differ significantly ( $F(1, 20) = 1.19, p = .289$ ) between those socially anxious participants who received positive feedback and those who received negative feedback. An ANOVA was also performed to test whether non-socially anxious participants agreed with either type of feedback more than the other. Agreement scores among non-socially anxious participants who received positive feedback were not significantly different ( $F(1, 46) = 2.95, p = .093$ ) than agreement scores among non-socially anxious participants who received negative feedback.

In addition, an ANOVA was conducted to compare the agreement scores of socially anxious participants who received positive feedback to the agreement scores of non-socially anxious participants who received positive feedback. Results indicated that socially anxious participants in the current study were significantly less likely to agree with positive feedback, compared to non-socially anxious participants ( $F(1, 21) = 19.51, p < .01$ ). Similarly, another ANOVA was conducted to compare the agreement scores of socially anxious participants who received negative feedback to the agreement scores of non-socially anxious participants who received negative feedback. Results indicated no significant difference in agreement scores between socially anxious participants who

received negative feedback and non-socially anxious participants who received negative feedback ( $F(1, 23) = 1.75, p = .200$ ).

Table 4

*Agreement Scores of Socially Anxious and Non-Socially Anxious Participants*

|                   | Socially Anxious |                 | Non-Socially Anxious |                 |
|-------------------|------------------|-----------------|----------------------|-----------------|
|                   | <i>n</i>         | <i>M</i> (SD)   | <i>n</i>             | <i>M</i> (SD)   |
| Positive Feedback | 11               | 11.45 (4.57) ** | 12                   | 18.00 (2.26) ** |
| Negative Feedback | 11               | 13.91 (5.91)    | 14                   | 11.07 (4.84)    |

**\*\* indicates a significant difference ( $p < .01$ ) between agreement scores of socially anxious participants and non-socially anxious participants.**

*Power Analysis*

Given some of the unexpected findings reported above, a power analysis should be considered when interpreting the results of the current study. The current study had a total sample size of 70 participants. This total sample was separated into 30 socially anxious participants and 40 non-socially anxious participants. Within each of these two groups, participants were then randomly assigned to one of three experimental conditions. The number of participants in each of these experimental conditions ranged from 8 participants to 14 participants. A power analysis conducted for the current study suggested a stronger power if each experimental condition had consisted of 27 participants. A post-hoc power analysis indicated a power of .46 for the sample size used in the current study.

## DISCUSSION

### *Supported Hypotheses*

It was hypothesized that, following the speech task, the receipt of no feedback would result in no significant change in self-predicted anxiety levels. As expected, there was no significant change in self-predicted anxiety levels following the receipt of no feedback. This finding suggests that participants did not experience any significant exposure effects—changes in self-predicted anxiety simply as a result of completing the speech task.

### *Making Sense of Unexpected Findings*

It was hypothesized that, following the speech task, the receipt of positive feedback would result in a significant increase in self-predicted anxiety levels among socially anxious participants. Contrary to expectations, a significant decrease was found in self-predicted anxiety levels following the receipt of positive feedback among socially anxious participants. Thus, it does not appear that socially anxious participants experienced increased anticipatory anxiety following the receipt of positive evaluation. This finding does not support Wallace and Alden's (1995) theory that socially anxious individuals worry that positive evaluation will raise the standards by which they will be evaluated in the future.

What might explain such an unexpected decrease in self-predicted anxiety levels of socially anxious participants following the receipt of positive feedback? Perhaps socially anxious participants experienced the positive feedback as a form of reassurance—a mechanism frequently used by highly anxious individuals to temporarily reduce anxiety (Clark & Wells, 1995; Cuming et al., 2009). However, it is important to

recall that the socially anxious participants were less likely than non-socially anxious participants to agree with positive feedback. Could positive feedback be reassuring when a participant does not fully agree with the feedback? Perhaps participants experienced reassurance about the evaluator's perception of the performance, rather than reassurance about the objective quality of the performance. If socially anxious participants did experience positive feedback as reassurance, it would make sense to see self-predicted anxiety levels decrease temporarily. It would be interesting for future researchers to investigate whether or not the initial decrease in self-predicted anxiety levels persists over a longer period of time (Cody & Teachman, 2011; Schmitz, Kramer, & Tuschen-Caffier, 2011).

It is also possible, however, that socially anxious individuals do not fear positive evaluation, and that the receipt of positive feedback actually decreases anxiety among socially anxious individuals. Perhaps socially anxious individuals have such negative expectations regarding evaluation from others that the receipt of positive feedback is actually experienced as a relief. This idea is somewhat supported by Reijntjes et al.'s (2011) finding that socially anxious children experience especially strong increases to state self-esteem following the receipt of positive feedback from peers. If this is the case, however, how does one make sense of previous research that has shown support for the idea of FPE? It is important to recognize that previous FPE research has relied heavily on measures of *trait* FPE, which refers to an individual's general tendency to experience anxiety related to the possibility of being exposed to favorable scrutiny by others. In contrast, the present study measured *state* FPE in response to an experimental manipulation through the use of self-predicted anxiety levels reported on a Subjective

Units of Discomfort Scale. *State* FPE refers to an individual's current level of anxiety related to the possibility of being exposed to favorable scrutiny by others. Perhaps when recalling past experiences of social situations, socially anxious individuals magnify their evaluative fears more than they do while actively experiencing a social situation or immediately before or after a social situation.

It was hypothesized that, following the speech task, the receipt of negative feedback would result in a significant increase in self-predicted anxiety levels. Possibly the most unexpected finding of the current study was the lack of significant change in self-predicted anxiety levels among socially anxious participants following negative feedback. Fear of negative evaluation has historically been considered a core feature of social phobia (American Psychiatric Association, 2000; Rapee & Heimberg, 1997; Clark & Wells, 1995), and previous research has supported this idea (Schulz, Alpers, & Hofmann, 2008; Makkar & Grisham, 2011). Acknowledging that the presence of fear of negative evaluation among socially anxious individuals has been widely empirically supported, it is important to consider possible explanations for the current study's vastly different findings regarding fear of negative evaluation.

The simplest explanation is that the sample size in the current study was too small. There were only 11 socially anxious participants in the current study's negative feedback condition. According to the results of a paired samples t-test, on average, socially anxious participants did report increased self-predicted anxiety levels ( $t(10) = .84$ ) following the receipt of negative feedback. However, this finding was not significant ( $p = .420$ ). A significant increase in self-predicted anxiety levels may have been found if the current study had used a larger sample size. A power analysis of the current study

provides some support for this explanation, suggesting a stronger power if the negative feedback condition had consisted of at least 27 socially anxious participants.

The standard deviation in the mean difference above may also provide an important clue about why self-predicted anxiety levels did not increase significantly following the receipt of negative feedback. Socially anxious individuals often fear very specific kinds of negative evaluation. For example, one socially anxious individual might be especially afraid that others will negatively evaluate his/her intelligence during a public speaking task; whereas another socially anxious individual might be especially afraid that others will negatively evaluate his/her voice during a public speaking task. It is possible that the negative feedback given in the current study only tapped into the specific fears of some of the socially anxious participants. It may be beneficial for future researchers to extend bogus feedback to represent a broader range of social evaluative fears.

An alternative explanation is that the bogus negative feedback used in the present study was not harsh enough. Because socially anxious individuals are typically harsh in their evaluations of their own performances (Rapee & Lim, 1992), perhaps the negative feedback in the current study was relatively gentle in comparison. Approximately 18% of socially anxious participants in the current study reported perceiving the bogus negative feedback as “neutral feedback.”

It is also important to consider the possibility that participants' self-predicted anxiety levels did not increase significantly following the receipt of negative feedback because they suspected deception and did not believe that there was a panel of judges evaluating their performance. Among the 11 socially anxious participants who received

negative feedback, 4 of them reported suspecting deception regarding the existence of a panel of judges during debriefing. However, when these participants were removed from analyses, results remained the same—indicating a non-significant increase in self-predicted anxiety levels following the receipt of negative feedback).

Alternatively, it is possible that socially anxious participants in the current study were simply already experiencing such high levels of anxiety in anticipation of engaging in the first speech task that the receipt of negative feedback following that speech task did not have a significant enough impact in comparison to the anxiety already being experienced.

Another plausible explanation may be found when post-event processing theory is taken into account. Post-event processing theory proposes that socially anxious individuals ruminate about past social situations, focusing on the negative aspects of those situations and re-experiencing anxiety (Clark & Wells, 1995). Previous research has found that highly socially anxious individuals often experience more negative post-event processing, but not less positive post-event processing, following social situations (Schmitz, Kramer, & Tuschen-Caffier, 2011; Cody & Teachman, 2011). Perhaps socially anxious participants in the current study would have shown a much greater elevation in post-negative feedback self-predicted anxiety levels if participants had been assessed a day or a week after engaging in the speech task.

It may also be interesting to note that, anecdotally, the experimenter noticed that the majority of participants in the current study performed speeches that emphasized positive aspects of their physical appearances. It is possible that an emphasis on positive aspects during the speech task had a priming effect on the participants' experience of the

feedback. Perhaps participants who emphasized positive aspects of their own physical appearance during the speech task were primed for a stronger influence of positive feedback and a weaker influence of negative feedback.

Of course it is also possible that the current study's finding does indicate an actual absence of fear of negative evaluation among socially anxious individuals. Although this seems unlikely, given the abundance of previous empirical research that has consistently shown support for the presence of FNE among socially anxious individuals, it is important to explore methodological differences between the current study and previous research. Most previous studies that have found support for fear of negative evaluation have focused on measures that ask participants to recall their experience during social/performance situations after those situations have occurred (Coles, Turk, Heimberg, & Fresco, 2001; Makkar & Grisham, 2011). The current study, however, focused on anticipatory anxiety by asking participants to predict the level of anxiety they expect to experience during an upcoming performance situation. Rather than suggesting a complete absence of FNE among socially anxious individuals, perhaps the findings of the current study suggest that fear of negative evaluation is more evident after a social situation than it is shortly before a social situation. It may be beneficial for future researchers to investigate the differences between anticipatory social anxiety and social anxiety experienced after a social situation, and likely after the opportunity to engage in rumination.

Given the unexpected findings of the current study, a few methodological limitations should be noted. First, the speech task used in the current study was not particularly intellectually demanding. Participants were asked to perform a speech about



any aspect of their physical appearance. However, if participants had been asked to perform a speech about a more intellectually demanding topic (such as, a specific political issue), the speech task may have tapped into a wider variety of evaluative fears and elicited greater levels of social anxiety. Also, when the experimenter informed each participant that he/she would be asked to perform a second speech task, the experimenter did not tell the participant the topic of the second speech. The purpose of this was to avoid a confounding effect of the speech topic on post-feedback self-predicted anxiety levels. For example, if a participant had felt more comfortable with the second speech topic, than he/she might have reported lower self-predicted anxiety levels in anticipation of the second speech task, regardless of the type of feedback received. However, the absence of knowledge about the second speech task could have created some anxiety based solely on the uncertainty of the situation.

Another methodological limitation was the lack of exclusion criteria in the current study. For example, participants were neither assessed nor excluded for meeting diagnostic criteria for body dysmorphic disorder (BDD). However, if any participants in the current study did meet criteria for BDD, it is possible that any anxiety they experienced during the study was only in response to performing a speech that focused on their own body image. In such cases, the SUDS may not have been measuring social anxiety as intended, but rather have been highly influenced by distress associated with body image concerns. Because BDD was not assessed in the current study, it is impossible to determine whether or not associated body image concerns influenced the findings of the current study.

The next methodological limitation was the absence of a baseline measurement of state anxiety prior to the introduction of the first speech task. The absence of this measurement hinders the ability to discern the amount of pre-feedback self-predicted anxiety accounted for by the speech task itself. Although previous research has found similar impromptu speech tasks to be significantly anxiety provoking (Carter et al., in press), the inclusion of a baseline measurement of state anxiety could have served as an effective manipulation check, indicating whether or not the speech task itself was sufficiently anxiety provoking among the current study's sample. Because the feedback was specific to the speech task, the feedback could have been less effective if the speech task itself was not sufficiently anxiety provoking. Future research would benefit from the inclusion of a manipulation check through the use of a baseline measurement of state anxiety prior to the introduction of an experimental task.

Another methodological limitation was the absence of any direct self-report measures of FNE and FPE already validated by previous research. It is certainly possible that self-predicted anxiety levels measured before and after a speech task do not actually measure fear of evaluation. The use of this technique could have been strengthened by the current study's inclusion of validated measures of FNE and FPE. Future research may benefit from adding the administration of the *Brief Fear of Negative Evaluation Scale* (BFNE; Leary, 1983) and the *Fear of Positive Evaluation Scale* (FPES; Weeks, Heimberg, & Rodebaugh, 2008) prior to the introduction of the experimental task.

It should also be noted that the generalizability of the present study's findings is somewhat limited. For example, the sample used in the current study was relatively small

( $n = 102$ ). Future research is required to determine the generalizability of the current study's findings.

## APPENDIX A

### SOCIAL PHOBIA SCALE (SPS) ITEMS

1. I become anxious if I have to write in front of other people.
2. I become self-conscious when using public toilets.
3. I can suddenly become aware of my own voice and of others listening to me.
4. I get nervous that people are staring at me as I walk down the street.
5. I fear I may blush when I am with others.
6. I feel self-conscious if I have to enter a room where other are already seated.
7. I worry about shaking or trembling when I'm watched by other people.
8. I would get tense if I had to sit facing other people on a bus or a train.
9. I get panicky that others might see me to be faint, sick or ill.
10. I would find it difficult to drink something if in a group of people.
11. It would make me feel self-conscious to eat in front of a stranger at a restaurant.
12. I am worried people will think my behaviour odd.
13. I would get tense if I had to carry a tray across a crowded cafeteria.
14. I worry I'll lose control of myself in front of other people.
15. I worry I might do something to attract the attention of others.
16. When in an elevator I am tense if people look at me.
17. I can feel conspicuous standing in a queue.
18. I get tense when I speak in front of other people.
19. I worry my head will shake or nod in front of others.
20. I feel awkward and tense if I know people are watching me.

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Items are reprinted from *Behaviour Research and Therapy, Volume 36*, by R.P. Mattick & J.C. Clarke, "Development and validation of measures of social phobia scrutiny fear and social interaction anxiety," pp. 455-470, Copyright 1998.

APPENDIX B  
DEMOGRAPHICS SURVEY

1. What is your gender?

\_\_\_\_\_ Male

\_\_\_\_\_ Female

2. What is your age?

\_\_\_\_\_ years

3. What is your current year at American University?

\_\_\_\_\_ Freshman

\_\_\_\_\_ Sophomore

\_\_\_\_\_ Junior

\_\_\_\_\_ Senior

\_\_\_\_\_ Graduate

4. What is your ethnicity? (Check all that apply)

\_\_\_\_\_ White or Caucasian

\_\_\_\_\_ Black or African American

\_\_\_\_\_ Asian

\_\_\_\_\_ American Indian or Alaska Native

\_\_\_\_\_ Native Hawaiian or Other Pacific Islander

\_\_\_\_\_ Other (Specify: \_\_\_\_\_)

5. Have you ever received professional treatment for social anxiety?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

6. Have you ever received any professional treatment for any psychological condition?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

APPENDIX C  
SUBJECTIVE UNITS OF DISCOMFORT SCALE (SUDS)

On a scale from 0 (no anxiety) to 100 (severe anxiety), please predict the level of anxiety you will experience during the upcoming speech task. You may use ANY number from 0 to 100.

In the space provided, write the number that best describes the level of anxiety you will experience during the upcoming speech task.

\_\_\_\_\_



## APPENDIX D

### BOGUS POSITIVE FEEDBACK AND QUESTIONNAIRE

Below is some general feedback about your performance in the speech task.

We would also like to get a sense of how you would rate your own performance. Please indicate your degree of agreement with each statement by placing the appropriate number in the space provided.

1 = I *disagree* with the statement.

2 = I *somewhat disagree* with the statement.

3 = I *neither agree nor disagree* with the statement.

4 = I *somewhat agree* with the statement.

5 = I *agree* with the statement.

\_\_\_\_\_ 1. You looked calm during your speech.

\_\_\_\_\_ 2. Your pace was smooth throughout your speech.

\_\_\_\_\_ 3. Your vocal projection was appropriate and consistent throughout your speech.

\_\_\_\_\_ 4. Overall, you performed well in your speech.

Please indicate how you perceive the above feedback by circling one of the following:

*Positive Feedback*

*Negative Feedback*

*Neutral Feedback*

Do you feel that the above feedback will influence the standards by which you will be evaluated in the future? (Circle one.)

*The feedback will raise the standards.*

*The feedback will lower the standards.*

*The feedback will not influence the standards.*

What type of feedback do you think you will receive after completing another speech task? (Circle one.)

*Positive Feedback*

*Negative Feedback*

*Neutral Feedback*

## APPENDIX E

### BOGUS NEGATIVE FEEDBACK AND QUESTIONNAIRE

Below is some general feedback about your performance in the speech task.

We would also like to get a sense of how you would rate your own performance. Please indicate your degree of agreement with each statement by placing the appropriate number in the space provided.

- 1 = I *disagree* with the statement.  
2 = I *somewhat disagree* with the statement.  
3 = I *neither agree nor disagree* with the statement.  
4 = I *somewhat agree* with the statement.  
5 = I *agree* with the statement.

- \_\_\_\_\_ 1. You looked anxious during your speech.
- \_\_\_\_\_ 2. Your pace was awkward throughout your speech.
- \_\_\_\_\_ 3. Your vocal projection was inappropriate and inconsistent throughout your speech.
- \_\_\_\_\_ 4. Overall, you performed poorly in your speech.

Please indicate how you perceive the above feedback by circling one of the following:

*Positive Feedback*

*Negative Feedback*

*Neutral Feedback*

Do you feel that the above feedback will influence the standards by which you will be evaluated in the future? (Circle one.)

*The feedback will raise the standards.*

*The feedback will lower the standards.*

*The feedback will not influence the standards.*

What type of feedback do you think you will receive after completing another speech task? (Circle one.)

*Positive Feedback*

*Negative Feedback*

*Neutral Feedback*



## APPENDIX F

### DEBRIEFING SCRIPT

“You have now completed your participation in this experiment. You will not actually be asked to engage in another speech task.

I would like to let you know that some deception was used in this experiment.

- The video camera was never actually recording your performance during this experiment.
- There was no panel of judges evaluating your performance.
- Only the experimenter in the room witnessed your performance of the speech task.
- The feedback statements you received were pre-generated and did not reflect your performance in the speech task in any way. The purpose of this was simply to see whether your self-predicted anxiety level would change after receiving a certain type of feedback.

Now that I’ve told you this, what is your reaction? Do you have any questions? Did you believe that the feedback you received was a genuine assessment of your performance during the speech task?

Because we used deception in this study, I want to let you know that you have the right to withdraw your data from being used in this study if you wish. I also have a list of therapy referrals to give you. These referrals are distributed to every participant. They might be useful to you if participating in this experiment has stirred up any strong feelings or reactions.

Thank you for your valued participation in this research.”

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